Ethiopia Logistics Masterplan Diagnostic

FIRST DRAFT

Addis Ababa, Ethiopia

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Ethiopian Transport and Logistics Support Project

Table of Contents

List of Tables

List of Figures

Preamble

The Ethiopia Transport and Logistics Support Programme (ETLSP) is a project financed by the European Union which started in February 2021. The project aimed to provide support to the Government of the Federal Democratic Republic of Ethiopia (FDRE) in terms of:

- Providing technical advice to the Government to facilitate the payment of the 2021 Variable Tranche of the Ethiopia's Regional Connectivity and Competitiveness budget support performance indicators; and
- Providing support to the Ministry of Transport and Logistics, through Ethiopia Maritime Authority and its Logistics transformation Office, in implementing Ethiopia's national Logistics Strategy.

One of the assignments allocated to the ETLSP by EMA was to prepare a National Logistics Masterplan Diagnostic. This is in line with the following National Logistics Strategy (NSL) intervention strategies:

70. Prepare production and logistics supply master plan
74. Develop master plan for modern import trade system
77. develop a master plan for the country logistics freight centres
82. Develop master plan for transport infrastructure development and management
84. Develop and implement master plan for liquid bulk cargo logistics

The Ethiopia Logistics Masterplan Diagnostic addresses all of these areas.

The Ethiopia Logistics Masterplan Diagnostic was put together by a team lead by Mark Pearson and Mekonnen Abebe and included Dr Matiwos Ensermu as Logistics Policy Adviser; Jaap van der Merve as a Railway Expert; Dr. Alemgena Araya and John Donovan as Road Engineering Experts. Graham Smith provided an input into the freight projections and Willem van Zyl supported the team with inputs on shipping and sea freight logistics. Ruben Naveiro and Joan Miquel Vilardell, both from ALG, a company that was part of the consortium led by DT Global implementing the ETLSP, provided inputs as a Warehouse and Logistics Systems Expert and as a PPP and Financing Expert respectively. Yehualaeshet (Mandela) Jemere Sharew provided inputs initially as a Railway Expert but then supported the preparation of the report in many other areas, including work on cool chain logistics.

A contract was awarded to Addis Ababa University to carry out data collection for the Ethiopia Logistics Masterplan Diagnostic and all tables and figures that do not have a source referenced have been prepared by the Addis Ababa University data collection team. The team was ably and efficiently led by Ato Dilnesahu Samuel Atiye. Tragically, Dilnesahu pass away in October 2023, and the team pays tribute to him for has hard work and significant intellectual and good-humoured contribution to the ELMD. Dilnesahu will be sorely missed by his colleagues and students at Addis Ababa University and the ELMD team.

The ETLSP team who prepared this report have tried as much as possible to ensure that facts and figures are correct and as up to date as possible. However, this is considered to be a living document. As such, it is hoped that the report, together with the on-line database, with be updated and added to on a regular basis.

The online database can be found at: https://etlsp.portal.africa/logistics-dashboard/

https://etlsp.portal.africa/logistics-masterplan-diagnostic/ is the link where is report, the working papers used to prepare this report, other useful reference material, and a summary power point can be found.

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FROM WHOM?

Executive Summary

Chapter 1, the introduction, notes that the Government of the Federal Democratic Republic of Ethiopia (FDRE) has recognised the importance of transport and logistics sectors and has taken steps to introduce reforms in these sectors.

The objective of the FDRE reforms is to promote efficiency, innovation and transparency in cross-border trade, increasing capacity and range of services, and reduce the cost of doing business in the country.

The 2019 Ethiopian Logistics Review carried out for the Government of Ethiopia by a World Bank and African Development Bank team proposed that the Logistics Sector should be designated a priority sector for Ethiopia. Ethiopia started down this part with the development of the National Logistics Strategy, the establishment of a National Logistics Council and the creation of the Logistics Transformation Office within the Ethiopia Maritime Authority. The National Logistics Strategy has been the driver of Logistics since its formal adoption in 2017.

Structural reform was one of the key macroeconomic issues addressed in Ethiopia's 2019 Home-grown Economic Reform Agenda and logistics and transport issues were among the priority areas of the reform agenda.

The challenges faced by businesses, exporters, and manufacturers include a heavy bureaucratic customs process and inadequate logistics services, under-developed transport systems, inadequate terminal facilities, limited utilisation of ICT systems, and an inefficient regulatory framework.

Recent logistics reform measures undertaken by the Ethiopian government include measures to enhance logistics sector competitiveness and efficiency; to enhance coordination across the logistics sector actors; and to digitalise logistics and related services.

Chapter 2 describes the data and information gathering techniques used to obtain data and information needed to prepare the diagnostic. The main data gathering exercise was the responsibility and, initially, it was envisaged that the AAU team would travel to different parts of the country to collect data and information, but local conditions restricted this exercise and data collected by AAU was limited to sourcing secondary data, and through interviews and group discussions mainly in and around Addis Ababa.

Experts in other sub-sectors, such as road, rail, shipping and warehousing, also complemented the AAU data by also collecting their own data and information.

Chapter 3 provides a macro-economic and trade context to the Diagnostic. It notes that:

- Ethiopia is a landlocked country located in the Horn of Africa with an estimated population of 120 million people (with about 78 per cent rural) and a GDP of USD111 billion in 2021.
- Most of the Ethiopia's population is concentrated in the central and northern parts of Ethiopia, particularly in the Oromia region and the city of Addis Ababa.
- Ethiopia's economy is mainly based on agriculture, which accounts for a 32.4 per cent share of GDP and a growth rate of 6.1 per cent in 2022 and 85 per cent of total employment.
- The agricultural sector is predominantly characterised by smallholder farmer agriculture.
- The Amhara and Oromia regions accounted for around 93 per cent of the total wheat production in the country.
- The Oromia region accounted for around 72 per cent of the total production of coffee in 2021-22.

- Ethiopian trade is characterised by an imbalance of imports and exports, with low export volumes.

Chapter 4, on stakeholders in the Logistics Sector, itemises stakeholders in the public and private sectors and describes the responsibilities, activities and functions of these stakeholders.

Government ministries, agencies and SOEs mentioned include the following:

- Ethiopian Customs Commission
- Other Border Agencies, including Ministry of Trade (MOT), Ethiopian Investment Commission (EIC) and Regional Investment Bureaus, National Bank of Ethiopia (NBE) and Commercial Banks (CBs), Ministry of Agriculture and Natural Resources (MOANR), Ministry of Industry (MoI) Ministry of Mines, Petroleum and Natural Gas , Ethiopian Conformity Assessment Enterprise (ECAE), Ministry of Transport and Logistics (MOTL) Ethiopian Radiation Protection Authority (ERPA), Oromia Islamic Affair Supreme Council (OIASC), Food, Medicine and Health Care Administration and Control Authority (FMHACA), Veterinary Drug and Feed Administration and Control Authority (VDFACA) , Information Network Security Agency (INSA), Ministry of Communication and Information Technology (MCIT) and Ministry of Livestock and Fishery (MOLF).
- Ethiopian Maritime Authority (EMA)
- Logistics Transformation Office (LTO)
- Ethiopian Airlines Cargo and Logistics Services
- Ethiopian Shipping and Logistics (ESL)

Private Sector agencies include the following:

- Ethio-Logistics Sectorial Association (ELSA)
- Ethiopian Freight Forwarders and Shipping Agents Association (EFFSAA)
- Customs Clearing Agents Association
- Ethiopian and Regional Chamber of Commerce and Sectoral Associations

Major warehouse operators and procurement service providers include the following:

- Ethiopian Agricultural Business Corporation (EABC)
- Ethiopian Trading Business Corporation (ETBC)
- Ethiopian Sugar Corporation (ESC)
- Ethiopian Petroleum Supply Enterprise (EPSE)
- Public Procurement Service (PPS)
- National Disaster Risk Management Commission

Other logistics service support providers include the following:

- Insurance Companies
- Banks.

With reference to the **National Logistics Council and Strategy,** up to September 2023, it had met 13 times since its formation.

The Logistics Transformation Office (LTO) was established as the technical arm of the National Logistics Council under the overall direction of the Ethiopian Maritime Authority. LTO is in charge of implementation of the National Logistics Strategy, scheduled to be completed within ten years of its launch, based on the identified ninety-eight interventions.

Ethiopia's **National Logistics Strategy** was developed to accomplish four main purposes:

- Enable National Development;
- Control Avoidable Logistics Costs;
- Provide Systemic Logistics Solutions; and
- Provide Direction and Leadership.

The NLS has six major strategies (divided up into twenty-two sub-strategies and ninety-eight interventions, to be achieved within ten years (2028). These six specific objectives are related to:

- Improve logistics services by refining the national trade and finance system.
- Establish well integrated and interfaced transit and customs System.
- Improve logistics service provider's efficiency.
- Reduce the monopolistic practices in the logistics sector of the country.
- Develop Logistics infrastructure.
- Build up logistics sector institutional capacity.

Some of the achievements already realised include the following:

- Diversification of Port Utilisation;
- Opening up of the Multimodal Transport Service;
- Export Containerisation;
- Perishable shipments / cool chain development;
- Expansion of Mojo Logistics Hub;
- Establishing Free Trade Zones; and
- Establishment of Corridor Management Institutions.

Other notable achievements in implementing the National Logistics Strategy include:

- The preparation and approval of Ethiopia's Logistics Performance Index (LPI) study for 2020 and 2021; and
- Approval by the NLC of a national coordinating mechanism for the import of dry bulk shipments.

Chapter 5 provides information on the multilateral trade and trade facilitation agreements Ethiopia is a signatory to. At the multilateral level Ethiopia is a signatory to the International Maritime Organisation, the World Customs Organisation (so needs to comply with the provisions of the Revised Kyoto Convention) and is aspiring to be a member of the World Trade Organisation (which implies that Ethiopia is willing to implement and abide by the provisions of the Trade Facilitation Agreement).

Chapter 6 provides information on the continental, regional and bilateral trade and trade facilitation agreements Ethiopia is a signatory to. At the continental level, Ethiopia is a signatory to the African Continental Free Trade Agreement protocol which contains similar trade, transport and transit provisions as those contained in the WTO Trade Facilitation Agreement). At the regional level, Ethiopia is a member of COMESA and, although provides limited preferences (10 per cent on originating goods) is not a member of the COMESA FTA. Ethiopia is also a member of IGAD, but IGAD does not have a free trade agreement in place amongst its Member States but does have a Regional Trade Policy which is designed mainly as a cooperation framework that seeks to guide the IGAD Members States to promote trade integration in a more flexible policy environment.

At the bilateral level, Ethiopia was a beneficiary of the AGOA regime but lost that status in January 2022 and, currently, Ethiopia has no trade agreement with the USA.

The Ethiopia-Sudan Preferential Trade Agreement (PTA) entered into force on 6th February 2003 and provides preferential market access provisions to all industrial and agricultural products originating

from both countries. Origin is determined through the application of the COMESA Rules of Origin as both parties are members of COMESA.

Ethiopia can benefit from the GSP schemes offered by the European Union (termed Everything-But-Arms or EBA) and the Japanese GSP.

Chapter 7 addresses Ethiopia's logistics sector regulations and notes that the Ethiopian institutional framework for transport and logistics is governed by the Ministry of Transport and Logistics (MoTL) while the Ministry of Urban and Infrastructure Development (MUID) is responsible for infrastructure development.

Under the Ministries, the main institutions in relation to transport and logistics infrastructure are:

- The Ethiopian Roads Administration (ERA), which has absorbed all the responsibilities and duties from the Ethiopian Road Fund (ERF) and the Ethiopian Roads Authority.
- The former Federal Transport Authority (FTA), the functions of which have now been taken over by MoTL, was responsible for developing and administering roads; creating conducive conditions for coordinated development of the road network; and ensuring the maintenance of standards in road construction.
- The Ethiopian Maritime Authority (EMA), which is accountable to the MoTL, ensures transport operation and movement of goods are economical; plans, coordinates and enforces such operation; and seeks ways and means for the promotion and development of multimodal, marine, in-land water transport; and ensures the availability of uninterrupted resource of skilled manpower in the maritime sector for the country.
- The Ethiopian Pay Toll Road Enterprise (EPTRE) that enforces penalties and fixes the toll tariff.
- Ethiopian Railway Corporation (ERC), established to build railway infrastructure; operate the cargo and passenger railway; and to engage in other related activities.
- Ethio-Djibouti Railway Company (EDR), tasked with operating the Ethio-Djibouti Railway.
- Ethiopian Shipping and Logistics Services Enterprise (ESLSE), now Ethiopian Shipping and Logistics (ESL), providing services to stevedoring, shore-handling, dry port, warehousing and other logistics services for import and export of goods.

The Industrial Parks Proclamation is the primary legislation that governs the establishment, development, and management of industrial parks. It provides the legal framework for the creation of industrial parks, including their operation, administration, and incentives provided to investors.

It was not until August 2022 that SEZs were allowed in Ethiopia.

Ethiopia does not have specific regulations dedicated to Dry Ports or warehouses. Despite the enactment of the Warehouse Receipt System Proclamation in 2003, until 2021 there has been no active supervisory/regulatory body overseeing the warehouse system in Ethiopia.

Chapter 8 addresses trade, transport and transit facilitation measures. Although Ethiopia is not a member of the WTO, it is in accession to the WTO and so subscribes to the implementation of the Trade Facilitation Agreement (TFA). For this reason, the TFA categorisation of trade facilitation measures and instruments are used.

According to the UN Global Survey on Digital and Sustainable Trade Facilitation, Ethiopia has made significant progress in implementing trade facilitation measures. Ethiopia's trade facilitation score in 2023 is 52.69 per cent. The score is based on several factors, including transparency, formalities, institutional arrangement and cooperation, paperless trade, and cross-border paperless trade. The survey indicates that Ethiopia has improved its trade facilitation score compared to previous years.

The African Continental Free Trade Agreement (AfCFTA), which Ethiopia is a signatory to, addresses Customs Cooperation, Trade Facilitation and Transit in Annexes 3, 4 and 8 of the AfCFTA Protocol on Trade in Goods respectively.

In terms of securing supply and value chains the following trade, transport and transit facilitation provisions of the WTO TFA and AfCFTA are probably the most important:

- Customs Cooperation and Mutual Administrative Assistance.
- Trade Facilitation.
    - Advance Rulings.
    - Pre-arrival Processing.
    - Electronic Payment.
    - Separation of Release from Final Determination of Customs Duties, Taxes, Fees and Charges.
    - Risk Management.
    - Post-clearance Audit.
    - Trade Facilitation Measures for Authorised Operators.
    - Use of Information Technology.
    - Single Window.
    - Border Agency Cooperation.
- Transit Facilitation.

Operational NTFCs are important to ensure implementation of trade facilitation measures that will secure regional and continental supply and value chains but the way that the Ethiopian NTFC is structured and operate needs to be re-examined.

The role of an NTFC is to facilitate and coordinate but what is needed is a body to champion trade facilitation in Ethiopia. Implementation of trade facilitation measures requires combined actions by, usually, multiple agencies and private sector organisations and an implementation budget, which should come from government rather than International Cooperating Partner grants. For example, a common risk assessment instrument needs not only cooperation between border agencies but also agency agreements, possibly changes in legislation and regulations, and a budget to make it happen. This may require a directive from a higher authority.

Chapter 9 addresses digitalisation of logistics. The digitised logistics systems, or digitised systems that are related to logistics and make logistics easier are as follows:

- Ethiopian Electronic Single Window for Traders (eSW).
- Ethiopian Customs Commission systems which include the Customs Management System, the Trade Portal and a soon-to-be implemented cargo tracking system.
- Ethiopian Airlines digitised and web-based systems that include an on-line ticket booking, paying and check-in system; and a cargo or shipment tracking system.
- Electronic Banking Systems and mobile money services including the Ethiopia Telecom's Telebirr and Safaricom's M-Pesa systems as well as online banking services offered by several of Ethiopia's commercial banks.
- Ethiopian Maritime Authority which has access to the Indian Ocean Region information Sharing Platform (IORIS).
- Ethiopian Shipping and Logistics' Oracle Enterprise Resource planning cloud application modules and data software.

Chapter 10 addresses the bilateral transport and transit corridor agreements Ethiopia has with neighbouring countries including:

- The Ethio-Djibouti Corridor: Steps are being taken to establish an Ethio-Djibouti Corridor Management Institution and to agree a Bilateral Agreement, but, in the meantime the existing agreements can be used to govern activities, exist agreements include:
    - The Djibouti Port Utilisation Agreement (2002);
    - The Preferential Investment Facilitation and Property Acquisition Agreement (2006);
    - Customs Transit Protocol Agreement (2008);
    - The Agreement on the Implementation of the Multimodal Transport System (2010);
    - The Road Transport Services Agreement (2011); and
    - The Bilateral Agreement for the Ethio-Djibouti Railway (2016).

- Berbera Corridor with the following agreements in place
    - Berbera Port Utilisation Agreement (2016) - makes provision for a Joint Corridor Management Authority that will meet every six months and a Joint Operational Committee; allows goods originating from, and destined to, Ethiopia to transit through the port of Berbera free of taxes and Customs duties; harmonises systems regarding frontier facilities for goods in transit; and provisions for demurrage charges. The Agreement allows for only two checkpoints for transit traffic – one at the port and one at the border.
    - MoU between the Ministry of Transport and Logistics and DP World - opened up the possibility of concluding an agreement in which DP World and its partners would invest up to USD1 billion in developing supply chain infrastructure along the Berbera corridor over a ten-year period.

- Port Sudan Corridor
    - The Port Sudan Utilisation Agreement makes provision for guaranteeing Ethiopia the permanent right of access to the sea and unhindered freedom of transit through Sudan in respect of goods and cargoes originating from or destined to Ethiopia; use of installations and equipment; the right of Ethiopia to have a free-zone facility within the port facilities of Port Sudan; preferential tariffs for Ethiopia; unhindered transit; and provisions on demurrage costs.

- LAPSSET Corridor
    - In 2013 Kenya announced the setting up of a government agency, the LAPSSET Corridor Development Authority (LCDA).
    - Kenya and Ethiopia signed a Bilateral Agreement to jointly pursue the development of the LAPSSET Standard Gauge Railway.

Chapter 11 provides information on the ports that serve Ethiopia and includes information on the following ports:

- Djibouti Ports and Free Zone Authority (DPFZA) Ports, these being:
    - Société de Gestion du Terminal à conteneurs de Doraleh (SGTD). SGTD plans to increase the number of containers it handles both for Ethiopia and transhipped containers. As such SGTD has recently purchased four new mega-max ship-to-shore (STS) cranes from Liebherr. These cranes will operate alongside the current eight STS cranes already installed. SGTD has also invested in an expansion of its container yard

which, together with the installation of the new mega-max STS gantry cranes, will allow SGTD to significantly increase the number of ships and containers it is able to handle per year.
    - Doraleh Multipurpose Port (DMP)
    - Tadjoura Port
    - Damerjog Liquid Bulk Port
- Société Djiboutienne de Gestion du Terminal Vraquier (SDTV)
- Horizon Oil Terminal
- Berbera Port
  DP World plans to transform Berbera into an integrated maritime, logistics and industrial trade hub to serve the Horn of Africa and has recently opened the Berbera Economic Zone (BEZ).
- Port Sudan
- Kenya Ports
    - Mombasa Port
    - Lamu Port

Chapter 11 also addresses port tariffs and compares port tariffs using the ESCAP/UNDP port tariff structure which organises tariffs into four service groups, these being navigation, berth, cargo operations and other business. From an exercise carried out to determine port charges for a "standard" vessel, it has been calculated that total port charges are substantially lower for Mombasa, with the other ports charging from about half to two thirds more than are charged by Mombasa.

Chapter 12 addresses Shipping transport Services. Eighty-nine liner services call at the ports considered in the Ethiopia Logistics Masterplan Diagnostic, these being Djibouti, Port Sudan, Massawa, Assab (although there was no data available for Assab) Mogadishu, Mombasa, Kismayo and Berbera. To qualify, a service needs to call at a port at least once. If only services that call at least once a month are considered, the total number of services reduces to 67. None of the services is purely intra-regional, i.e. looping between only a selection of the nominated ports. Of the 67 services, six are regional in that they loop between one or more of the nominated ports and ports in the Gulf, Red Sea and Middle East. The majority of the services are extra-regional in that they link one or more nominated port, possibly with a regional port(s), and with port(s) outside the immediate region.

From this port call analysis, it is shown that:

- Mombasa and Djibouti have the most extensive service connectivity networks, followed by Berbera and Port Sudan.
- Mombasa, Djibouti and Berbera are relatively well connected and have strong connectivity to the surrounding region.

There are 21 liners participating in services to the ports of interest. These may be "operating" liners that actually provide the service or "sharing" in that they purchase capacity on another liner's vessel. The relationship between liners may take the form of cooperating alliances, of which the major ones are 2M (Maersk and MSC), Ocean Alliance (CMA CGM, Cosco, Evergreen, OOCL), and Alliance 2022 (Hapag-Lloyd, ONE, Yang Ming, HMM).

The ports under consideration received about 193 vessel calls per month on average with Mombasa receiving nearly half of the calls, Djibouti about a third and Berbera about a tenth of calls.

The dominant frequencies are to/from Mombasa and South-East Asia, East Africa and the Indian Sub-Continent; and to/from Djibouti and the Red Sea and Gulf. Each of these five OD pairs represents about 10 per cent of the vessel call activity.

The Linescape data, which related to a period before SGTD had their mega-max ship-to-shore cranes installed, which can handle the largest ship on the ocean, shows that the busier ports attract vessels of a larger carrying capacity. The maximum vessel size at Mombasa is a Post Panamax, whilst at Djibouti, vessels reach a ultra-large container vessel (ULCV) size. At the other ports, vessels are mostly of a Feeder (up to 3,000 TEU) and Feeder-max (up to 5,000 TEU) size. These are vessels that are often equipped with their own gear which enables them to self-handle cargo and not rely on port cranes.

Chapter 13 concerns railway transport s services and, in particular, the Addis Ababa – Djibouti standard gauge railway that serves as the main transport corridor for Ethiopia to its gateway of the Port of Djibouti, which handles over 90% of Ethiopia's international trade.

The railway line is owned by the Ethiopia-Djibouti Railway (EDR), a joint venture company of the two state-owned companies, Ethiopia Railway Corporation (ERC), owning 75 per cent of the railway and La société de chemin de fer Djibouti (SDCF), owning 25 per cent of the railway.

The project was constructed by China Railway Group Limited (CREC) and China Civil Engineering Construction Corporation (CCECC). CREC and CCECC also have a contract to operate the railway for six years following construction completion.

All rolling stock was purchased by ERC and has been transferred to EDR.

Since the opening of the railway line, the transport volumes and passenger numbers have been below planned volumes and numbers.

Chapter 14 addresses road infrastructure issues. Road transport accounts for more than 95 per cent of the country's total domestic passenger and cargo traffic, although the country has a limited road network, a small transport vehicle fleet and a low coverage of road transport services.

The country's road network has increased from 26,550 km in 1997 to 147,942 km in 2020, so an average growth rate of 8 per cent per year. This does not include an estimated 49,573 km of unclassified roads. The road density per 1000 sq. km has increased from 24.1 km in 1997 to 131 km in 2020.

Improvement has been registered in the condition of the country's road network, with the proportion of road network in good condition increasing from 22 per cent in 1997 to 71 per cent in 2020.

The population living within 2 km from an all-weather road is 28 million people which gives a Rural Accessibility Index (which is an indication of the percentage of the population living within a 20-minute walk from an all-weather road) of 31 per cent, which is low for sub-Saharan Africa, which has an average RAI of 42 per cent. The RAI for the Somali and Afar Regions of Ethiopia are significantly worse than for the rest of the country.

To improve the road network coverage and improve road conditions, the FDRE Government has completed five phases of the Road Sector Development Programme (RSDP), starting in 1997 and completed in 2020. Under the RSDP, physical works have been undertaken on a total of 159,218.4 km of roads excluding routine maintenance work and community roads, financed mainly (84.9 per cent) from domestic sources, including the general budget and the Road Fund Office, but also from external sources (15.1 per cent).

Chapter 15 addresses the trucking fleet, and in particular the cross-border truck fleet. Most cross-border trucks, about 60 per cent, are rated as having a carrying capacity of 38 tons or more. This is an interesting statistic in itself as the maximum axle loads for a truck under the COMESA-EAC-SADC Tripartite Transport and Transit Facilitation Agreement (TTTFP), which Ethiopia has signed up to, is about 8 tons an axle, depending on the axle combinations. Most cross-border trucks registered in Ethiopia are 6-axle truck/trailer combinations which have a tare weight of about 18 to 20 tons. If a 6-axle truck with a tare weight of 18 tons carries a load of 40 tons (which is the allowed cargo weight in Ethiopia) the total weight (or gross vehicle mass) will be 58 tons and the axle loading will be almost 10 tons per axle, which is about a 20-25 per cent overloading. As Ethiopia's roads are designed for axle loads of about 8 tons per axle, and as the damage caused to pavements from overloading is a log (or exponential) function, an overloading of 20 per cent will half the life expectancy of the road pavement. Given that it costs about USD1m to USD2m to build a pavement of a single lane going in both directions, overloading is a massive economic cost to any economy.

Most cross-border trucks, or about 75 per cent, are owned by the truckers' associations and about 50 per cent of the trucks owned by the truckers' associations are in good condition (level 1), about 30 per cent are in fair condition and about 20 per cent are in poor condition. Of the trucks owned by the private sector, about 70 per cent are in good condition.

About 16 per cent of the total cross-border fleet is either not operational or is being maintained which means that the number of trucks providing a cross-border service is about 11,000. Of these 11,000 trucks, about 2,700 belong to private sector operators and about 8,300 belong to the truckers' associations.

Chapter 16 addresses air transport and focusses on cargo services provided by Ethiopian Airlines, Ethiopia's, and Africa's dominant carrier, and the 4th largest airline in the world. The firm is wholly owned by the Government of Ethiopia but operates as a private company, with its own Board of Directors, and Government does not get involved in the management of the company. It became a share company in 1965 and changed its name from Ethiopian Air Lines to Ethiopian Airlines.

Ethiopian Airlines was organised into an aviation holding group in July 2017 consisting of Ethiopian Airports Enterprise (EAE); Passenger Airline Company; Cargo Airline and Logistics Company; Ethiopian Aviation Academy; Ethiopian In-flight Catering Services; Ethiopian Maintenance, Repair and Overhaul (MRO) Services; and Ethiopian Hotel and Tourism Services.

Ethiopian Airlines carries about 1.5 million tons of cargo a year, using 177 aircraft, of which 129 are passenger aircraft, 12 are cargo freighters and 36 are training aircraft.

There are three cargo terminals at Bole International Airport that belong to Ethiopian Airlines, these being Terminal I (ETCT-I) with a capacity of 300,000 tons/year; Terminal II (ETCT-II) with a capacity of 600,000 tons/year and a perishable cargo terminal that can handle 276,000 tons (82%) of import cargo/year; 17,000 tons (5%) of transit cargo/year and 43,000 tons (13%) of export cargo/year.

Chapter 17 addresses warehousing and warehousing systems. The warehouse system in Ethiopia is decentralised across many organisations, both public and private and are used mainly for storing agricultural commodities such as grains, oilseeds, coffee, and other non-perishable agricultural products.

Key public entities involved in warehouse management include the Ethiopian Trading Businesses Corporation (ETBC), the National Disaster Risk Management Commission (NDRMC), the Ethiopia Commodity Exchange (ECX), the Ethiopian Agricultural Businesses Corporation (EABC), and the Ethio-Djibouti Railway (EDR). Accurately accounting for the total number and capacity of warehouses,

especially the private ones, can be challenging because of the many warehouse owners. However, the combined warehouse capacity of the main public entities is estimated to be around 1,685,784 tons with ETBC owning or controlling the largest share of warehousing space.

The availability of warehouses in Ethiopia is currently limited because most warehouses are already used by the main entities mentioned above. The few available options often come with high costs. Additionally, most of the warehouses are independent scattered facilities.

There is a notable lack of coordination and integration among entities involved in the warehouse system, resulting in inadequate stock management and ineffective price control. This issue is further compounded by the seasonality of many stored products, particularly agricultural commodities such as wheat, leading to periods of under-utilisation in warehouses during certain months of the year.

Most warehouses in Ethiopia typically lack value-added services and often operate with limited personnel. The available workforce is often characterised by low qualifications and strong unionisation, resulting in low productivity rates.

Warehousing in Ethiopia is, in general, inefficient which is caused by a lack of qualified personnel and long loading/unloading and shifting times. Warehouses are not specialised and are almost always at an advanced stage of their useful life. Their overall security is fair, and their management systems are still manual in most cases, without IT systems. This leads to serious planning issues, resulting in poor stock management and long storage, dwell, and turnaround times. It can also lead to the contamination of stock, such as grain, stored for long periods of time. The general lack of coordination and integration between all procurement bodies makes it difficult to find available warehouses and leads to poor control of warehouses prices.

Warehouses are primarily concentrated in the central and northern regions of the country, with a notable concentration around the city of Addis Ababa. This distribution pattern aligns with the population density and agricultural production centres in those areas.

Most of these warehouses enjoy good accessibility, as they are located close to major road networks that traverse the country. Additionally, some warehouses have the added advantage of being accessible via the Ethio-Djibouti railway line, which further facilitates the transportation and movement of goods.

Chapter 18 addresses Industrial Parks, Dry Ports and Special Economic Zones The Government of Ethiopia places high importance to industrial parks development and is establishing over 20 industrial parks located along key development corridors. Currently, there are 13 Federal Government owned and managed industrial parks, 3 regional government owned industrial parks and 7 private industrial parks operating in Ethiopia.

Most factory sheds of Industrial Parks are rented to foreign investors, and they produce mainly products to be exported. In general, Ethiopian Industrial Parks have low land rental prices by global standards (2.50 USD/sqm/month in Hawassa and 2.75 USD/sqm/month in Dire Dawa).

All Ethiopian Dry Ports are managed by the Ethiopian Shipping and Logistics (ESL) and are mainly focused on container trade, but some of them also offer services for fertiliser or grain trade.

The Modjo Dry Port is the largest operational Dry Port in Ethiopia and handled around 67 per cent of the total tons and 86 per cent of the total TEUs traded by Ethiopian Dry Ports in 2021. Apart from the container storage area, it has six closed warehouses (three of 5,400 sqm for customs inspection, another one of 5,400 sqm rented to the shipping lines and two of 1,600 sqm for fertiliser).

Although Ethiopian Dry Ports are generally in good condition and the overall security is good, the global storage capacity is limited by global standards. Therefore, the Ethiopian Transport Master Plan 2022-2052 proposes several new dry ports, mainly along the corridors connecting Addis Ababa with Eritrea, Sudan, Kenya and Somalia, given that the Ethiopia-Djibouti corridor is already well served by the Modjo Dry Port, which is currently being upgraded. Of particular interest is the Dry Port being built in Hawassa, which will serve a major Industrial Park along the Ethiopia-Kenya corridor.

Special Economic Zones

Chapter 19 addresses exports and imports of commodities and value chains Ethiopia's economy largely depends on agricultural commodities for its foreign exchange earnings and the export cargo volume partly reflects this. Of the top ten major export items by volume, eight are from the agricultural sector, being, in order of importance, pulses, coffee, oilseeds, fruits and vegetables, flowers, chat, live animals, meat products and spices, while the two most important mining products are tantalum and gold.

The export value of flowers, chat and fruit and vegetables have been increasing while the export values of oilseeds, pulses and live animals has been decreasing. Exports of meat, spices, tantalum, and gold are stable but are not major export earners for Ethiopia.

The total export cargo volume of the top ten exported items was 1.2 million metric tons in 2021 and are estimated to grow to 1.37 million metric tons by 2030, which would be almost a return to the volumes exported in 2016, which were 1.39 million metric tons.

Ethiopia exported about 594,000 tons of coffee, sesame and fruits and vegetables per year, on average, from 2020 to 2022. In the same period the total average production for these commodities, plus wheat, was 16.4 million tons, with wheat contributing 5.4 million tons. About 4.3 million tons was consumed within the production areas, with about 11.5 million tons consumed domestically within Ethiopia and about 0.6 million tons was exported.

Containerised imports account for about 50 per cent of Ethiopia's total imports which increased during the 2015-2017 period at an average CAGR of 4.3 per cent but have been declining since 2017 at an average CAGR of 8.2 per cent.

Most of the containerised products imported into Ethiopia and exported from Ethiopia pass through the Port of Djibouti, mainly at the Doraleh Container Terminal (operated by SGTD) but also at the Doraleh Multipurpose Terminal (operated by DMP). All goods are subject to customs clearance procedures at the port. Customs officials inspect the goods, verify the accompanying documentation, and assess applicable duties and taxes.

The business processes that are followed for containerised imports entering Ethiopia from Djibouti through the borders of Galafi or Dewele, destined to Modjo Dry Port are itemised, with the business processes revolving around three core processes:

i) Pre-import, which starts with preparation of documentation and ends with issuance of international payment options.
ii) The Djibouti port service process starts with goods arrival, to transit, to the border crossing.
iii) The in-transit process starts from the Dewele or Galafi border posts to Modjo dry port for container cargo and fertiliser and final destination for dry bulk cargo.

As the Ethio-Djibouti Railway, linking the port(s) of Djibouti to Addis Ababa, has become operational, increasing volumes of cargo are moving from road to rail so that, currently, more containerised cargo imports from Djibouti are now moving to Addis Ababa and Modjo Dry Port by rail rather than by road.

The Business Process for import via rail transport for international container cargo covers two core processes:

i) Document validation, which is done by the owner and EDR, starting from contract to document validation; and
ii) The issuance of order occurs between EDR and Djibouti port.

Chapter 19 provides detailed value chain analyses and business process analyses for the following commodities.

- Coffee. Ethiopia is Africa's largest coffee producer and the world's fifth largest exporter of Arabica coffee and coffee is one of Ethiopia's main sources of export revenue, generating, on average, about 30 to 35 per cent of the country's total export earnings.

- Sesame. Ethiopia's three main oilseed crops (sesame, soybean, and Niger seed) account for about 20 per cent of the country's total agricultural export profits. The oilseed sector is one of the fastest growing sectors in the country and is the second largest source of foreign exchange earnings after coffee. Ethiopia is one of the world's top six sesame producers and accounts for 14 per cent of total global exports. It is a crop that is cultivated and grows wild in Ethiopia, with a wide range of cultivated sesame varieties. Sesame is grown in Amhara, Tigray, Oromia, Benishangul-Gumuz, and the Southern Nations, Nationalities, and People's Region (SNNPR) but the major production areas are in Ethiopia's northern and northwestern regions, bordering Sudan and Eritrea.

- Wheat, one of the most important food security crops in Ethiopia, is cultivated on a total area of 2.1 million hectares, with 1.7 million hectares rain-fed and 0.4 million hectares irrigated. Annual total production in 2020-21 was about 5.52 million tons and about 7.5 million tons in 2021-22. Wheat is mainly produced by smallholders with landholdings of less than one hectare. About 5 to 10 per cent of Ethiopia's wheat is produced on large-scale farms in the Arsi-Bale wheat belt. Wheat is the third most important cereal crop in Ethiopia, after teff and maize, accounting for 17 per cent of the country's grain production. Ethiopia is the second largest wheat-producer in Africa, after South Africa. The grain produced in Ethiopia is aggregated by farmers at cooperative societies, local markets, and other designated locations. The quality of wheat is assessed through various tests, and afterwards it is packed in sacks or bags. It is then transported and stored in warehouses because Ethiopia does not have public sector silos which can be used to store wheat. In 2021 Ethiopia met about 70 per cent of its wheat demand through domestic production and so needed to import the remaining 30 per cent. Once the domestic supply of wheat is known (or estimated) and total demand is forecasted, government agencies, including the Ethiopian Trading Businesses Corporation (ETBC) and the National Disaster Risk Management Commission (NDRMC), working together and often with external agencies such as the World Food Programme (WFP) will estimate the amount of wheat that needs to be imported. Recently Government determined that the only agency authorised to import wheat was ETBC.

  Imported wheat arrives mainly through the Port of Djibouti but also, to a much lesser extent, and mainly wheat imported through WFP, through Berbera. Vessels are unloaded with either suction machines or mechanical grabbers, and the bulk grain is then stored in the port, either in a warehouse (as is the case for SDTV) or in a horizontal silo (as is the case for DMP) or, in the case of WFP, can be transported directly to the WFP silos. The grain is bagged in 50kg

bags at the port facilities before being transported to Ethiopia, usually directly to the warehouse the wheat has been assigned to.

Some wheat off-loaded at DMP is transported by rail. The Ethio-Djibouti Railway railhead in Doraleh is about one kilometre from the port and there is no system (such as a conveyor belt) linking the warehouses or horizontal silos to the Doraleh railhead, so all grain exported by rail is bagged at the quayside, loaded onto a truck, driven to the rail head, and loaded into wagons.

- Perishable Products Ethiopia has the potential to produce and export perishable products such as fruit, vegetables, flowers and meat. But, despite this potential, the horticulture sector has been underdeveloped, compared to food grains and floriculture, partly because of the lack of cold chain logistics infrastructure for sea freight. To tap into this potential, Ethiopia has prioritised horticulture as a key sector for agricultural production and future export growth. Work being done on export by surface transport of perishable products and development of the cool chain is carried out primarily under the National Cool Logistics Network, which is a joint project between the Governments of Ethiopia, Djibouti and the Netherlands and involves local businesses and smallholder farmers. The National Cool Chain Logistics Network categorises export cargo flows by primary and secondary flows. The primary flow is the export of fresh produce, which is the priority and catalyst project for the National Cold Chain Logistics Network. Secondary export flows include chilled and frozen meat, as well as refrigerated flowers.
- Teff is a dietary staple food crop and the most important cereal in Ethiopia in terms of agricultural land use and total value. It is adapted to a wide range of environments and is presently cultivated under diverse agroclimatic conditions, but mainly in the central and northwestern highlands. The crop is critical for incomes and food and nutrition security and is grown by 6.5 million smallholder farmers who consume 70 to 80 per cent of their production and market the surplus to consumers.
- Livestock. Ethiopia has the largest livestock population of any African country. The sector contributed up to 40 per cent of agricultural GDP, nearly 20 per cent of total GDP, and 20 per cent of national foreign exchange earnings in 2017. The export of live animals from Ethiopia plays a significant role in the country's economy, contributing to foreign exchange earnings and providing employment opportunities.
- Fertiliser. Between 2020 to 2022 Ethiopia distributed on average 1.4 million tons of fertiliser across Oromia (658,000 tons), Amhara (615,000 million tons), and (the previous) SNNP (110 million tons) regions. The country has distributed an annual average of 1.49 million tons of fertiliser in the three years.
- Minerals, Gemstones and Construction Materials. The Ethiopian mining sector generated annual average revenue of ETB389 million and USD131 million from 2018 to 2020. Mineral investment brought annual average revenue of about ETB2m. The country has reportedly produced, on average, 2,259 kg of gold, 7.5 million tons of lime, and 139 thousand tons of gypsum.
- Gold. Asosa zone, Metekel zone, and Kamashi zone are the major gold producing regions and are part of the "Gold Belt" stretching from Sudan and into the north-western part of Ethiopia. The major producers of gold in Ethiopia are artisanal miners, who account for about 48 per cent of the gold produced. The main commercial gold mine in Ethiopia is the Lega

Dembi Mine located in Oromia, which is owned by Midroc and which produced about 168,280 ounces in 2021 and accounted for about 38 per cent of the gold produced.

- Gemstones. Ethiopia has a large variety of high-quality precious gemstones, including opals, emeralds, sapphires, amazonite, amber, rubies, tourmaline, aquamarine, chrysoprase, period, and semi-precious gemstones including quartz, agate, jasper and there have been new discoveries of colour-change Chrome Grossular Garnets
- Coal. Ethiopia has an estimated 430 million metric tons of coal, and the government continues to encourage utilisation of this resource by encouraging small- and large-scale coal producers as well as trying to attract investors into this sector. The volume of coal that is imported rose steadily from 381,300 short tons in 2014 to a high value of 732,500 short tons and then steadily declined to 509,300 short tons in 2021.
- Cement and Construction Materials. Ethiopia is the 7th largest producer of cement in Africa. There are 13 companies operating 23 plants owned by a mix of international and local investors, with Derba Midroc Cement, Dangote, Mugher Cement, Messebo Cement, Habesha Cement and National Cement (parent company East African Holding), being the largest producers.
- Dimension Stone. Ethiopia has untapped potential in marble production. The marble deposits are mostly located in the Northern and Western part of Ethiopia. In the exploitation of dimensional stone, large, commercial blocks are extracted in the quarry and transported to a processing plant for final shaping and finishing into slabs and tiles. Those that are homogenous and attractive types of rocks are potentially exported to other countries as rough blocks. Interesting deposits of marble are found in the western part of Wellega (Daleti) and Gojam (Mora, Bulen, Mankush and Baruda). The area is quite remote, and distances to Addis Ababa vary between 550 and 800 km, for the most part along non-paved roads. The cost of transportation and the security situation in the area are posing serious challenge for the production and smooth marketability of the product.
- Oil and Gas. Ethiopia has the potential to be an oil exporter with oil deposits having been located in the northeast, southeast, and southwest of the country. International oil exploration companies have been given oil concessions and, in 2018, Poly GCL struck oil at their oil field of Hilala at the Hamanlei formation, where they had drilled three exploration wells. All of the three wells have shown gas reserves with 2 of them having oil flows. The test production phase of Hilala will see Poly GCL producing 450 barrels of oil per day.

  Ethiopia has imported about 3.8 million metric tons of petroleum products worth Birr 164.3 billion by the Ethiopian Petroleum Enterprise during the 2021/22 fiscal year. This value of petroleum import showed a 126.3 per cent annual surge mainly due to an increase in import of jet fuel (140 per cent), gas oil (127.5 per cent), regular gasoline (120.4 per cent) and fuel oil (65.3per cent). Consumption of petroleum products has also been rising rapidly and annual oil consumption tripled from 1.2 million metric tons in EFY 1995 to 3.9 million metric tons in EFY 2012.

  EPSC) has 23 strategic depots built in 14 different cities to store 394 million metric tons of different types of fuel at a time. Out of these 327 million litres of diesel can be stored in 15 depots in five different towns; 53.5 million litres of gasoline in 5 depots in five towns; 50,000 litres of kerosine in 1depot in Gondar; and 3 million litres of light black diesel in 2 depots, in Kombolcha and Shashemene.

Fuel is distributed to just under 1,000 fuel stations throughout the country. Seven of the distribution companies are foreign owned and thirty-one are Ethiopian owned. In terms of market share, five companies have a market share of about 80 per cent.

Chapter 20 describes the framework for private investment in infrastructure in Ethiopia. The Ethiopian government has recognised the significant role that PPPs can play in addressing the country's infrastructure gaps and promoting economic growth. To this end, it has implemented a comprehensive legal framework, established dedicated institutions, and introduced transparent processes to facilitate PPP projects.

The recently enacted Public-Private Partnership Proclamation No. 1076/2018 (the PPP proclamation) aims at facilitating and improving private sector participation in infrastructure financing.

In March 2021, the PPP Board, following an initiative of the PPP Directorate General, granted approval for a total of twenty-three (23) projects in the PPP pipeline. The three projects identified in the transport sector are the Adama-Awash Expressway (125 km), the Awash-Mieso Expressway (72 km) and the Mieso-Dire Dawa Expressway (160 km), all being upgrading of the existing road to an Expressway.

The PPP proclamation also establishes the provisions for project development and approval procurement (including open bidding, two-stage bidding, competitive dialogue, direct negotiations and unsolicited proposals) and implementation of the PPP agreement.

1. Introduction

The Government of the Federal Democratic Republic of Ethiopia (FDRE) has recognised the importance of transport and logistics sectors and has taken steps to introduce reforms in these sectors. It is recognised that logistics reform is essential to allow Ethiopia to fully capitalise on the opportunities generated by the investments that have, and are being, made in critical infrastructure, including roads, railways, dry ports, industrial park facilities and special export zones.

The objective of the FDRE reforms is to promote efficiency, innovation and transparency in cross-border trade, increasing capacity and range of services, and reduce the cost of doing business in the country. However, despite the introduction of reforms, the anticipated boost in the growth of the manufacturing and agricultural sectors have not materialised. Firms in Ethiopia continue to face high inventory costs, long lead times and unreliable and unpredictable import and export supply chains. Poor logistics increases the final price of imported fertiliser used in agriculture, thereby constraining exports of key products such as sesame, coffee, perishable commodities and processed food.

The 2019 Ethiopian Logistics Review carried out for the Government of Ethiopia by a World Bank and African Development Bank team proposed that the Logistics Sector should be designated a priority sector for Ethiopia. Ethiopia started down this part with the development of the National Logistics Strategy, the establishment of a National Logistics Council and the creation of the Logistics Transformation Office within the Ethiopia Maritime Authority. The National Logistics Strategy has been the driver of Logistics since its formal adoption in 2017.

In the “Priority Sector” approach, the business community, universities and knowledge institutions and the government work together to tackle the challenges that the logistics sector is facing and work together in the field of knowledge and innovation. This unique form of collaboration (golden triangle/triple helix) is designed to promote innovation, to attract talent (human capital) and to ensure a solid position for the sector in the international context. The instruments used include investments, fiscal incentives, guarantees and cutting down on bureaucracy and red tape.

Structural reform was one of the key macroeconomic issues addressed in Ethiopia’s 2019 Home-grown Economic Reform Agenda and logistics and transport issues were among the priority areas of the reform agenda. While macro-financial stability is necessary for restoring confidence and building a solid foundation for economic growth, success in rebalancing and sustaining productivity growth and job creation will depend on creating an enabling environment for businesses and sufficient incentives for investment. Cumbersome bureaucratic and regulatory procedures, corruption, barriers to international trade, poor logistics, and limited access to reliable electricity, in addition to foreign exchange shortages and limited access to finance, are often cited as the key bottlenecks to doing business in Ethiopia. On the other hand, monopolistic and hoarding practices in some domestic markets have complicated efforts to stabilise prices.

The challenges faced by businesses, exporters, and manufacturers include a heavy bureaucratic customs process and inadequate logistics services, under-developed transport systems, inadequate terminal facilities, limited utilisation of ICT systems, and an inefficient regulatory framework.

In Ethiopia, access to multimodal transport services is limited and the position of the Multimodal Transport Operator is not clear. Until recently, third parties have been excluded from setting up their own multimodal transport services. To open up the multimodal sector to private competition, the Council of Ministers approved a regulation amending the 2011 bill that had established a

monopolistic approach to logistics. Although the legal framework now permits new entrants, so far, no additional multimodal operators, beyond the original state actor, ESL, have joined.

Multimodal transport in the international context differs from multimodal transport in the Ethiopian context, as in Ethiopia it involves a lot more than modes of transport; it refers to providing transport, cross-border services (bonding and transit through a foreign country), warehousing and all this without having to pay a foreign service provider, so all done in local currency.

Recent logistics reform measures undertaken by the Ethiopian government include the following:

- **Enhance logistics sector competitiveness and efficiency**. Improving the competitiveness of the logistics sector requires enhancing the existing services in the sector and expanding the range of value-added services as well as improved coordination among actors. This will require modernising corporate governance, improving operational efficiency of logistics enterprises and attracting a range of investors into the sector. The operational efficiency of Ethiopian Shipping and Logistics (ESL) needs significant improvements in shipping, freight-forwarding and terminal and port operations to engender performance improvement and lower costs. The government has announced measures to liberalise the sector. The liberalisation of the sector would allow an increase in the capacity, efficiency, and quality of existing services, which are focused on transportation and customs clearance. It's also important to expand value added services and bring in private sector providers in a range of logistics services to serve modern manufacturing supply chains, including distribution, packaging, warehousing services, transport management services, supply chain consulting services, consolidation and deconsolidation and inventory management.
- **Enhance coordination across the logistics sector actors**. Logistics is a network industry where efficiency is impacted by multiple regulations and requirements defined by a range of regulatory bodies (maritime transport, road transport, rail, ports, customs, finance, etc.), all with different objectives. Hence, regulatory coordination is essential in supporting efficiency in the sector and preventing fragmentation of supply chains. Establishing a robust logistics sector coordination structure will be among the key reform measures.
- **Digitalise logistics and related services**. Under-utilisation of ICT constrains the logistics sector. The IT software and systems that track cargo and report on customs processes are not fully operational or integrated. The use of ICT will be enhanced to include automated customs clearance system at the customs authority and the integration of these services in checkpoints along trade routes, where traders and service providers can access the web-based portal.

2. Methodology and Data Sources

The resources available for the Ethiopia Logistics Masterplan Diagnostic (ELMD) exercise were insufficient to rely on collection of primary data so the Diagnostic relies heavily on secondary data collected mainly by Addis Ababa University (AAU), who were contracted to collect the data required for the Diagnostic. **All figures and tables not attributed underneath the table or figure are sourced from the work done by Addis Ababa University.**

AAU employed a mixed research approach involving both qualitative and quantitative approaches. The extensive amount of data that needed to be captured and then analysed and assessed, and the need to triangulate information gathered from several sources, necessitated the use of the mixed approach.

Secondary data has been gathered, mainly by Addis Ababa University, from recently published and unpublished documents including relevant legal documents such as Proclamations, Regulations, Directives and manuals related to trade logistics, transportation and Customs. Further reviews include national and sectoral strategic plans such as the National Transport Master Plan and National Logistics Strategy, studies and reports on trade logistics, main import and export value chains, logistics systems and logistics facilities such as industrial parks, warehouses, border posts and dry ports. Numerical data has been gathered from reports from the Central Statistical Agency, National Bank of Ethiopia and Ethiopian Customs Commission.

Primary data has been gathered from various stakeholders and government ministries and agencies using questionnaires or data templates, key informant interviews and Focus Group Discussions for each sector which included the mining and mineral sector, agricultural commodities, and logistics sectors. This data includes production and distribution of major agricultural commodities and fertiliser, mining and minerals production, industrial park production and facilities, warehouse facilities and volume, port facilities, border posts, logistics facilities and road vehicle and fleet capacities.

Table 2.1 shows the breakdown of the qualitative data collection through individual interviews and focus group discussions.

Table 2.1: The breakdown of the qualitative interviews across different Key Informants

No	Key Informant group	Individual interviews	FGDs
1	**Regulatory body and development partners**	**17**	**8**
	- Federal and regional government offices (MoTL, EMA, MoA, Regional agricultural bureau, MoM, ERA, ERC)	12	6
	- Development partners (WB, WFP, CRS)	5	2
2	**Warehouse operators and distributors**	**16**	**6**
	- Agro sector (ETBC, NDRMC, EABC, EPSA, ECX, Associations)	10	4
	- Logistics Sector (ESLSE, associations)	6	2
3	**Logistics Facility Providers**	**8**	**2**
	- Industrial Park	4	1
	- Dry port	4	1
Total		**41**	**16**

Data collection templates and questionnaires have been employed to gather objective and numerical agricultural warehouse data, including capacity, location, condition and distribution information; of

mining commodities; of industrial parks and dry port information; and of other logistics information such as vehicle and train capacity, volume, and driver time logs.

Data has been obtained from three stakeholder categories, these being Regulatory Authorities and Development Partners; Warehouse Operators and Distributors; and Logistics Facility providers. A mix of purposive sampling and snowballing techniques were used to select interviewees from selected members of Regulatory Authorities, supply chain actors, and logistics facility providers. Initially, purposive sampling was used for high level key informant interviews; then sequential snowballing was adopted to locate the right key informants fitting each specific interview guides. Finally, data collection templates were administered to gather concrete official numerical and statistical data. In parallel, key data providing offices from each sector were approached to gather national and regional data on the selected sectors.

The schedule at Table 2.2 summarises the sample proportion if population size can fairly be determined.

Table 2.2: Breakdown of study population

No	Population category	Data collection method	Sampling technique	Sample size
1	Regulatory organs and development partners	Interview, FGD,	Purposive, Snow balling	17
2	Warehouse operators and distributors	Interview, FGD	Purposive, Snow balling	16
3	Logistics facility providers	Interview, FGD	Purposive, Snow balling	8
4	Primary data providers	Survey	Purposive	50

The study employed both qualitative and quantitative data analysis techniques as follows: -

- Quantitative Methods of Data Analysis The research utilised mainly descriptive statistical analysis to summarise and present the analysis and quantitative components of the research with the help of appropriate statistical packages for each topic using:
    - Descriptive statistics - employed to present data using percentages, frequency tables, items analysis, means, value chain maps, and business process analysis, and projections.
    - Value chain Analysis - conducted to map the value chains of main agricultural and mining commodities affecting the national trade logistics of Ethiopia.
    - Business process analysis – a six-step business process analysis has been employed to show the Business process selected import/export cargos in the main port corridors using root cause analysis and experience analysis.
- Qualitative Methods of Data Analysis: The study applied qualitative analysis techniques such as narrative, content, and thematic analysis to explain and understand the different qualitative aspects of collected data. The qualitative assessment followed careful coding data, identification of themes and pattern, organization into coherent categories, linking within and between categories of data, and data interpretation.

In compliance with applicable ethical procedures, participants are informed of the purpose of data collection and their consent of participation. In addition, the anonymity and confidentiality of participants is strictly preserved.

For the railway sector component a different data-gathering and analysis technique was used. The two railway Non-Key Experts reviewed existing reports on the Ethiopian railway sector. They then prepared a Power-Point presentation which summarised the Ethiopian railway sector and presented this in a 2-day workshop of selected Ethiopian railway experts. The workshop reviewed the material collected and made a series of recommendations on how the railway sector should be further developed after first analysing the challenges faced in the sector. Specifically, the following methodology for the railway sector was used:

- Direct Data Collection from Ethiopian Railways Corporation (ERC): This included details about the national railway network, its current status, and future plans. This direct approach ensured that the data was accurate and up to date, providing a reliable foundation for the report.
- Compilation of Information from Various Sources: Compiling detailed descriptions and technical conditions of the Addis Ababa-Djibouti railway project from different publications. These publications were sourced from the Ethiopian Railways Corporation and the Ministry of Transport and Logistics. This method allowed for a broad range of perspectives and data points to be included in the report.
- Collection of Operational Data: This involved using annual reports from the Ethio-Djibouti Standard Gauge Railway Company (EDR) to collect operational data. This data provided a clear picture of the company's performance and operations, which was crucial for understanding the current state of the railway sector.
- Review of Previous Studies: This involved reviewing previous studies on the railway sector. In the past five years studies have been carried out by different institutions in the railway sector, including a study by ERC, the World Bank and McKinsey and these were reviewed. These studies focused on sector governance, finance, investment, and market structure and, by reviewing these studies, a comprehensive understanding of the sector was achieved, which helped to contextualise the data collected.
- Focus Group Discussion: Discussions were held with the management of the Ethiopian Railways Corporation. These discussions provided valuable insights and perspectives on the critical problems facing the railway sector in Ethiopia. This qualitative data added depth to the report, providing a more nuanced understanding of the challenges and opportunities in the sector.
- Collaboration with Experienced Railway Professionals: This involved collaborating with a select group of experienced railway professionals. These professionals had in-depth knowledge of the Ethiopian rail industry and helped to create a the SWOT analysis and a comprehensive ten-year scenario analysis for EDR, the railway operation company. This analysis included a thorough evaluation of the current state of the industry, as well as predictions for future growth and development.

Data gathering on road condition was from the Ethiopia Roads Authority, who were able to provide data on the international Roughness Index (IRI), which is a measure of the physical condition of a road, and average annual daily traffic (AADT) counts for all sections of the main trunk road system.

The shipping profile is calculated from a dataset obtained from Linescape, a company which advertises itself as compiling the most comprehensive source of global sailing schedules, ships register details and liner profile information. The database covers 134 shipping lines and 1,100 ports.

The dataset is in a “raw” state when received and requires some work to screen out duplicate voyages/ calls (to eliminate the instances of more than one liner offering capacity on the same vessel, sometimes on different dates). For the period analysed (October 2021 to June 2022) the master data file of some 900,000 records is reduced to about 21,000 relevant records which include all the sailing legs of all the services that call at the target ports listed above.

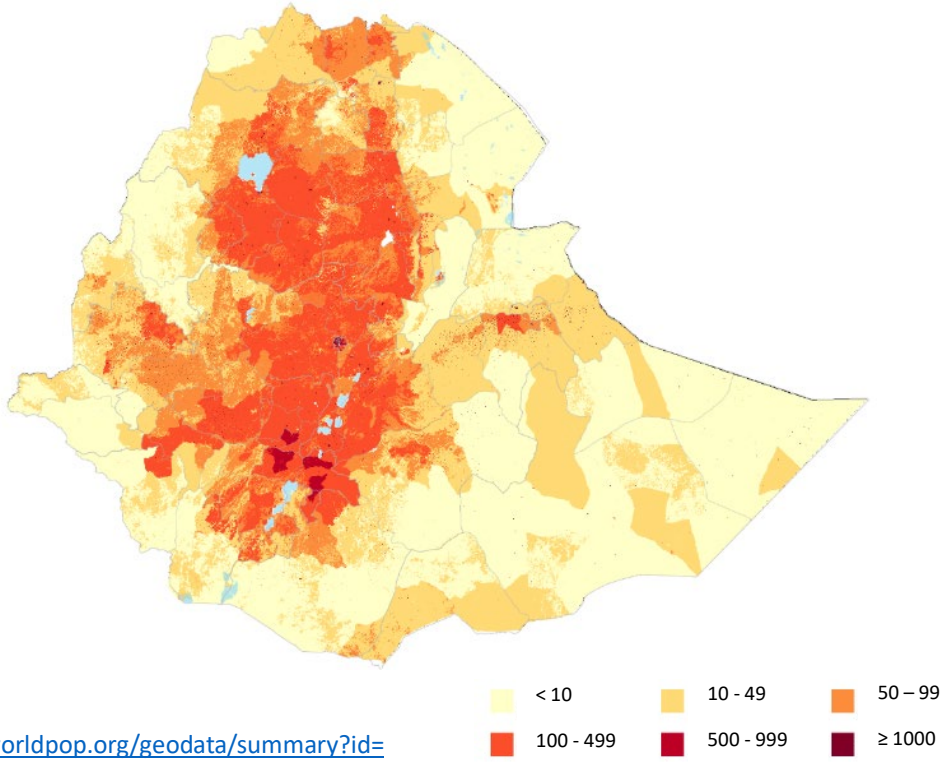
Ports’ tariffs’ contribution to the cost of importing into and exporting out of Ethiopia was obtained from Ethiopian Shipping and Logistics (ESL), with the source being the port tariff book, dated 2017/2018 (Doraleh Container Terminal, Djibouti), 2021 (Berbera), and 2022 (Port Sudan and Mombasa).

3. Macroeconomic and Trade Overview

Ethiopia is a landlocked country located in the Horn of Africa with an estimated population of 120 million people and a GDP of USD111 billion in 2021, with low GDP per capita (USD925) compared to the Sub-Saharan Africa average (USD1,663)[1].

Addis Ababa is the capital and largest city of Ethiopia, but the rural population accounts for 78 per cent of the total population. Most of the Ethiopia's population is concentrated in the central and northern parts of Ethiopia, particularly in the Oromia region and the city of Addis Ababa, as shown in **Figure 3.1**. Moreover, Addis Ababa boasts a higher GDP per capita than neighbouring states, resulting in a greater consumption rate and a wider range of available products. In contrast, rural regions situated further from the capital tend to have a higher proportion of people living below the poverty line. Consequently, consumption patterns in these regions primarily revolve around basic commodities, reflecting lower levels of economic prosperity.

Figure 3.1: Population Density in Ethiopia (Inhabitants per square kilometre)



Source: https://hub.worldpop.org/geodata/summary?id=41033

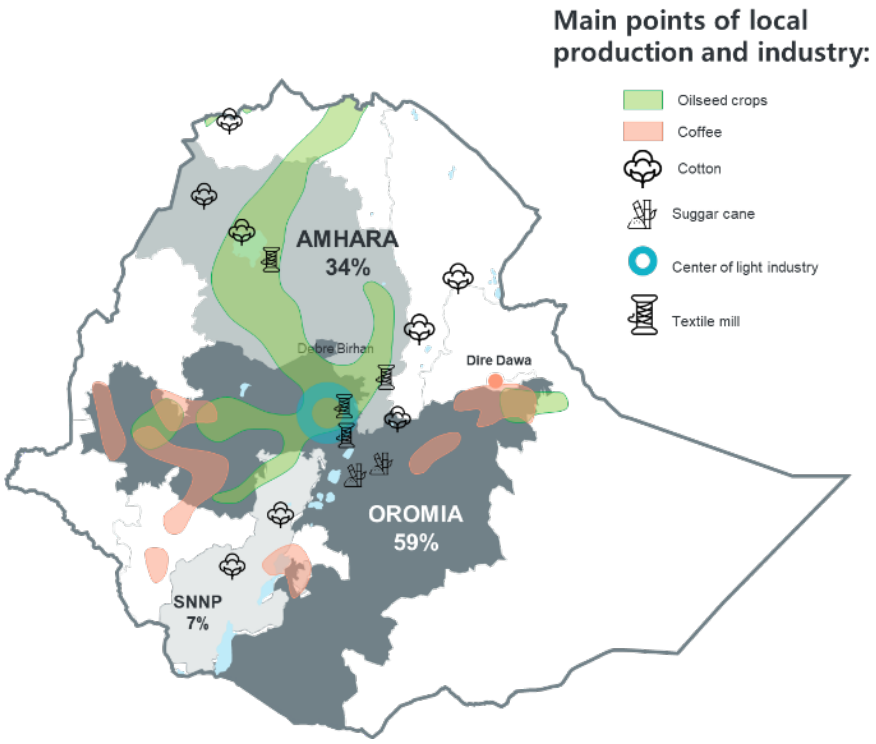
Ethiopia's economy is mainly based on agriculture, which accounts for a 32.4 per cent share of GDP and a growth rate of 6.1 per cent in 2022 and 85 per cent of total employment. The agricultural sector is predominantly characterised by smallholder farmer agriculture. The Services and Industry sectors contributed 40 per cent and 28.9 per cent to GDP in 2022 respectively.

Agricultural production is primarily concentrated in the western, northern and central regions. The country's agricultural sector produces a wide range of products, including grains (particularly wheat), oil seeds, coffee, cotton, sugarcane, and vegetables.

[1] World Bank

As shown in **Figure 3.2**, the Amhara and Oromia regions accounted for around 93 per cent of the total wheat production in the country (34 per cent in the Amhara region and 59 per cent in the Oromia region) in the 2021-22 year. The consumption of wheat is also concentrated in these regions because of their relatively high populations.

Figure 3.2: Distribution of Domestic Production in Ethiopia



Source: https://comtradeplus.un.org/

The flour milling industry in Ethiopia is currently operating at less than 50 per cent of its capacity. Additionally, approximately one third of the existing flour mills are located in Addis Ababa.

The Oromia region accounted for around 72 per cent of the total production of coffee in 2021-22.

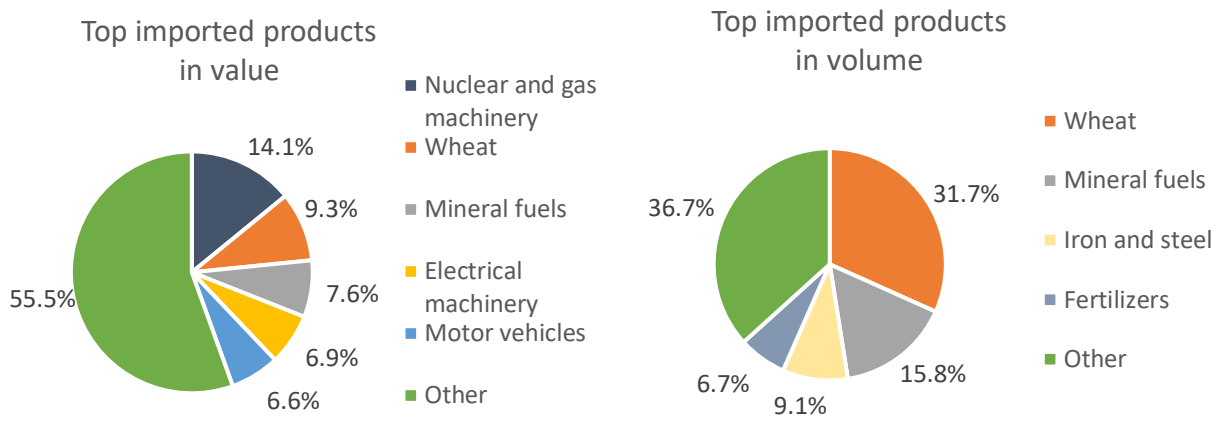
There is a significant flow of agricultural products from the rural Northern and Central regions towards the capital. Most of the cotton is used in the textile industry around Addis Ababa. There is also a flow of basic commodities, such as food, wheat, and fertilisers, from the capital (an intermediate stop from international markets) towards the rural regions.

Ethiopian trade is characterised by an imbalance of imports and exports, with low export volumes per capita compared to the Sub-Saharan Africa average. In 2021, Ethiopia exported USD4.62 billion (1.49 million tons) in products while it imported USD13.44 billion (8.08 million tons) in products[2]. Nevertheless, Ethiopia has abundant natural resources which represent great future opportunities for trade, especially as regards the agricultural and mining industry.

Figure 3.3 shows that, in 2021, the top imports of Ethiopia in value were machinery, wheat and mineral fuels, while in volume they were mainly wheat and mineral fuels. This is due to the difference in the price per ton of each product, especially regarding machinery.

[2] UN Comtrade

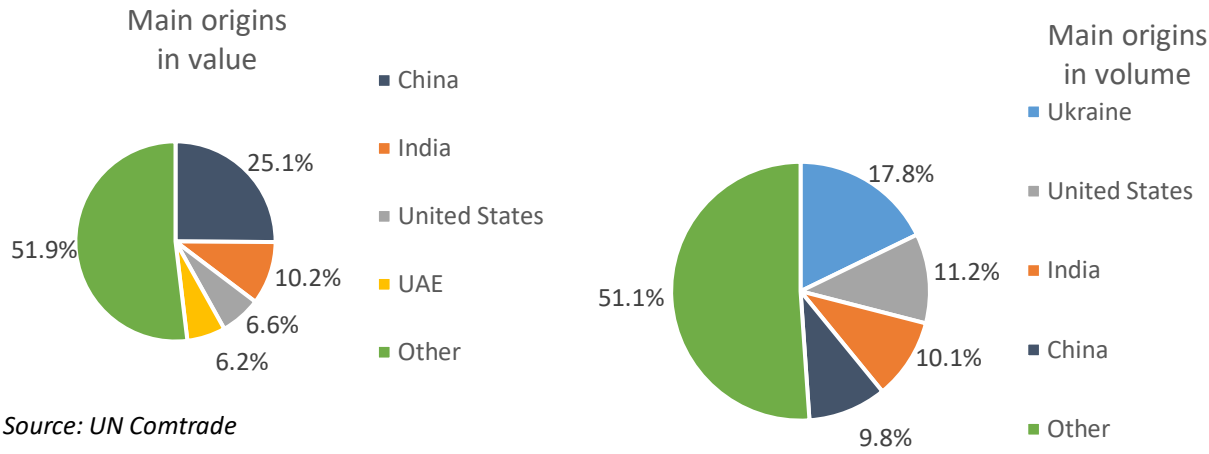
Figure 3.3: Main Ethiopian Imports by Value and Volume (2021)



Source: UN Comtrade

The main origins by value were China and India, while in volume they were Ukraine and the United States[2]. China and India are the main origins of machinery and cars, while Ukraine and the United States are the main origins of wheat as shown in **Figure 3.4.**

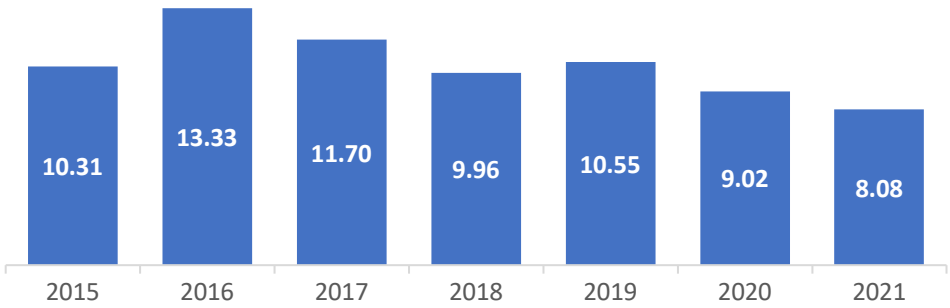
Figure 3.4: Main Origins of Ethiopian Imports by Value and Volume (2021)



Source: UN Comtrade

Figure 3.5 shows the value of imports in Ethiopia from 2015 to 2021. Imports reached a peak in 2016 and have steadily decreased ever since at an average of 9.5 per cent, mainly because of the depreciation of the Ethiopian Birr against the US Dollar and foreign currency shortages.

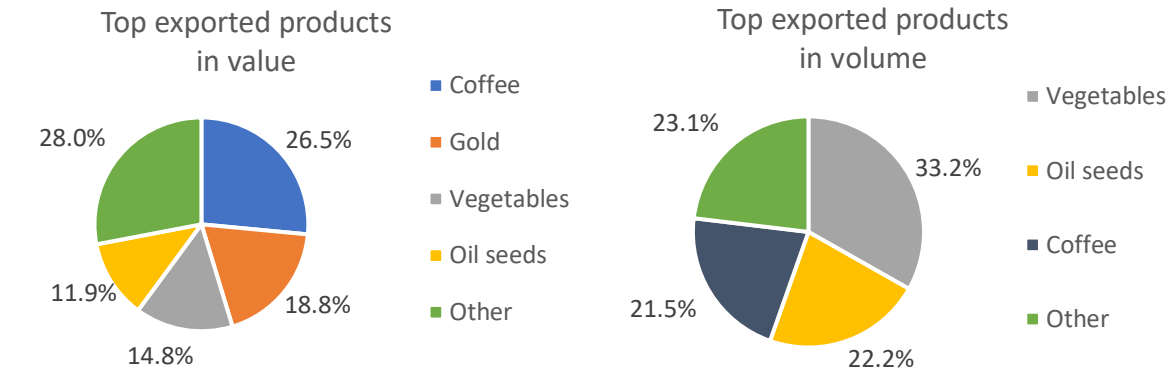
Figure 3.5: Imports in Million Tons



Source: UN Comtrade

As shown in **Figure 3.6,** the top exports of Ethiopia in 2021 in value were coffee and gold, while in volume they were vegetables, oil seeds and coffee[2]. This is due to the difference in the price per ton of each product, especially regarding gold.

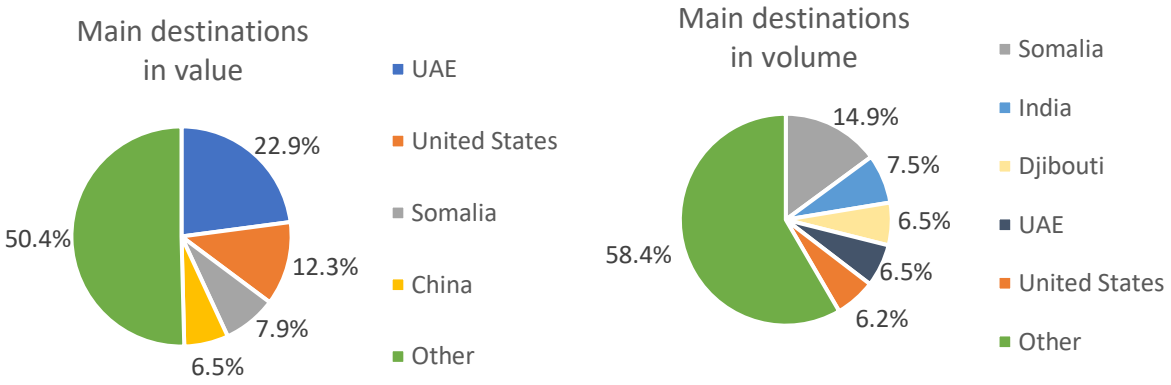
Figure 3.6: Main Exported Products in 2021



Source: UN Comtrade

The main destinations in value were the United Arab Emirates (where the Ethiopian gold is exported to) and the United States, while in volume they were Somalia, India, and Djibouti as shown in **Figure 3.7.**

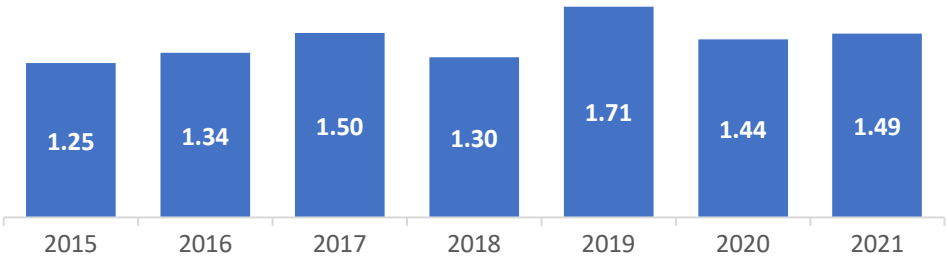
Figure 3.7: Main destinations of Ethiopian exports in 2021 (Source: UN Comtrade)



Source: UN Comtrade

Figure 3.8 shows that exports during the 2015-2021 period increased at an average CAGR of 3 per cent, peaking in 2019 and dropping in 2020 as a result of the pandemic and civil unrest.

Figure 3. 8: Exports by Year in Million Tons



Source: UN Comtrade

4. Stakeholders in the Logistics Sector

The key stakeholders in the Ethiopian logistics sector include the regulatory bodies, transport associations, professional associations, transport and logistics operators, cargo owners, industrial parks and special economic zones. These stakeholders provide a wide range of services that are essential for the smooth functioning of the logistics and international trade sectors.

4.1 Government Ministries, Agencies and SOEs

Ethiopian Customs Commission

The World Customs Organization (WCO) defines Customs as "the government service which is responsible for the administration of Customs law and the collection of import and export duties and taxes and which also has responsibility for the application of other laws and regulations relating, inter alia, to the importation, transit and exportation of goods."

In Ethiopia, Ethiopian Customs Commission's (ECC) functions include the enforcement of the Customs Proclamation provisions governing the import and export of cargo, baggage and postal articles; the arrival and departure of vessels, aircraft, and other means of transport; goods in transit; and the governance of any goods subject to customs control, including rights and obligations of persons taking part in customs formalities.

Customs operations involve the administration of customs law relating to the importation, exportation, movement or storage of goods and the collection of duties and taxes. Ethiopian customs law contains provisions that clearly prescribe the basic guiding principles that have to be applied on customs operations. These guiding principles, which have important implications for the roles of all stakeholders, including the traders themselves, include:

- Self-assessment: It is the responsibility of importers and exporters or their agents to assess and submit the value of goods to the customs office, which then determines the appropriate duties and taxes to be paid based on the information provided by traders.
- Risk management: ECC assesses, directs and controls risks which emanate from the import and export of goods. The purpose is to strike a balance between trade facilitation and controls. Successful implementation of the risk management principle helps to avoid unnecessary delays and wastage of resources by concentrating customs control on high-risk consignments and expediting the release of low-risk consignments.
- Transparency: Under this principle, ECC provides relevant information about trade - including the rates of duties and taxes, fees and charges, customs laws and procedures, appeal procedures, etc. – through publications and other means.
- Accountability: ECC clearly defines the duties and responsibilities of each actor in customs operations.
- Service orientation: ECC is committed to creating a conducive environment to provide equitable, expeditious, predictable and reliable services.
- Prevention of illegal practices by promoting self-compliance: Under this principle, which is related to risk management and self-assessment, ECC will seek to prevent illegal practices such as commercial fraud (under-or over-invoicing, wrong description and classification of goods, etc.), smuggling of prohibited and restricted goods, and others, by taking measures

that promote self-compliance. Examples of such measures are the provision of information and advice to traders, advance rulings for customs classification, customs valuation and preferential origin, the implementation of post clearance audits, or the use of simplified procedures for authorised traders.

- Promotion of priority sectors and economic development: This principle is aimed at the Authority to play its vital role in expediting the economic development of the country by providing special service to priority sectors, such as manufacturing.

As a general rule, Ethiopia allows any commodity to be traded freely. However, this is not the case for "prohibited goods", such as illicit narcotics and drugs or worn clothes and "restricted goods" such as medicines and pharmaceutical products, foods and beverages, communication equipment, fertilisers, seeds, live animals, etc.

Other Border Agencies

In addition to the Customs Division of the Ministry of Revenue, there are other regulatory agencies involved in regulating Ethiopia's international trade. Their responsibilities include safety and security; environment and health; consumer protection; revenue collection; and trade policy. The main agencies and their specific responsibilities are listed in **Table 4.1**.

Table 4.1: Other Border Agencies and their Functions:

Regulatory Agency	Issues Responsible For	Responsibilities
Ministry of Trade (MOT)	All import and export goods	- Issues Import Release Permit - Issues Import Release Permit for Legal-Metrology Instruments - Issues Export Release Permit
Ethiopian Investment Commission (EIC) and Regional Investment Bureaus.	All goods imported and exported by investors	- Issues and renews Investment Permits - Issues Custom Duty-Free permission letter
National Bank of Ethiopia (NBE) and Commercial Banks (CBs).	Foreign currency	- Registers sales contract agreement - Issues Export Bank Permit - Issues Foreign currency Approval - Issues Bank import permit for: Letter of Credit, (Open L/C) - Advance Payment - Approves Purchase Order for CAD
Ministry of Agriculture and Natural Resources (MOANR)	- Import of plants, seeds, plant products, pesticides and fertilisers - Export of animal feed, live animals and meat	- Issues Phytosanitary Certificate for re-export - Issues Veterinary Health Certificate - Issues Export Permit for Animal Feed - Issues pre-import permit for plant and - plant Products - Issues pre-import permit for fertilisers and pesticide - Issues import release permit for plant and plant products - Issues import release permit for list of registered pesticides
Ministry of Industry (MoI)	Incentives related to manufacturing	- Issues Duty drawback authorisation letter - Issues and renews export trade duty incentive scheme certificate

Regulatory Agency	Issues Responsible For	Responsibilities
		- Issue and renew 2nd Schedule Certificate - Approvals of raw material supply contract agreement
Ministry of Mines, Petroleum and Natural Gas	Export of mineral products	- Issues Customs duty- and tax-free support Letter
Ethiopian Conformity Assessment Enterprise (ECAE)	Conformity with accepted standards	- Issues Laboratory Test Report - Issues inspection report
Ministry of Transport and Logistics (FTA))	Import of vehicles	- Issues pre-import permit (criteria specification) - Issues import release permit
Ethiopian Radiation Protection Authority (ERPA)	Import of radiation emitting equipment and machinery	- Issues Pre-Import Permit - Issues Import Release Permit - Issues Export Release Permit and Transport License
Oromia Islamic Affair Supreme Council (OIASC)	Export of meat	- Issues Halal Certificate
Food, Medicine and Health Care Administration and Control Authority (FMHACA)	Import and export of drugs, medical supplies or instruments, baby food, supplement food, cosmetics	- Issues pre-import permit and/or Special import permit - Issues export permit - Issues import release permit - Issues free sale certificate/letter - Issues health certificate - Issues list of registered drugs
Veterinary Drug and Feed Administration and Control Authority (VDFACA)	Import and export of veterinary drugs and animal feed	- Issues Pre-Import Permit - Issues Import Release Permit - Issues re/export Permit - Issues list of registered drugs
Information Network Security Agency (INSA)	Import of communication and security equipment	- Issues pre-import permit - Issues import release permit - Issues re/export permit
Ministry of Communication and Information Technology (MCIT)	Import of tele-communication and network equipment	- Issues Pre-Import permit - Issues Import Release permit - Issues Export/Re-export permit - Issues Customs duty and tax free permit
Ministry of Livestock and Fishery (MOLF)	Import of live animals, animal products, and export of animal feed	- Issues pre-Import permit for live animals and animal products - Issues import release permit for live animals and animal products - Issues international veterinary health certificate for cattle, sheep and goat, meat and meat product, hides and skins - Issues export permit for animal feed
ECCSA - Ethiopia Chamber of Commerce and Sectoral Association	Goods exported to member states of COMESA	- Issue COMESA Certificate of Origin

Ethiopian Maritime Authority (EMA)

Ethiopia Maritime Authority has the responsibility and the authority to ensure that the standards of Ethiopia's maritime training and seafarer certification are maintained; to administer marine and dry ports; and to administer transport logistics. EMA is a Transport and Logistics Ministry agency, managed by the Office of the Director-General. The Authority is based in Addis Ababa, Ethiopia, and operates separate departments for the accreditation of training centres and seafarer certification, registration of Ethiopia's national fleet, and maritime security and safety.

EMA's Mission is to transform the logistics system and benefit from the blue economy by:

- Improving the legal framework and polices of the maritime and logistic sector;
- Enhance the efficiency of shipping and logistics operators;
- Laying a robust logistics foundation by creating seamless customs and transit system and by facilitating business and finance system related to the sector.;
- Building logistics infrastructure.
- Ensuring that registered vessels are safe, and seafarers are qualified and satisfied;
- Laying strong seafarers marketing strategy and
- Enabling the regulatory capacity of the sector.

The objectives of EMA are to:

- Ensure that the transport operations and movement of goods and import and export of the country are economical; plan, coordinate and enforce such operation.
- Reduce the transit time of import export of goods and coordinate the concerned Government bodies to care for goods at port.
- Seek ways and means for the promotion and development of multimodal transport, marine transport, in-land water transport and ensure the availability of uninterrupted resource of skilled manpower in the maritime sector for the country.
- Implement obligations and rights of Ethiopia under international maritime conventions.
- Strive tom make Ethiopia seafarers' nation.

Logistics Transformation Office (LTO)

The Logistics Transformation Office was created within the Ethiopia Maritime Authority to manage and implement the National Logistics Strategy.

Ethiopian Airlines Cargo and Logistics Services

The cargo division of Ethiopian Airlines plays a significant role in air freight and logistics into and outside the country.

Ethiopian Shipping and Logistics (ESL) previously Ethiopian Shipping and Logistics Services Enterprise (ESLSE)

ESL is a government-owned enterprise responsible for providing various logistics and shipping services and is principally engaged in multi-modal cargo transporting. Its mandate includes facilitating the movement of goods through ports, managing shipping and cargo operations, and promoting efficient and cost-effective logistics operation. ESL plays a role in enhancing the country's trade and economic activities by offering integrated shipping and logistics services. ESL currently administers dry ports located throughout Ethiopia.

4.2 Private Sector

Ethio-Logistics Sectorial Association (ELSA)

Ethio-Logistics Sectorial Association (ELSA) represents the major Ethiopian logistics supply chain customers, service providers, infrastructure owners and suppliers. ELSA members span the entire supply chain, incorporating road, rail, sea, air, seaports and dry ports.

Ethiopian Freight Forwarders and Shipping Agents Association (EFFSAA)[3]

The Government has recognised the freight forwarding and shipping profession under Regulation No. 37/1998 of June 19, 1998. The issuance of this regulation and the establishment of the Ethiopian Freight Forwarders and Shipping Agents Association (EFFSAA) are closely related. EFFSAA is an apex non-governmental, not-for-profit professionals' association representing transport and other logistics companies, including licensed carriers and shipping agents.

EFFSAA has three main functions, these being advocacy for the logistics sector; capacity building; and networking or creating market linkages.

EFFSAA is a member, and sole representative of Ethiopia (there can only be one representative) of the International Federation of Freight Forwarders Associations (FIATA), based in Switzerland.

EFFSAA has five types of membership:

1. **Core Members**: A Freight Forwarder, Shipping Agent, Transporter (Rail, Air, Road), and Freight Forwarder and Shipping Agent with a valid business license from Ministry of Trade according to proclamation no. 37/90 and a Certificate of Competency from Ethiopian Maritime Affairs Authority is eligible for Core Membership.
2. **Basic Members:** An institution based in Ethiopia which engages in manufacturing, supplying, exporting, and importing, with a valid business license, is eligible for Basic Membership.
3. **Professional Membership**: A professional who has graduated from an institution of higher learning with a qualification in logistics and supply chain management; or Customs management; or road/rail/air cargo transport; or shipping and supply chain; or similar, and with more than 10 years of experience in the sector is eligible for Professional Membership.
4. **Youth Members:** A student from a recognised higher education institution who is studying Logistics and Supply Chain Management are eligible to be Youth Members.
5. **Honorary Members:** A professional who has made significant contributions to the realisation of the association's goals, who believe in the Association's goals and objectives, and who has been recognised as successful and exemplary in their activities in the Association's activities may be given Honorary Membership.

EFFSAA has 80 core members, five professional members, and 1 honorary member, with almost half of the 170 carriers and shipping agents certified by the Ethiopian Maritime Authority being members.

[3] This is extracted from LTO's Ethiopian Maritime and Logistics Bulletin (unpublished)

Seventy-seven of the eighty Core Members are local, private companies. One (ESL) is a member from the public sector and two are international logistics companies that are working as joint ventures with local companies.

Most EFFSAA members are freight forwarding and shipping agencies and provide logistics services such as: packing, moving, stuffing, distribution, door to door service, Garment on Hanger (GOH) delivery of cold agricultural products (flowers, fruits, meat and meat products, etc.), warehousing services, freight transport, ground handling, aviation services (including cleaning), consultancy services in logistics sector, etc.

Customs Clearing Agents Association

Customs Clearing Agents (CCAs) are third party logistic service providers assigned by importers and exporters to clear goods through Customs on their behalf. Customs clearing agents are also known as customs brokers in some countries.[4]

The Ethiopian Customs Clearing Agents Association has 674 registered members providing customs clearing services.[5]

Regulations regarding Customs Clearing Agents are contained in the Regulation No.1081 2004. This Regulation defines a CCA as "a person authorised to deal with the customs, for and on behalf of another person, to carry out customs formalities related with the importation, exportation and in general with the movement and storage of such goods within the customs territory of Ethiopia"[6]

The responsibilities of a Customs Clearing Agent can be summarised as:

a) submit the evidence proving his authority to act on behalf of his client when requested;
b) promptly advise when he is aware that his client has committed a mistake or irregularity that violates the law;
c) perform utmost diligence to his client in providing information about customs;
d) pay duties taxes and other fees promptly when requested by customs and be jointly and severally liable with his client for duties and taxes;
e) refrain from any act or attempt of threat, false accusation manipulations, or offering of gifts, promises or advantages for customs officers and police; and
f) refrain from any act or attempt to acquire relevant customs. information directly or indirectly in violation of the normal channel.

Furthermore, Customs Clearing Agents have an obligation to keep records of their clients and make these available to Customs on request.

Ethiopian and Regional Chamber of Commerce and Sectoral Associations

[4] In some countries, such as the United States, Customs Brokers must have passed the Customs Broker examination and, to be eligible to take the Customs Broker examination, an individual must be a U.S. citizen, must be 18 years of age or older, and must not be an officer or employee of the U.S. Government. Gopal, C. R. (2008). Export Import procedures documentation and Logistics. New Delhi, India, India: New Age International (P) Ltd.

[5] Ethiopian Customs Commission, Customs Clearing Agents address, February 09, 2021

[6] Council of Ministers Regulation No. 108/2004 Customs Clearing Agents Council of Ministers Regulation Page 2886

The Ethiopian and Regional Chamber of Commerce and Sectoral and Associations is a non-governmental organisation that represents the interests of businesses in Ethiopia. It is also responsible for issuing the COMESA Certificate of origin for goods traded under the COMESA preferential trade agreement and free trade agreement.

4.3 Major Warehouse Operators and Procurement Service Providers

Ethiopian Agricultural Business Corporation (EABC)

The Ethiopian Agricultural Business Corporation (EABC) procures and distributes agricultural inputs, including fertiliser, and undertakes market price stabilisation activities. EABC works with the Ministry of Agriculture, which conducts regional fertiliser needs assessments by asking farmers to share their quantity estimates for the coming year with local agents who then share at the Kebele level, which is then aggregated up to the Woreda, Zonal, and regional levels. The Ministry of Agriculture aggregates estimated demand from each region and requests EABC to procure the required volumes of fertiliser.

Ethiopian Trading Business Corporation (ETBC)

The Ethiopian Trading Businesses Corporation (ETBC) is established mainly to purchase selected agricultural and industrial products and basic commodities from local and foreign markets to stabilise the domestic market. ETBC started procuring wheat in 2023, taking over from PPDS. ETBC has the most overlapping mandates with other DBC procuring organisations such as PPDS (agricultural crops and others), ESC (industrial products), EPSE (industrial products), and EABC (agricultural products).

Ethiopian Sugar Corporation (ESC)

Ethiopian Sugar Company (ESC) is responsible for the importation of sugar in that it manages the bidding process, awards supply contracts and manages the whole process from issuance of the tender documents to distribution to consumers and industrial users. The Ministry of Trade and Regional Integration notifies the ESC of the amounts of sugar that is needed for import.

Ethiopian Petroleum Supply Enterprise (EPSE)

EPSE is importing coal for industrial customers such as cement factories. EPSE does not have explicitly stated mandate to import coal for industrial customers although it is practically engaged in such to solve the existing energy problems of industries especially cement factories.

Public Procurement Service (PPS)

The Public Procurement service (PPS), previously known as the Public Procurement and Property Disposal Service (PPDS), was established to enable the timely supply of goods and services, which are commonly used by public bodies as well as goods and services which have national strategic significance. PPDS is not engaged in distribution or warehousing activities. PPDS has the mandate to involve in international procurement of wide range of goods and services basically for Federal public organs. The PPDS has the authority to import goods that have national strategic significance. However, the types of strategic goods that PPDS imports are not clearly specified in the regulation. PPDS was involved in the importation of wheat from overseas markets. Currently, PPDS is not importing wheat due to various challenges it has faced in managing the wheat importation process.

National Disaster Risk Management Commission[7]

[7] https://www.weadapt.org/sites/weadapt.org/files/legacy-new/placemarks/files/5460989a93d42accra-eth-drm-planning-july14-fv-web.pdf

Ethiopia remains a net importer of wheat, satisfying around 25 percent of the local demand with wheat imports. Ethiopia's grain imports are dominated by wheat. Wheat imports, except wheat donated for food and development aid has been made through PPDS for NDRMC in the past. When PPDS faces procurement challenges, NDRMC gets wheat imports through other procuring organs such as ETBC and UNoPS. The mandate given to NDRMC is silent on procurement of strategic commodities in general, but it is clear on distribution.

The woreda/district disaster risk reduction planning (contingency and risk mitigation/adaptation) is a government-led programme. The programme seeks to change Ethiopia's reactive approach towards emergencies and find new ways of managing risk. This is a model based on decentralised and participatory approaches with significant local input from local governmental experts, community representatives and local civil society organisations.

The Disaster Risk Management and Food Security Sector (DRMFSS) was established within the Ministry of Agriculture (MoA) and tasked with the design, roll-out and scale-up of this innovative approach.

The new policy of Disaster Risk Management involves the DRMFSSS obtaining technical advice on a demand-driven basis, and policy support when requested from, amongst other agencies, the UN World Food Programme, international donors, ACCRA (Oxfam, Care International, World Vision and Save the Children), United States Department of Agriculture, United States Forest Service and Bahir Dar University. This has ensured that the programme is nationally owned, but with external support provided when needed, where it can add value and can strengthen the programme going forward.

The Woreda Disaster Risk Profiles, which can be viewed on the Disaster Risk Management Commission website at https://edrmc.gov.et/filedepot/folder/8, involves data collection to produce profiles for each of the 670 rural and 100 urban Woreda. It contains crucial local information and indicators of risks related to hazards, vulnerability and capacities. It also documents the exposure, sensitivity and resilience of a population, place and system to such risks.

4.4 Logistics Service Support Providers

Insurance Companies

Ethiopian insurance companies include government owned enterprises and private insurance companies. The pioneer insurance company is Ethiopian Insurance Corporation (EIC) which provides services on credit for governmental organisations, public agencies, financial organisations and private sector companies. The Ethiopian insurance industry is regulated by the National Bank of Ethiopia. Insurance companies provide essential services such as transport insurance for transporters, marine insurance for cargo, etc. Transport insurance service offer protection to vehicles or any party involved in the transport activities. The beneficiaries include trucking companies, freight forwarders, shipping companies, warehouse operators, etc.

Members of COMESA, including Ethiopia and neighbouring states of Djibouti, Eritrea, Kenya and Sudan, make use of the COMESA Yellow Card Scheme, which is a Third-Party Motor Vehicle Insurance Scheme that facilitates the smooth movement of motor vehicles, persons and goods in the region through the establishment of a common system for the settlement of claims arising from inter-state motorists. In each country there is a National Bureau and then a Primary Insurer, which is an insurance company. Yellow Card operations have been digitalised since November 2018.

Table 4.2 provides a list of insurance companies in Ethiopia.

Table 4.2: List of Insurance Companies in Ethiopia

1. Africa Insurance Company S.C	10. Abay Insurance Company
2. Awash Insurance Company S.C	11. Berhan Insurance S.C.
3. Global Insurance Company S.C.	12. National Insurance Company of Ethiopia S.C.
4. Lion Insurance Company S.C	13. Oromia Insurance Company S.C.
5. NIB Insurance Company	14. Ethio-Life and General Insurance S.C.
6. Nile Insurance Company S.C	15. Tsehay Insurance S.C.
7. Nyala Insurance Company S.C	16. Lucy Insurance S.C.
8. The United Insurance S.C	17. Bunna Insurance S.C.
9. Ethiopian Insurance Corporation	18. Zemen Insurance S.C

Banks

Banks in Ethiopia play a major role in facilitating international trade as a financial intermediary. The Ethiopia's Banking sector is monitored by Central bank, the National Bank of Ethiopia. Currently, there are 31 commercial banks operating in Ethiopia, as shown in table 1.7, but there are plans to open and liberalise the sector so that international banks will also be able to operate in Ethiopia.

Table 4.3 provides a list of operational banks in Ethiopia.

Table 4.3: List of Ethiopian Banks

1. Awash International Bank	12. Oromia Bank	23.
2. Commercial Bank of Ethiopia	13. Bunna International Bank	24. Shabelle Bank S.C
3. Development Bank of Ethiopia	14. Berhan International Bank	25. Ahadu Bank S.C
4. Dashen Bank	15. Abay Bank S.C	26. Tsedey Bank S.C
5. Wegagen Bank	16. Addis International Bank S.C	27. Amhara Bank S.C
6. Bank of Abyssinia	17. Debub Global Bank S.C	28. Gadaa Bank S.C
7. Hibret Bank	18. Enat Bank S.C	29. Sidama Bank S.C
8. Nib International Bank	19. ZamZam Bank S.C	30. Rammis Bank S.C
9. Cooperative Bank of Oromia	20. Goh Betoch Bank S.C	31. Omo Bank Share Company
10. Lion International Bank	21. Hijira Bank S.C	32. Tsehay Bank Share Company
11. Zemen Bank	22. Siinqee Bank S.C	

4.5 National Logistics Council and Strategy

Following the ratification of the National Logistics Strategy by the Council of Ministers in 2018, the National Logistics Council was established as a high-level leadership and decision-making body mandated to solve complex problems related to logistics.

Chaired by the Minister of Transport and Logistics, the National Logistics Council comprises members from the following government and private logistics institutions:

- Minister of Industry;
- Minister of Trade and Regional Integration;
- Minister of Agriculture;
- Minister of Revenue;
- State Minister from Ministry of Finance;
- Governor of the National Bank of Ethiopia;
- Commissioner of the Ethiopian Customs Commission;
- Commissioner of the Ethiopian Investment Commission;
- Economy Advisor of the Prime Minister;
- President of the Ethio-Logistics Sectoral Associations (ELSA);
- Director of EMA; and
- Head of LTO (secretary).

Up to September 2023, the National Logistics Council has met 13 times since its formation.

The Logistics Transformation Office (LTO) was established as the technical arm of the National Logistics Council under the overall direction of the Ethiopian Maritime Authority. LTO is in charge of implementation of the National Logistics Strategy, scheduled to be completed within ten years of its launch, based on the identified ninety-eight interventions.

Ethiopia's National Logistics Strategy[8] was developed to accomplish four main purposes:

a) **Enable National Development:** Logistics plays an important role in enabling economic growth to ensure sustainable development and the NLS aims to create an enabling logistics sector for the country's economic development.

b) **Control Avoidable Logistics Cost:** Generally, costs for transport, port handling, transaction and storage services as well as container demurrages and maintaining inventories are on the high side. This implies that the country is bearing unnecessary and avoidable logistics costs and control of expenditures on logistics is an important objective of the NLS.

c) **Provide Systemic Logistics Solutions**: Logistics is a chain of multiple nodes, entities, players, processes and outcomes that need to be coordinated and integrated. The NLS pursues an integrated problem-solving approach to address the operational and strategic issues entrenched in the current logistics system to improve performance.

d) **Provide Direction and Leadership:** Logistics management involves the seamless coordination of the flow of goods and services, utilisation of infrastructure, human resources and systems. It also requires strong commitment and follow up and the NLS addresses these issues.

[8] Detail of the strategies and the 98 interventions are found at https://etmaritime.com/resources/national-logistics-strategy(2018 – 2028)

The NLS has six major strategies (divided up into twenty-two sub-strategies and ninety-eight interventions, to be achieved within ten years (2028). These six specific objectives are related to:

- Improve logistics services by refining the national trade and finance system.
- Establish well integrated and interfaced transit and customs System.
- Improve logistics service provider's efficiency.
- Reduce the monopolistic practices in the logistics sector of the country.
- Develop Logistics infrastructure.
- Build up logistics sector institutional capacity.

Since implementation began on Ethiopia's National Logistics Strategy, the country has made important strides in strengthening trade logistics. While more work remains, these achievements demonstrate meaningful early-stage progress. Sustaining momentum across the strategy's key pillars will further strengthen Ethiopia's competitiveness as a strategic trade hub and boost national economic development. Close, harmonised and well synchronised coordination between government agencies and continued private sector engagement will be essential to fully realise the promise of the National Logistics Strategy in the years ahead.

Some of the achievements already realised include the following:

Diversification of Port Utilisation:

As a landlocked country, Ethiopia relies on seaports in neighbouring countries for its imports and exports. The government has pursued two concurrent strategies to diversify port utilisation, namely, to increase the number of ports used in neighbouring countries and the joint development of seaports with coastal neighbours.

Previously, Ethiopia depended solely on Djibouti's ports for trade. Following the diversification strategy, the number of ports serving Ethiopia's trade has expanded to four (five when Port Sudan was in use). Additionally, efforts are underway to jointly develop a new port with a neighbouring coastal state. Through these efforts, Ethiopia aims to reduce over-reliance on any single port and enhance the resilience of its trade logistics network.

Opening up of the Multimodal Transport Service:

To open up the multimodal sector to private competition, the Council of Ministers approved a regulation amending the 2011 bill that had established a monopolistic approach to logistics. The previous legislation had created a single state-owned entity with exclusive control over multimodal transport services. This monopoly was seen as limiting efficiency and innovation in the logistics sector.

The new Multimodal Transport Operator Directive ends the state monopoly on multimodal services, allowing more operators to enter the market and provide competitive services. To facilitate implementation of this liberalisation, detailed manuals and guidelines for licensing and operations have been developed.

Under the Directive, four additional multimodal operators are being sought specifically for FOB (freight on board) cargos, bringing the total to five approved operators for this subset of goods. However, the multimodal market is fully open to any qualified service provider for non-FOB cargo. This creates opportunities for a diverse range of companies to participate across trucking, rail, air, and sea transport modes.

Although the legal framework now permits new entrants, as at the end of September 2023, no additional multimodal operators have joined the market, beyond the original state

operator. Attracting private investment and fostering a competitive multimodal sector may require further efforts. Companies may need reassurances about transparency, regulatory stability, and fair access to infrastructure to encourage their participation. Promotional efforts showcasing the new openness of the sector could also help drive interest and investment.

Export Containerisation:

Export containerisation has been a major initiative under Ethiopia's National Logistics Strategy to enhance trade competitiveness. Previously, Ethiopian exports were packed into containers in neighbouring coastal country ports, which incurred fees paid in foreign currency. Containerising domestically provides benefits including the following:

- Protects goods from theft/damage during overland transport;
- Maintains product quality standards;
- Reduces the need for foreign currency – for example, local containerisation eliminates the average USD110 fee per container charged at Djibouti Port; and
- Creates local jobs.

The initiative has seen major success for coffee exports, with 98 per cent of coffee exports now containerised and shipped by rail. Containerisation of other agricultural exports is rising as well, though not yet matching coffee.

While infrastructure improvements, competitive services, and exporter experience have driven increases, challenges remain. Smaller exporters may lack scale for direct containerisation. Seasonal production fluctuations strain capacity. Further awareness creation for exporters on the benefit of export containerisation, investments in transportation networks, equipment and facilities are still needed. Addressing these constraints while maintaining affordability will be key for further expansion of export containerisation and its national benefits.

Perishable shipments / cool chain development:

Ethiopia has significant potential to expand production and export of perishable goods, including fruits, vegetables, flowers, and meat. The country is positioned to become a leading global exporter in horticulture across these categories. However, growth in fruits, vegetables and meat has lagged behind food grains and flowers. A key constraint has been the lack of cold chain infrastructure enabling cost-effective sea freight.

Recognising this vast unmet potential, the government has prioritised horticulture as a strategic sector for agricultural production and export growth. The goal is to catalyse horticulture development, supporting economic and social progress. But realising the country's full potential as a major fruit, vegetable, meat and flower exporter requires building out efficient cold chain logistics solutions.

Among several key initiatives under the National Logistics Strategy, cold chain logistics was an early priority area. A feasibility study for cold chain infrastructure has been completed, with an avocado value chain assessment providing insights on needs and opportunities. Trial avocado shipments validated the potential for integrated rail-sea cold freight. A funding proposal was submitted to the Dutch government to finance new cold chain facilities. Approval was also obtained to provide incentives for investors willing to participate in cold chain services.

These efforts aim to address key gaps, including lack of refrigerated trucks, cold storage facilities, pre-cooling facilities, and reefer containers. Partnerships with experienced cold chain operators can provide technical expertise. Continued infrastructure development and operator incentives will be crucial to enable growth in horticultural exports requiring cold chains. This can transform Ethiopia's potential as an exporter of fruits, vegetables, and meats.

Expansion of Mojo Logistics Hub

The Mojo dry port expansion project, which aims to develop Mojo Dry Port into a Logistics Hub, is advancing, with financing from a USD150m loan from the World Bank Group. When the expansion project has been completed, the operational capacity of the Mojo terminal will have doubled, and the terminal will have been transformed into a Logistics Hub.

Concurrent to the implementation of the expansion project, a common use study for the Mojo Logistics Hub has been finalised which, when implemented, should increase the participation of private sector investors and so increase the service delivery efficiency of the Logistics Hub.

One of the services to be provided in Ethiopia’s dry ports is export consolidation. The export consolidation programme was designed to increase the market competitiveness of export products (especially textiles and clothing). The aim is to pack clothing and garments manufactured in Ethiopia into containers at source and transport the full container by rail from source (industrial park) to the seller's warehouse, usually, in the case of textiles, in Europe and the United States of America.

Establishing Free Trade Zones

Establishing Free Trade Zones (FTZs) has been a key strategic priority under Ethiopia's National Logistics Strategy. The goal is to streamline foreign trade by reducing the high costs and delays of the current logistics system.

Since the strategy's approval, the National Logistics Council has approved a National Special Economic Zone (SEZ) programme. Within this broader initiative, the Dire Dawa Free Trade Zone was selected as a pilot project and fast-tracked.

The SEZ/FTZ programme aims to spur rapid economic growth and industrialisation. By concentrating infrastructure and streamlining processes, trade costs and delays can be cut dramatically. This facilitates foreign trade and positions Ethiopia as a logistics and manufacturing hub in the Horn of Africa. SEZs are also expected to create jobs, stabilise prices, boost exports and investment, and support import substitution.

Since the SEZ programme was launched, the following has been achieved:

- Macro policy and legal frameworks have been drafted, with the SEZ policy having been approved by the Council of Ministers;
- Institutional structures have been adjusted to administer FTZs; and
- Dire Dawa Free Trade Zone was inaugurated in August 2022.

Continued progress will require coordinated efforts across government agencies and private stakeholders. Further upgrading of trade-related infrastructure, implementing expedited customs and administrative procedures, establishing business incentives, and attracting companies to locate in the FTZs will be critical. Success in Dire Dawa can catalyse additional zones countrywide.

Establishment of Corridor Management Institutions

One of the priority initiatives selected for implementation was the establishment of a corridor management institution for the Ethio-Djibouti Corridor. As Ethiopia is a landlocked country, it relies on neighbouring coastal countries' ports for its import and export activities. Over 90 per cent of Ethiopia's import and export operations utilise ports in Djibouti. At present the annual freight volume on this corridor exceeds USD20 billion. However, the corridor is currently not being managed effectively, with Ethiopian agencies working in a fragmented manner alongside their counterparts in Djibouti. This has resulted in difficulties in addressing problems that arise along the corridor. To tackle this challenge, the establishment of a Corridor Management Institution (CMI) has been deemed necessary. Substantial progress has been made in this regard, including the completion of a comprehensive study, the commitment of both Ethiopia and Djibouti to the establishment of the CMI, through the signing of a Memorandum of Understanding, multiple rounds of discussions held in both countries, the formation of national technical teams, and ongoing negotiations. It is anticipated that the CMI for the Ethio-Djibouti Corridor will be established in the near future.

Other notable achievements in implementing the National Logistics Strategy include:

- The preparation and approval of Ethiopia's Logistics Performance Index (LPI) study for 2020 and 2021, based on the World Bank's Key Performance Indicators, approved by the National Logistics Council (NLC); and
- Approval by the NLC of a national coordinating mechanism for the import of dry bulk shipments, which is currently in the preparation stage for implementation.

5. Multilateral Trade and Transport Commitments

5.1 International Maritime Organisation

Table 5.1: IMO Conventions and Protocols Subscribed to

Conventions and Protocols Subscribed to	Djibouti	Eritrea	Ethiopia	Kenya	Somalia	Sudan
IMO Convention 48	X	X	X	X	X	X
SOLAS Convention 74	X	X	X	X	X	X
SOLAS Protocol 78			X	X		
SOLAS Protocol 88		X		X		
LOAD LINES Convention 66	X	X	X	X	X	X
LOAD LINES Protocol 88		X	X	X		
TONNAGE Convention 69	X	X	X	X	X	
COLREG Convention 72	X	X	X	X	X	
CSC Convention 72				X	X	
Cape Town Agreement 2012				X		
STCW Convention 78	X	X	X	X		
STCW-F Convention 95				X		
SAR Convention 79	X			X		
IMSO Convention 76				X		
INMARSAT OA 76				X		
FACILITATION Convention 65				X		
MARPOL 73/78 (Annex I/II)	X			X	X	X
MARPOL 73/78 (Annex III)	X			X	X	
MARPOL 73/78 (Annex IV)	X			X	X	
MARPOL 73/78 (Annex V)	X			X	X	
MARPOL Protocol 97 (Annex VI)				X		
London Convention 72				X		
London Convention Protocol 96				X		
INTERVENTION Convention 69	X					
CLC Convention 69	D			D		
CLC Protocol 92	X			X		
FUND Protocol 76						
FUND Protocol 92	X			X		
LLMC Protocol 96				X		
SUA Convention 88	X		X	X	X	
SUA Protocol 88	X			X	X	
SUA Convention 2005	X					
SUA Protocol 2005	X					
SALVAGE Convention 89	X			X		
OPRC Convention 90	X			X	X	
HNS Convention 96			x			
OPRC/HNS 2000	X					
BUNKERS CONVENTION 01	X		X	X		
ANTI FOULING 2001			X	X		
BALLASTWATER 2004				X		
NAIROBI WRC 2007				X		

The International Maritime Organisation (IMO) is the United Nations specialised agency with responsibility for the safety and security of shipping and the prevention of marine and atmospheric pollution by ships.

IMO is the global standard-setting authority for the safety, security and environmental performance of international shipping. Its main role is to create a regulatory framework for the shipping industry that is fair and effective, universally adopted and universally implemented.

Although Ethiopia does not have direct access to the sea, it does have a merchant fleet and is an active member of the IMO. **Table 5.1** shows the conventions that Ethiopia (and Kenya, Djibouti, Eritrea, Sudan and Somalia, where the ports Ethiopia uses are) has ratified.

Of particular relevance to trade logistics is the decision by IMO members to first of all digitise the FAL forms (IMO General Declaration (FAL form 1); Cargo Declaration (FAL form 2); Ship's Stores Declaration (FAL form 3); Crew's Effects Declaration (FAL form 4); Crew List (FAL form 5); Passenger List (FAL form 6); and Dangerous Goods (FAL form 7)) and then for each IMO member to establish a digitised Maritime Single Widow which is based on the digitised FAL forms. However, although Ethiopia is considered to be a maritime nation and is an IMO signatory and has a merchant fleet, the merchant fleet does not have a home port so vessels coming into ports with cargo destined for Ethiopia, and Ethiopian vessels, will be required to submit digitised data to the port authorities on entry to these ports. Therefore, although Ethiopia is an IMO member it is assumed that it is not required to comply with the FAL convention to establish a digitised Maritime Single Window, although the Ships' Masters of vessels flying an Ethiopian flag will need to comply with the requirements of the digitised national maritime single window of the port of entry.

5.2 World Customs Organisation

In international trade Customs plays a critical role, not only in providing expedited clearing processes but also in implementing effective controls that secure revenue, ensure compliance with national laws, and ensure security and protection of society. The efficiency and effectiveness of Customs procedures has a significant influence on the economic competitiveness of nations and in the growth of international trade and the development of the global marketplace.

The efforts of the World Customs Organisation (WCO) are focused at simplifying and standardising Customs practices across its Member administrations. Trade facilitation, in the WCO context, means the avoidance of unnecessary trade restrictiveness. This can be achieved by applying modern techniques and technologies, while improving the quality of controls in an internationally harmonised manner.

The International Convention on the simplification and harmonisation of Customs procedures (as amended), known as the Revised Kyoto Convention (RKC) is the WCO's main trade facilitation, and so trade logistics, set of enforceable guidelines. The Convention elaborates several key governing principles- chief among these are the principles of:

- transparency and predictability of Customs actions;
- standardisation and simplification of the goods declaration and supporting documents;
- simplified procedures for authorised persons;
- maximum use of information technology;
- minimum necessary Customs control to ensure compliance with regulations;
- use of risk management and audit-based controls;
- coordinated interventions with other border agencies; and
- partnership with the trade.

The RKC promotes trade facilitation and effective controls through its legal provisions that detail the application of simple yet efficient procedures. The revised Convention also contains new and obligatory rules for its application which Ethiopia, along with all Contracting Parties, must accept without reservation.

The RKC comprises the Convention, the General Annex and Specific Annexes relating to specific Customs procedures and practices and the legal text of each annex is accompanied by Guidelines, the texts of which are not binding upon Contracting parties.

5.3 World Trade Organisation

Ethiopia has expressed an interest in being a World Trade Organisation (WTO) Member and the process of accession to the WTO has started, with a Working Party established on 10th February 2003. The Working Party met for the fourth time in January 2020. Since the establishment of the Working Party, under the Multilateral Process, a Memorandum on the Foreign Trade Regime, which provides a comprehensive summary of Ethiopia's foreign trade regime, including relevant statistical data, and a Factual Summary (which documents the written questions asked by other WTO members on the Memorandum on the Foreign Trade Regime and the answers provided, but the Working Party Report has not yet been prepared. Under the Bilateral Process, Ethiopia has prepared initial goods and services offers and bilateral negotiations on goods and services have started, but draft goods and services schedules have yet to be prepared.

6. Continental, Regional and Bilateral Trade Agreements

Ethiopia has been conservative, and taken a defensive position, in market access agreements. As noted above, Ethiopia is in the early stages of accession to the WTO and, although is a member of the Common Market for Eastern and Southern Africa (COMESA), it is not a signatory to the COMESA Free Trade Agreement. Ethiopia also has a bilateral Free Trade Agreement with Sudan, is a signatory to the African Continental Free Trade Agreement (AfCFTA) and was, until 1st January 2022, a beneficiary of the Africa Growth and Opportunity Act. As a Least Developed Country Ethiopia is also a beneficiary of the Generalised System of Preferences offered to all LDCs by developed countries.

6.1 African Continental Free Trade Agreement (AfCFTA)

The African Continental Free Trade Agreement (AfCFTA) is the world's largest free trade area bringing together the 55 countries of the African Union (AU) and eight (8) Regional Economic Communities (RECs). As part of its mandate, the AfCFTA aims to eliminate trade barriers and boost intra-Africa trade. In particular, it is to advance trade in value-added production across all service sectors of the African Economy. The AfCFTA entered into force on 30th May 2019, after 24 Member States deposited their Instruments of Ratification. Ethiopia submitted a diplomatic letter confirming ratification of the AfCFTA on 10th April 2019.

6.2 Common Market for Eastern and Southern Africa (COMESA)

Ethiopia has been a member of COMESA since its inception in 1994 but is not a member of the COMESA Free Trade Agreement but does offer a tariff preference of 10 per cent to COMESA FTA members. The COMESA FTA was launched in 2000 after members had reduced their tariffs on COMESA originating products gradually over a 10-year period.

6.3 Inter-Governmental Agreement on Development (IGAD)

The Inter-Governmental Agreement on Development (IGAD) does not have a free trade agreement in place amongst its Member States but does have a Regional Trade Policy which is designed mainly as a cooperation framework that seeks to guide the IGAD Members States to promote trade integration in a more flexible policy environment.

6.4 Africa Growth and Opportunity Act (AGOA)

In 2015, Ethiopia became eligible for preferential access to the market of the United States of America (USA) under the African Growth and Opportunity Act (AGOA) and this preferential access was granted for a 10-year period, until 2025. However, AGOA is a non-reciprocal, non-negotiated and non-contractual set of preferences and the USA withdrew all AGOA privileges it had granted to Ethiopia in January 2022. Ethiopia, therefore, has no existing trade agreement with the USA.

6.5 Ethiopia-Sudan Preferential Trade Agreement

The Ethiopia-Sudan Preferential Trade Agreement (PTA) entered into force on 6th February 2003 and provides preferential market access provisions to all industrial and agricultural products originating from both countries. Origin is determined through the application of the COMESA Rules of Origin as both parties are members of COMESA.

6.6 Generalised System of Preferences

The principle of The Generalised System of Preferences (GSP) was agreed at the United Nations Conference on Trade and Development (UNCTAD), and is a facility granted to developing countries, including Least Development Countries ("beneficiary countries"), by certain developed countries ("donor countries"). GSPs are not negotiated (the donor countries unilaterally decide what preferences they will give); are not reciprocal (donor countries provide preferences but beneficiary countries do not provide any preferences in return); and are usually non-contractual (donor countries can remove the GSP preferences, or change the conditions of the preferences, whenever they decide to). GSP schemes offered by the various donor countries can, and usually do, differ fundamentally, especially the rules of origin that are applied. Ethiopia can benefit from the GSP schemes[9] offered by the European Union (termed Everything-But-Arms or EBA) and the Japanese GSP.

[9] The USA GSP scheme, which is different from AGOA, has been in force since 1976 but expired on 31st December 2020 and its renewal is pending Congressional approval.

7. Logistics Sector Regulation

The logistics sector in Ethiopia is governed by various laws, regulations, and licensing procedures. Moreover, Ethiopia has a National Logistics Strategy which aims, by solving infrastructure gaps, improving trade facilitation, enhancing logistics services, and promoting collaboration, to transform Ethiopia into a regional logistics hub and improve its competitiveness in global trade.

The Ethiopian Institutional framework for transport and logistics is governed by the Ministry of Transport and Logistics (MoTL). According to Proclamation No. 1263/202110, the MoTL has, among others, the following main duties in relation to inland transport and infrastructure development:

- initiate policies, strategies, programmes and laws that ensure sustainable development and competitiveness of the transport and logistics sector and implement the same upon approval;
- ensure the integration, efficiency and accessibility of land, air and sea transportation services, and thereby realise the country's development strategies and meet the needs of transport and logistics of development hubs and corridors;
- in collaboration with Ministry of Urban and infrastructure and other concerned organs, prepare a master plan of the country's transport and comprehensive logistics infrastructure and follow up on its implementation;
- establish a system that promotes the participation and role of the private sector in transport and logistics development and create conducive conditions for implementation of the same;
- ensure that the national logistic system, with respect to import and export, is efficient and competitive; and
- follow up the operations of the Ethio-Djibouti Railways in accordance with the agreement concluded between the two countries and monitor the same.

Furthermore, according to Proclamation No. 1263/202111, the Ministry of Urban and Infrastructure Development (MUID) is responsible for infrastructure development in Ethiopia. Its main duties in relation to transport and logistics infrastructure development are the following:

- prepare, in collaboration with the concerned organs, national integrated infrastructure master plan; follow up and monitor its implementation;
- ensure that national road infrastructure works are carried out on the basis of economic efficiency, importance and equitable access;
- prepare compensation formula and unit price for land and property expropriated for public interest; and
- support and follow up urban development, construction and infrastructure activities of Addis Ababa and Dire Dawa city administrations.

In addition to planning and policy development, the Ministries are accountable for coordinating all other planning and regulatory institutions and authorities. These institutions and authorities are responsible for developing, implementing, and regulating policies at their sectoral level in all aspects related to transport and logistics infrastructure. Proclamation No. 1263/2021 defines the relationship

[10] Proclamation No. 1263/2021 Definition of Powers and Duties of the Executive Organs Proclamation – Government of Ethiopia – January, 2022 (link)
[11] Proclamation No. 1263/2021 Definition of Powers and Duties of the Executive Organs Proclamation – Government of Ethiopia – January, 2022 (link)

between a ministry and institutions accountable to it. The main institutions in relation to transport and logistics infrastructure are the following:

- Ethiopian Roads Administration (ERA): accountable to the MUID, ERA was established by Proclamation No. 1263/2021 and absorbs all the responsibilities and duties from both, the Ethiopian Road Fund (ERF) and the Ethiopian Road Authority.
  - Ethiopian Roads Authority, *former*: established by Proclamation No. 80/1997. The objective of the Authority was to develop and administer highways and to ensure standards of road construction and to create a conductive condition for the development of the road network in a coordinated way. However, the reorganisation of executive organs established in Proclamation No. 1263/2021 states that the Ethiopian Roads Administration takes over all powers of this Authority.
  - Ethiopian Road Fund (ERF), *former*: established by Proclamation No. 66/1997 with the objectives of financing the maintenance of roads and road safety measures. However, the reorganisation of executive organs established in Proclamation No. 1263/2021 states that the Ethiopian Roads Administration takes over all powers of this Authority.
  - Federal Transport Authority (FTA), *former*: established by Proclamation No. 247/2011 with the objective of developing and administering roads; creating conducive conditions for coordinated development of the road network; and ensuring the maintenance of standards in road construction. However, the reorganisation of executive organs established in Proclamation No. 1263/2021 states that the Ministry of Transport and Logistics take over all powers of this authority.
  - Ethiopian Maritime Authority (EMA): accountable to the MoTL, was established by proclamation No. 549/2007 to ensure transport operation and movement of goods of the country are economical; plan, coordinate and enforce such operation; and seek ways and means for the promotion and development of multimodal, marine, in-land water transport and ensure the availability of uninterrupted resource of skilled manpower in the maritime sector for the country.
- Ethiopian Pay Toll Road Enterprise (EPTRE): established by Proclamation No. 843/2014 with the objective of enforce the penalties imposed under the proclamation and shall fix the toll tariff applicable for use of toll roads, some cases in collaboration with the private sector.
- Ethiopian Railway Corporation (ERC) was established by proclamation No. 141/2007 with the purpose of building railway infrastructure; operate the cargo and passenger railway; and to engage in other related activities necessary for the attainment of its purpose.
- Ethio-Djibouti Railway Company (EDR) was created after the bilateral agreement established in Proclamation No. 1014/2017. This company is tasked with operating the Ethio-Djibouti Railway.
- Ethiopian Shipping and Logistics Services Enterprise (ESLSE), now Ethiopian Shipping and Logistics (ESL) was established by proclamation No. 255/2011 to provide services to stevedoring, shore-handling, dry port, warehousing and other logistics services for import and export of goods.

Furthermore, the Ministry of Transport and Logistics can delegate all its responsibilities to non-federal Government Institutions that will oversee all operations at city administrations such as the Addis Ababa Transport Bureau (AATB) and Dire Dawa Administration Transport Bureau (DDATB)

The main regulatory framework for the development of road, railway and logistics infrastructure as well as for private investment in Ethiopia is presented in Table 7.1.

Table 7.1: Regulatory Framework

Sector	Regulation
Executive Organs	Proclamation No. 1263/2021[12] - Definition of Powers and Duties of the Executive Organs Proclamation
Transport	Proclamation No. 486/2005 – Transport Proclamation. Establishes the Federal Transport Authority
Road transport	Proclamation No. 247/2011[13] – Ethiopian Roads Authority Re-establishment Council of Ministers Regulation
Road transport	Proclamation No. 66/1997[14] - Road Fund Establishment Proclamation
Road transport	Proclamation No. 843/2014[15] – Toll Roads Proclamation. Establishment of the Ethiopian Pay Toll Road Enterprise (EPTRE)
Road transport	Proclamation No. 1274/2022[16] - Road Transport Proclamation
Railway transport	Proclamation No. 1048/2017[17] - Railway Transport Administration (RTA) Proclamation
Railway transport	Proclamation No. 141/2007[18] – Ethiopian Railway Corporation Establishment Council of Ministers Regulation. Stablishes the Ethiopian Railway Corporation (ERC)
Railway transport	Proclamation No. 1014/2017[19] – Bilateral Agreement between the Government of the Federal Democratic Republic of Ethiopia and the Government of the Republic of Djibouti for the Development, Operation and Management of Standard Gauge Railway Network Ratification Proclamation
Logistics	Proclamation No. 549/2007[20] – Maritime Sector Administration Proclamation. Regulates and stablish the Ethiopian Maritime Authority (EMA), including also dry ports and transport logistics infrastructures.
Logistics	Proclamation No. 255/2011 – Ethiopian Shipping and Logistics Services Enterprise Establishment Council of Ministers
PPP	Proclamation No. 1076/2018[21] – Public Private Partnership Proclamation

The Industrial Parks Proclamation is the primary legislation that governs the establishment, development, and management of industrial parks. It provides the legal framework for the creation of industrial parks, including their operation, administration, and incentives provided to investors.

Regarding national Special Economic Zones (SEZ), it was not until August 2022 that the government of Ethiopia allowed their establishment aiming to improve the export system of the country, increase Foreign Direct Investment (FDI), and create wide employment opportunities in the sector.

[12] Proclamation No. 1263/2021 - Definition of Powers and Duties of the Executive Organs Proclamation (link)
[13] Proclamation No. 247/2011 – Ethiopian Roads Authority Re-establishment Council of Ministers Regulation (link)
[14] Proclamation No. 66/1997 - Road Fund Establishment Proclamation (link)
[15] Proclamation No. 843/2014 – Toll Roads Proclamation (link)
[16] Proclamation No. 1274/2022 - Road Transport Proclamation (link)
[17] Proclamation No. 1048/2017 - Railway Transport Administration (RTA) Proclamation (link)
[18] Proclamation No. 141/2007 – Ethiopian Railway Corporation Establishment Council of Ministers Regulation (link)
[19] Proclamation No. 1014/2017 – Bilateral Agreement (link)
[20] Proclamation No. 549/2007 – Maritime Sector Administration Proclamation (link)
[21] Proclamation No. 1076/2018 – Public Private Partnership Proclamation (link)

It should be noted that Ethiopia does not have specific regulations dedicated to Dry Ports or warehouses. Despite the enactment of the Warehouse Receipt System Proclamation in 2003, until 2021 there has been a notable absence of an active supervisory/regulatory body overseeing the warehouse system in Ethiopia, as well as a lack of specific legislation addressing this issue.

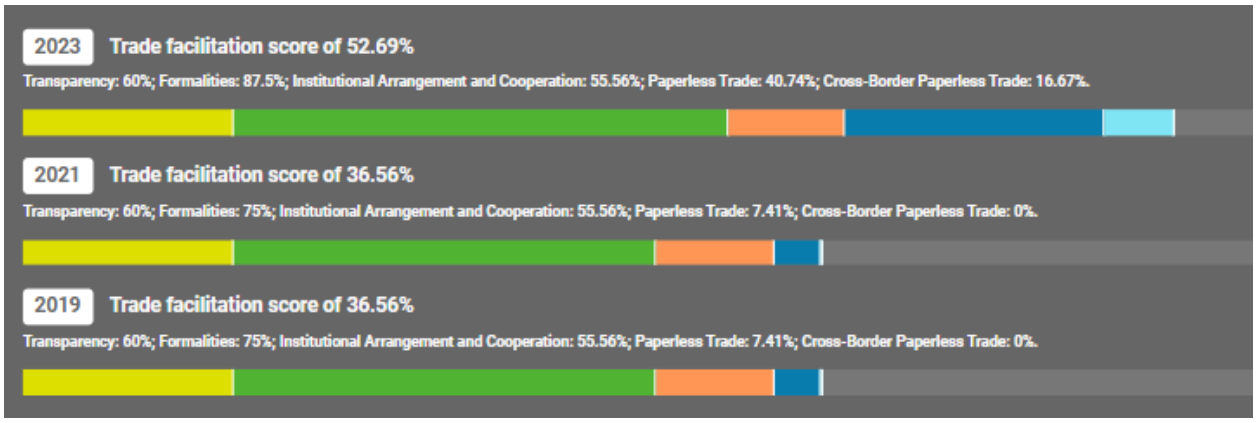
8. Trade, Transport and Transit Facilitation Measures

Although Ethiopia is not a member of the WTO, it is in accession to the WTO and so subscribes to the implementation of the Trade Facilitation Agreement (TFA)[22]. For this reason, the TFA categorisation of trade facilitation measures and instruments are used.

According to the UN Global Survey on Digital and Sustainable Trade Facilitation[23], Ethiopia has made significant progress in implementing trade facilitation measures. Ethiopia's trade facilitation score in 2023 is 52.69 per cent. The score is based on several factors, including transparency, formalities, institutional arrangement and cooperation, paperless trade, and cross-border paperless trade.

The survey indicates that Ethiopia has improved its trade facilitation score compared to previous years. In 2021, the score was 36.56 per cent with progress being made in areas such as transparency, formalities, and institutional arrangement and cooperation, as shown in **Figure 8.1**.

Figure 8.1: Ethiopia's Trade Facilitation Scores in 2019, 2021 and 2023



Source: https://www.untfsurvey.org/economy?id=ETH

The African Continental Free Trade Agreement (AfCFTA), which Ethiopia is a signatory to, addresses Customs Cooperation, Trade Facilitation and Transit in Annexes 3, 4 and 8 of the AfCFTA Protocol on Trade in Goods respectively.

Annex 3 of the AfCFTA Protocol on Trade in Goods addresses Customs Cooperation between State Parties, the objectives and scope being to:

- Ensure cooperation in all areas of Customs administration aimed at improving the regulation of trade flows and the enforcement of applicable laws within the State Parties, by:
    - providing for common measures for which State Parties are encouraged to comply with in the formulation of their Customs Law and procedures; and
    - establishing appropriate institutional arrangements at continental, regional and national levels.
- Ensure Mutual Administrative Assistance through ensuring appropriate Customs Laws are observed; preventing, investigating and combating customs offences; making documents necessary for the application of Customs Law available; facilitating the simplification and

[22] Ethiopia has ratified the AfCFTA, and the provisions of the Trade Facilitation Agreement are also reflected in the AfCFTA.

[23] Trade Facilitation and Paperless Trade in Ethiopia | UN Global Survey on Digital and Sustainable Trade Facilitation (untfsurvey.org)

harmonisation of customs procedures; and ensuring the smooth flow of trade and the integrity of the international supply chain.

Annex 3 also commits State Parties to:

- Undertake to establish, use and continually upgrade modern data processing systems to facilitate effective and efficient Customs operations and transmission of trade data amongst themselves.
- Use internationally accepted standards, especially those adopted by the World Customs Organisation (WCO)[24];
- Develop or adopt interconnectivity of computerised Customs clearance and information systems in collaboration with stakeholders;
- Facilitate the exchange of data with stakeholders; and
- Exchange information electronically and in advance of the arrival of persons, goods and means of transport.

Annex 4 of the AfCFTA Protocol on Trade in Goods addresses Trade Facilitation and is similar to the WTO TFA[25] in its coverage. Annex 4 promotes the fundamental principles of trade facilitation through transparency, simplification, harmonisation, and standardisation and addresses Enquiry Points; Advance Rulings; Pre-arrival Processing; Electronic Payments; Separation of Release from Final Determination of Customs Duties, Taxes, Fees and Charges; Risk Management; Post-clearance Audit; Establishment and Publication of Average Release Times; Trade Facilitation Measures for Authorised Operators; Expedited Shipments; Perishable Goods; Use of International Standards; Use of Information Technology; Single Window; Freedom of Transit; Documentation; Review and Appeal; use of Customs Brokers; Pre-shipment Inspection; Border Agency Cooperation; and Other Measures to Facilitate Trade.

Annex 4 also stipulates that each State Party shall establish and/or maintain a National Committee on Trade Facilitation.

Annex 8 of the AfCFTA Protocol on Trade in Goods, which is in line with Article 11 of the WTO TFA, provides for the means of transport used in transit trade to be licensed by the appropriate licensing authorities of the State Parties in accordance with their national laws and regulations and for all

[24] Ethiopia is a member of the WCO and a signatory to the Revised Kyoto Convention (RKC) which is the main WCO trade facilitation instrument and harmonises and simplifies Customs procedures and practices by providing standards and recommended practices for modern Customs procedures and techniques. Contracting parties to the RKC accept the Body and the General Annex to the RKC, which are binding. The General Annex of the RKC commits contracting parties to the following key principles:

- transparency and predictability of Customs actions;
- standardisation and simplification of the goods declaration and supporting documents;
- simplified procedures for authorized persons;
- maximum use of information technology;
- minimum necessary Customs control to ensure compliance with regulations;
- use of risk management and audit-based controls;
- coordinated interventions with other border agencies; and
- partnership with the trade.

[25] The WTO Trade Facilitation Agreement was the first Agreement concluded at the WTO by all of its Members and, as a Member in accession, Ethiopia should be in compliance. The Agreement entered into force on 22 February 2017 when the WTO obtained the two-thirds acceptance of the Agreement from its 164 Members. Section I of the TFA contains provisions for expediting the movement, release and clearance of goods, including goods in transit. It clarifies and improves the relevant articles (V, VIII and X) of the General Agreement on Tariffs and Trade (GATT) 1994. It also sets out provisions for customs cooperation.

transit traffic operations to be covered by Customs bond and sureties' arrangements and use AfCFTA transit documents. Annex 8 addresses the following:

- State Parties granting all transit traffic freedom to traverse their respective territories by any means of transport suitable for that purpose;
- Not to levy any import or export duties on the transit traffic, but may levy administrative or service charges equivalent to services rendered;
- Makes no discrimination in the treatment of persons, goods and means of transport coming from, or bound to State Parties, and
- Rates and tariffs for the use of their facilities by other State Parties shall not be less favourable than those accorded to their own traffic.

In terms of securing supply and value chains the following provisions of Annexes 3, 4 and 8 are probably the most important:

- Customs Cooperation and Mutual Administrative Assistance: To secure an African supply chain which is, for example, along a transport/trade/transit Corridor (referred to henceforth as a Corridor) which crosses one or more borders, it is essential for national Customs agencies to cooperate fully with each other both to ensure law enforcement and to ensure sharing of information and data. Presently, although there are Customs cooperation and mutual administrative assistance agreements in place, Customs may not share data which is essential for pre-clearance and common risk management to take place. For example, if goods are moving along a Corridor, it is not uncommon for Customs of the country the goods are arriving at to not have information on the goods (such as the bill of lading) before the goods physically arrive at the border. In this situation Customs and other border agencies cannot pre-clear, cannot provide expedited services to Authorised Operators, cannot carry out risk assessments prior to the arrival of the goods at the border and, in the case of road transport, cannot adequately manage the queue of traffic.
- Trade Facilitation[26]:
    - Advance Rulings: Advance Rulings are written decisions made by Customs authorities at the request of an importer that are legally binding on both parties. They provide certainty on the HS classification and what tariff will be applied to the import. If an importer has an Advance Ruling from the Customs agency of the country of final import this should simplify the process of final clearance.
    - Pre-arrival Processing: Pre-arrival processing involves the, usually electronic, submission of a goods declaration to Customs prior to the arrival of the goods at the border. This simplifies the import process as goods can be cleared before they arrive at the border and so do not need to be stopped for a documentary check, or a scan or a physical inspection.
    - Electronic Payments: There are many advantages to electronic payments for cross-border services including lower levels of corruption, quicker transactions and pre-payment before goods arrive at the border, allowing pre-clearance to take place.
    - Separation of Release from Final Determination of Customs Duties, Taxes, Fees and Charges: This allows goods to be released by Customs prior to the payment of duties, taxes, fees and charges where the final classification of the goods, assessment of

[26] Note that Freedom of Transit is considered important in the context of securing cross-border supply chains, but this is addressed under Annex 8 rather than under Trade Facilitation.

value or other transactions are pending. This allows goods to leave the border area quickly.

- Risk Management: A Risk Management system which is common to Customs and other border agencies on both sides of the border would have significant benefits, including common channelling of goods into low, medium and high-risk lanes so avoiding situations where one Customs or other border agency assesses the risk differently to another agency. In an optimal situation, low risk cargo should not be stopped at the border; medium risk cargo could undergo a scan and/or a document check and high-risk cargo could be physically inspected and/or scanned. Therefore, even in situations where there are joint inspections taking place, if risk assessment is not common to Customs and other border agencies on both sides of the border, there is a strong possibility that goods will be unnecessarily delayed at the border.
- Post-clearance Audit: A post-clearance audit is a structured examination of a trader's relevant commercial systems and processes, financial and non-financial records, physical stock and other assets, as a means to measure and improve compliance. It is conducted after the release of the goods from Customs control. It allows goods to be released to the importer immediately and for the audit to be done at a later date.
- Trade Facilitation Measures for Authorised Operators: Authorised Operators are trusted traders that have undertaken to fully comply with Customs and other borderer agency procedures and regulations in return for preferential and expedited treatment, such as fast tracking through the border. Authorised Operator, or trusted trader schemes often do not work in the African context because the Authorised Operator or trusted trader does not receive the envisaged benefits unless Customs can risk assess, pre-clear and assign goods to a fast-track lane before the goods arrive at the border.
- Use of Information Technology: There have been significant improvements in use of information technology (IT) by Customs and border agencies. However, there is usually a requirement for Customs and other border agencies[27] to make more use of IT and, through the improved use of IT, further improve trade facilitation.
- Single Window: Trade Single Windows are designed to simplify traders' interactions with the border and to do this by allowing traders and transporters and other stakeholders to lodge standardised information and documents once (a single entry) to fulfil all import, export, and transit related regulatory requirements. The efficacy of national Trade Single Windows is varied but Single Windows are an essential component in trade facilitation.
- Border Agency Cooperation: Border agency cooperation refers to cooperation between border agencies on the same side of a border. This type of cooperation is essential for the smooth implementation of all the above trade facilitation measures important in securing efficient cross border supply chains in Africa.

- Transit Facilitation: Free movement of goods (and vehicles and drivers) in transit is a vital component of the security of the supply and value chain and it is essential that all State Parties grant all transit traffic freedom to traverse their respective territories; do not impose any import or export duties on the transit traffic; and do not discriminate in the treatment of persons, goods and means of transport coming from, or bound to State Parties.

[27] Other border agencies are usually less advanced in their use of information technology than Customs is.

Operational NTFCs are important to ensure implementation of trade facilitation measures that will secure regional and continental supply and value chains but the way that the Ethiopian NTFC is structured and operate needs to be re-examined.

The role of an NTFC is to facilitate and coordinate but what is needed is a body to champion trade facilitation in Ethiopia. Implementation of trade facilitation measures requires combined actions by, usually, multiple agencies and private sector organisations and an implementation budget, which should come from government rather than International Cooperating Partner grants. For example, a common risk assessment instrument needs not only cooperation between border agencies but also agency agreements, possibly changes in legislation and regulations, and a budget to make it happen. This may require a directive from a higher authority.

9. Digitalisation of Logistics

According to a study conducted by UN ECA and MoTL, the logistics industry in the country faces several key challenges that are hindering digital transformation and efficiency which include the following:

- There is a lack of a centralised logistics information hub to capture end-to-end data from source to destination.
- Digitalisation efforts by stakeholders remain fragmented without coordination or standards. Usage of digital platforms, software, and emerging technologies remains low among logistics companies.
- Major infrastructure gaps including unreliable Internet and power disrupt digitalisation. An absence of legal frameworks mandating system integration and data sharing between stakeholders.
- Few cargo, truck and warehouse tracking systems have been implemented.
- Awareness of global digital trends in logistics is limited. To drive progress, there is a need for bold leadership, enforceable policies, and institutional capacity building focused on digital transformation of the logistics industry[28].

The digitised logistics systems, or digitised systems that are related to logistics and make logistics easier, that are in place are not integrated systems, with the most notable being the following: -

- **Ethiopian Electronic Single Window for Traders**[29] (eSW).

  Ethiopia is streamlining trade procedures and documentation requirements through the new electronic Single Window (eSW) system. Phase one connects 16 key cross-border regulatory agencies, enabling traders to submit all import and export documents electronically through a single submission portal. This is expected to significantly reduce trade times and costs by creating a paperless process, eliminating multiple physical inspections and repetitive document submissions. Clearance times are projected to decrease substantially.

  The eSW should also reduce corruption by minimising in-person interactions. Phase two of the eSW, which is now underway, will connect more agencies to further reduce trade times.

  Overall, the eSW modernises Ethiopia's trade processes to align with international best practices such as the WTO Trade Facilitation Agreement. By simplifying procedures and paperwork through automated electronic systems, Ethiopia is making trading more efficient, cost-effective and transparent.

- **Ethiopian Customs Commission**:
  - Customs Management System: the Ethiopia Customs Management System (CMS) is a system which was designed by Webb Fontaine and its architecture, functionality and file structures are based on UNCTAD's ASYCUDA World.
  - Trade Portal: the Customs Trade Portal allows clients to
    - Calculate what customs taxes they will need to pay on imports;
    - Seach for tariff rates for a particular good;
    - Check to see whether goods in transit (T1s) have arrived at a dry port;

[28] Gap Assessment of Logistics Digitalization in Ethiopia, United Nation Economic Commission for Africa (UNECA) and FDRE Ministry of Transport (MoT), 2021

[29] https://esw.et/esw-trd/

        - Provides information on what documentation/information a trader needs to provide to clear goods; and
        - A facility that searches/browses for codification.
    - Cargo Tracking: The Ethiopia Customs Commission has commissioned the Ethiopian Artificial Intelligence Institute and Addis Ababa University to jointly develop a cargo tracking system. This project is expected to be completed and put into operation within a short period of time.

- **Ethiopian Airlines:**
  Ethiopian Airlines are fully digitised and web-based systems that are available to customers include:
    - An on-line ticket booking, paying and check-in system; and
    - A cargo or shipment tracking system.

- **Electronic Banking Systems and mobile money service:**
  Currently in Ethiopia Telebirr and M-Pesa are the two mobile money services developed and launched by Ethio telecom and Safaricom Ethiopia respectively, these being the two telecommunication and Internet service providers in Ethiopia. In Ethiopia, electronic banking has been steadily growing, with several banks offering online banking services to their customers.

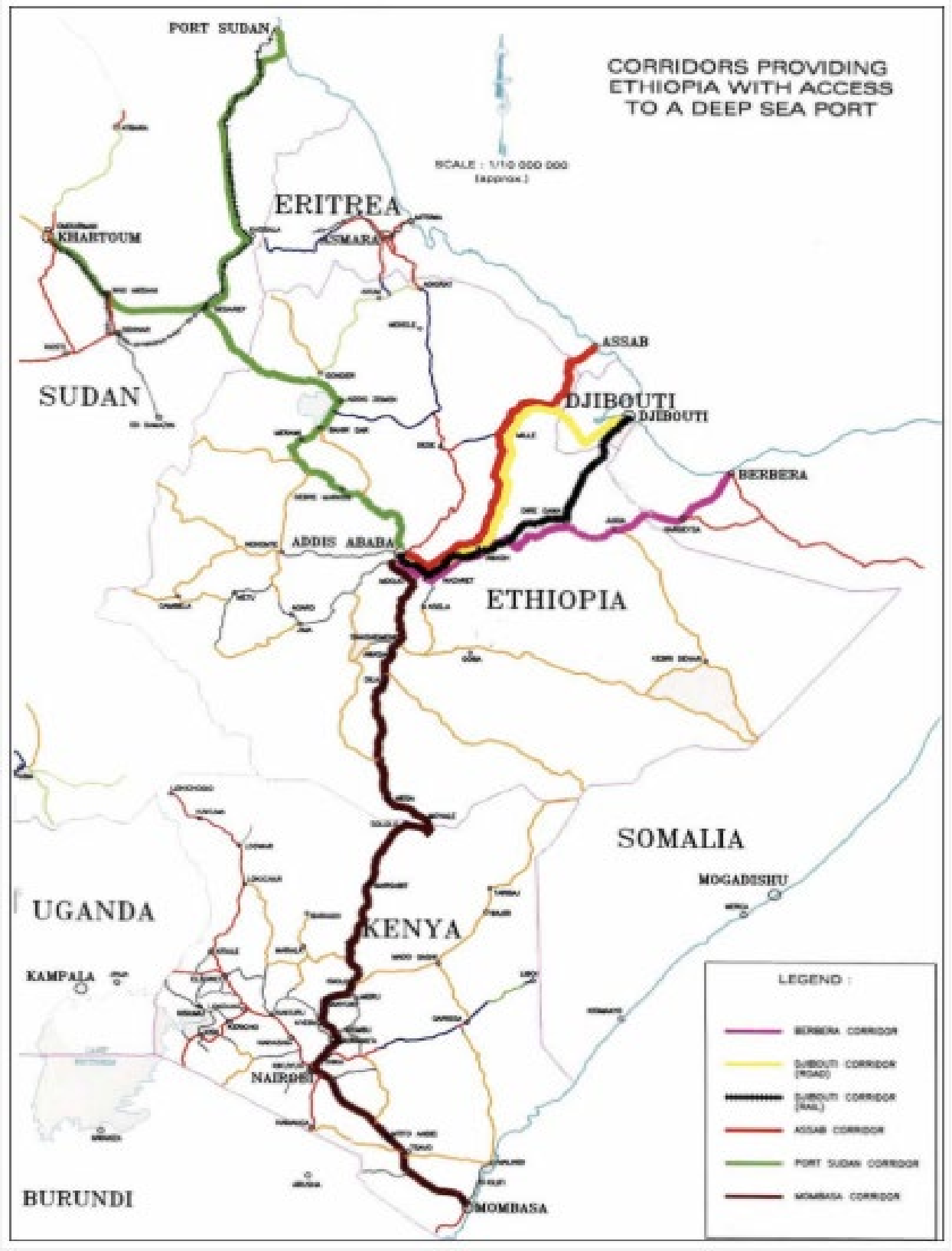
- **Ethiopian Maritime Authority (EMA**):
  Indian Ocean region information Sharing Platform (IORIS): Ethiopia Maritime Authority is a trained user of, and active participant in, the IORIS Platform, which, in its primary function, provides maritime centres with a means to jointly plan and coordinate maritime operations, including crisis/incident management, offering enhanced information-sharing functions and strengthen interagency collaboration at national and regional levels.

- **Ethiopian Shipping and Logistics (ESL):**
  Oracle Enterprise Resource planning /ERP/-cloud application modules and data software are implemented in ESL. The enterprise has entered into the implementation phase of selected finance, human resource, procurement, property administration, audit management and warehouse management ERP-cloud Application modules.

10. Bilateral Transport and Transit Corridor Agreements

10.1 Summary of Corridors Serving Ethiopia

Figure 10.1: Map of Trade and Transport Corridors serving Ethiopia



Berbera Corridor – Berbera-Jijiga = 318km + Jijiga-Modjo = 549km

- Advantages: - port and road Infrastructure, economic growth of Ethiopia
- Disadvantages: - relative late comer; inadequate customs, transit, transport and logistics systems; no railway; inadequate border facilities; no Somaliland Government framing policy.

Djibouti Corridor (Djibouti – Modjo = 823km)

- Advantages: - port infrastructure; economic growth of Ethiopia, SGR, efficient transit system
- Disadvantages: - capacity, costs, road infrastructure, inefficient use of SGR

Eritrea Corridors (Modjo – Massawa = 1,245km, Modjo – Assab = 811km)

- Advantages: - Historical ports for Ethiopia and (Assab) close to Ethiopia
- Disadvantages: - political will, infrastructure, access (Massawa), systems

Port Sudan (Modjo – Port Sudan = 1,840km)

- Advantages: - proximity to Ethiopia northern region
- Disadvantages: - infrastructure, systems

LAPSSET and Mombasa Corridors (Mombasa - Modjo = 1,905km)

- Advantages: - good infrastructure (road and port), OSBP at Moyale
- Disadvantages: - distance, congestion at Mombasa

10.2 Djibouti Corridor – Agreements in Place

Steps are being taken to establish an Ethio-Djibouti Corridor Management Institution and, in this process, there will be a need to put in place a Bilateral Agreement to assist with the governance of the Ethio-Djibouti Corridor. But there are already bilateral agreements between Ethiopia and Djibouti in place that cover transport, transit, customs procedures and port utilisation as follows:

- Djibouti Port Utilisation Agreement (13th April 2002)[30].
- Preferential Investment Facilitation and Property Acquisition Agreement (18th November 2006).
- Customs Transit Protocol Agreement (9th April 2008).
- Agreement on the Implementation of the Multimodal Transport System (24th April 2010).
- Road Transport Services Agreement (7th November 2011).
- Bilateral Agreement for the Ethio-Djibouti Railway (8th December 2016).

10.3 Berbera Corridor -Agreements in place

Berbera Port Utilisation Agreement

The *Bilateral Agreement between the Government of the Federal Republic of Ethiopia and the Government of Somaliland for Utilization of the Port or Berbera and Services to Cargoes*

[30] Article 33.1 of the Djibouti Port Utilisation Agreement makes provision for Ethiopia and Djibouti "*to establish a joint Ministerial Committee which shall be composed of Ministers responsible for port, transit, transport, customs and other related matters that shall meet every six months alternately in Addis Ababa and in Djibouti. Either Party may request for an interim consultation as deemed necessary.*"

in Transit (the Berbera Port Utilisation Agreement), signed on 31st March 2016, updates the agreement signed in 2005 and makes provision for a Joint Corridor Management Authority that will meet every six months and a Joint Operational Committee.

The Agreement also makes the following provisions:

- Somaliland shall allow goods originating from, and destined to, Ethiopia to transit through the port of Berbera free of taxes and Customs duties.
- Port of Berbera shall give priority to Ethiopian transit cargo in accordance with the port regulations.
- The Parties shall take all the necessary measures to guarantee the fast forwarding of traffic and avoid unjust delays to the flow of goods through their territories.
- The adoption of a list of designated transit transport routes by separate agreement.
- Designation of frontier posts by separate agreement.
- Harmonising systems regarding frontier facilities for goods in transit.
- Provision of the normal commercial ships' services to Ethiopian ships and ships carrying cargo destined to Ethiopia.
- A grace period of 15 days for port dwell times, charges applied up to 120 days and classified as abandoned cargo after 120 days, with Ethiopia to collect abandoned cargos within 30 days of this being designated as abandoned cargos.
- Reefers have zero storage period, and if not collected within 30 days will be classified as abandoned cargos.
- The Parties undertake to simplify and harmonise documentation procedures relating to transit.

The Agreement allows for only two checkpoints for transit traffic – one at the port and one at the border.

Provisions are made to utilise the Multimodal as well as the Unimodal systems, with the involvement of ESL (previously ESLSE).

Under the Agreement, Somaliland has the right to introduce changes to port regulations and tariffs (which are listed in Annex 1 to the Agreement) but need to give 60 days' notice.

MoU between the Ministry of Transport and Logistics and DP World

The Ministry of Transport and Logistics of Ethiopia and DP World signed a Memorandum of Understanding (MoU) which opened up the possibility of concluding an agreement in which DP World and its partners would invest up to USD1 billion in developing supply chain infrastructure along the Berbera corridor over a ten-year period. The proposed investment would be in dry ports, silos, warehouses, container yards, cool and cold chain depots, freight forwarding and clearing activities, in parallel with the implementation a digitised supply chain management system.

The MoU envisages the establishment of a joint venture logistics company to perform logistic operations from origin to destination.

The MoU also envisages that the Ministry of Transport and Logistics will remove regulatory obstacles facing the Ethiopian side of the Berbera Corridor.

10.4 Port Sudan Corridor

Port and Corridor Utilisation Agreements with Ethiopia

The *Protocol Agreement on Port Sudan Utilization Agreement between the Government of the Federal Democratic Republic of Ethiopia and Government of the Republic of Sudan* (the Port Sudan Utilisation Agreement), makes provision for:

- Guaranteeing Ethiopia the permanent right of access to the sea and unhindered freedom of transit through Sudan in respect of goods and cargoes originating from or destined to Ethiopia;
- Guaranteeing Ethiopia use of installations and equipment at Port Sudan;
- The right of Ethiopia to have a free-zone facility within the port facilities of Port Sudan;
- Preferential tariffs for Ethiopia;
- The right for Ethiopian institutions or organisations (public and private) to establish offices to carry out transit and port services or facilitate/coordinate transport;
- Documents required for clearing of Ethiopian transit cargo through Port Sudan
- Sudan giving Ethiopia 90 days' notice of any changes it proposes to make in port regulations, tariffs or other payments and procedures affecting Ethiopian cargo or ships carrying Ethiopian cargo;

The Port Sudan Utilisation Agreement also provides for length of stay in the port, which is free of storage penalty charges, but this is amended continuously.

The Port Sudan Utilisation Agreement also makes provision for port handling charges and dues which are also continuously amended.

10.5 LAPSSET Corridor

The Lamu port, South Sudan and Ethiopia (LAPSSET) Corridor project has the following components:

- A port at Manda Bay, Lamu;
- Standard gauge (1,435 mm (4 ft 8+1⁄2 in)) railway line to Juba and Addis Ababa
- Road network
- Oil pipelines (South Sudan and Ethiopia)
- Oil refinery at Bargoni
- Three airports
- Three resort cities (Lamu, Isiolo and Lake Turkana shores)

On 1 April 2013, Kenya's government announced the setting up of a government agency, the LAPSSET Corridor Development Authority (LCDA) to manage the project on behalf of the Kenyan government. The cost of the project was also put at KSh.2.5 trillion (USD29.24 billion).

Kenya and Ethiopia signed a Bilateral Agreement to jointly pursue the development of the LAPSSET Standard Gauge Railway. A Memorandum of Understanding (MoU) was signed between LCDA and IGAD to facilitate the financing of feasibility and preliminary design studies through the Infrastructure Project Preparatory Fund (IPPF).

11. Ports Serving Ethiopia

11.1 Djibouti Ports and Free Zone Authority (DPFZA) Ports

The Port of Djibouti is located at the southern entrance to the Red Sea, at the intersection of major international shipping lines connecting Asia, Africa and Europe. Djibouti port is a minimal deviation from the principal East-West trade route and provides a secure regional hub for transhipment and relay of goods. The port has handled more than 90 per cent of Ethiopia's maritime traffic since 1998, when Ethiopia ceased using the Eritrean ports of Assab and Massawa.

The port of Djibouti comprises the following facilities:

11.1.1 Société de Gestion du Terminal à conteneurs de Doraleh (SGTD)

The terminal was inaugurated in 2009 and, until 2023, had the capacity to handle Super Post Panamax container vessels (so vessels that have a capacity of 10,000-12,000 TEUs). In 2023, SGTD had four mega-max ship-to-shore (STS) gantry cranes installed, which allows SGTD to now handle the world's biggest container ships.

Figure 11.1: Aerial view of SGTD (prior to the installation of the mega-max STS Gantries)

The quay side productivity of the terminal is 34 TEU movements per hour per crane. SGTD has the capacity to handle 1.2 million TEU per year, has 1,050 meters of quay line, 8 Super Post Panamax quay cranes and 18 meters of draught.

Port Development Strategy

SGTD plans to increase the number of containers it handles both for Ethiopia and transhipped containers. As such SGTD has recently purchased four new mega-max ship-to-shore (STS) cranes from Liebherr. These cranes will operate alongside the current eight STS cranes already installed. The 4 mega-max STS cranes arrived in Djibouti in May 2023 and allows SGTD to handle the latest generation of container ships, which carry up to 23,000 TEUs. Prior to the instalment of the mega-

max STS gantries SGTD was able to handle ships up to Super Post Panamax size, carrying up to 15,000 TEUs and to handle up to 40 container vessels per month.

SGTD has also invested in an expansion of its container yard, increasing storage capacity by 20 per cent, from 1.6 million TEUs to 2.0 million TEUs per year which, together with the installation of the new mega-max STS gantry cranes, will allow SGTD to significantly increase the number of ships and containers it is able to handle per year.

Figure 11.2 and **Table 11.1** give volume statistics for SGTD. **Table 11.2** shows port performance indicators while **Table 11.3** gives Forecasts of container volumes for SGTD.

Figure 11.2: SGTD Throughput in number of TEUs (2009-2022)

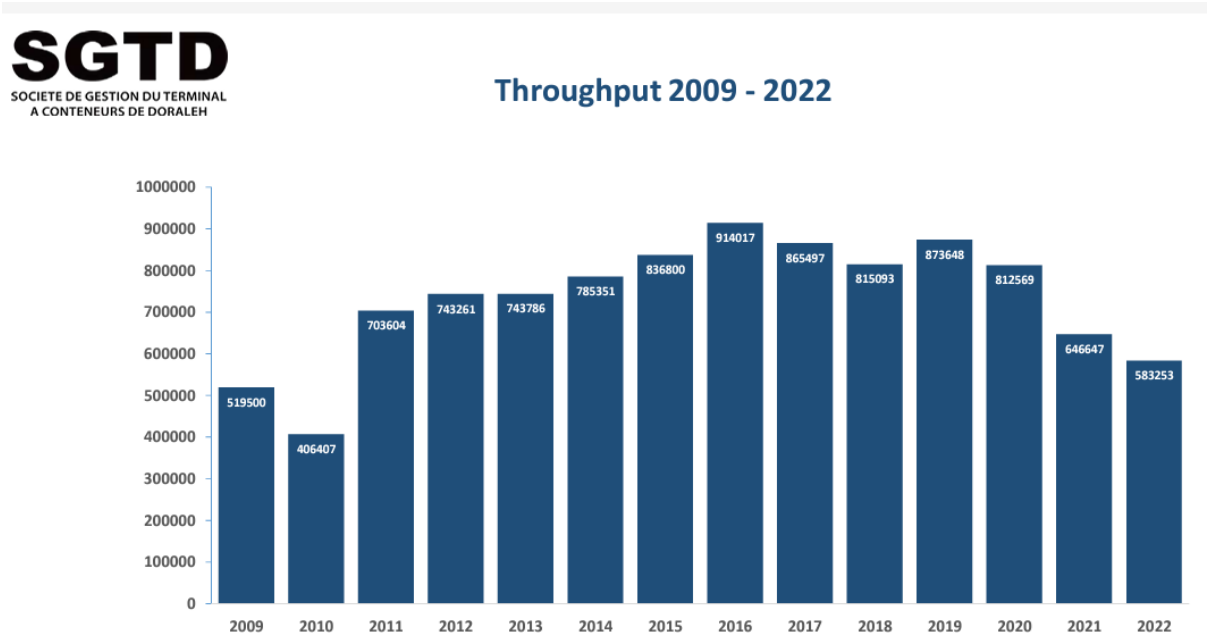


Table 11.1: Port Volumes – SGTD

Type		Unit	Year	Year	Year	Year	Year
Containers	Domestic	TEU					
	Transit	TEU					
	Transhipment	TEU					

Table 11.2: Performance Indicators – SGTD

Vessel Type	Number of Arrivals (Year)	Median Waiting Time at Anchor	Median Waiting Time at Quay	Average Ship Size (GT)	Average Cargo Carrying Capacity (DWT)	Maximum Cargo Carrying Capacity (DWT)	Average Container Capacity
Container							

Table 11.3: Forecasts of container volumes for SGTD

Type		Unit	Year	Year	Year	Year	Year
Containers	Domestic	TEU					
	Transit	TEU					
	Transhipment	TEU					

11.1.2 Doraleh Multipurpose Port (DMP)

Figure 11.3: Photo of Doraleh Multipurpose Port

Source: https://www.portdedjibouti.com/doraleh-multi-purpose-port/

Details of the Doraleh Multipurpose Port (DMP are as follows:

- Vessel Operations
  - 220.000 TEU of handling capacity
  - Ship unloading at 600 tons per hour
- Warehousing and Silos
  - 1 x 85,000 tons grain silo
  - 1 x 145, 000 tons fertiliser silo
  - 20,000 square metre warehouse space for bagged cargo
  - 32,000 square metre warehouse space for dry bulk cargo
- Port Infrastructure
  - 1200 meters of quay length
  - 15.3 m water depth
  - 690 hectares of total land area
  - 8.2 million tons annual capacity
  - 40 thousand vehicles slots
  - Can accommodate up to Cape-size vessels (100,000 DWT)
- Equipment
  - 12 quay cranes for general cargo

- 4 quay cranes of 50 Tons each for containers
- 2 RMG of 40 Tons each
- 7 reach stackers of 45 tons
- 8 grain bagging lines with a capacity of 300 tons/hour/line
- 6 fertiliser bagging lines with a capacity of 300 tons/hour/line
- 6 mobile bagging machines

Table 11.4 gives the port volume statistics for Doraleh Multipurpose Port while **Table 11.5** gives port performance statistics and 11.6 provides forecasts of container and bulk cargo volumes.

Table 11.4: Port Volumes – Doraleh Multipurpose Port

Type		Unit	Year	Year	Year	Year	Year
Containers	Domestic	TEU					
	Transit	TEU					
	Transhipment	TEU					
General Cargo	Domestic	Tons					
	Transit	Tons					
Dry Bulk	Domestic	Tons					
	Transit	Tons					
Wet Bulk	Domestic	Tons					
	Transit	Tons					
Ro-Ro	Domestic	Tons					
	Transit	Tons					

Table 11.5: Performance Indicators – Doraleh Multipurpose Port

Vessel Type	Number of Arrivals (Year)	Median Waiting Time at Anchor	Median Waiting Time at Quay	Average Ship Size (GT)	Average Cargo Carrying Capacity (DWT)	Maximum Cargo Carrying Capacity (DWT)	Average Container Capacity
Container							
Dry Bulk							
Break Bulk							
Ro-Ro							
Liquid Bulk							

Table 11.6: Forecasts of container and bulk cargo volumes for Doraleh Multipurpose Port

Type		Unit	Year	Year	Year	Year	Year
Containers	Domestic	TEU					
	Transit	TEU					
	Transhipment	TEU					
General Cargo	Domestic	Tons					
	Transit	Tons					
Dry Bulk	Domestic	Tons					
	Transit	Tons					
Wet Bulk	Domestic	Tons					
	Transit	Tons					
Ro-Ro	Domestic	Tons					
	Transit	Tons					

11.1.3 Tadjoura Port

The port was inaugurated in 2017 as a port to mainly handle potash exports originating in Tigray and Afar in northern Ethiopia and from Eritrea. The project was financed by the Arab Fund for Economic and Social Development and the Saudi Fund for Development. It has two linear quays of about 435 m length, with 12m draft. The port can accommodate general cargo vessels of up to 65,000 DWT. The port has a Ro-Ro terminal with a quay length of 190m and 12m draft. It has a 30ha handling area, including a state-of-the-art potash handling system that can handle up to 2,000 tonnes of potash per hour, and up to 4 million tons a year.

11.1.4 Damerjog Liquid Bulk Port

The structure of the Damerjog Liquid Bilk Port consists of an offshore jetty that is connected to onshore storage facilities. This will serve multiple end users, enabling them to load and unload a wide variety of products to and from inland storage facilities. The jetty is located around 3km from land, with a causeway that provides access for vehicles and pipeline services. It is designed for the berthing of two ships – one capable of accommodating vessels of up to 100,000 DWT and the second is for vessels between up to 30,000 DWT, with an annual throughput capacity of over thirteen million tons. A Moroccan, company, SOMAGEC, is doing the construction.

11.2 Société Djiboutienne de Gestion du Terminal Vraquier (SDTV)

SDTV sits on a 42-hectare site and has a quayside length of 390 metres comprising a dedicated grain berth (berth 15) of 200 metres and a dedicated fertiliser berth (berth 14) of 190 metres, both with a draft of 11.75 meters.

Each of the flat silos can accommodate up to four different products and/or different clients cargoes using removable concrete partition slabs. The operations process is monitored and set up by a central control room where operational data can be consulted at any time. CCTV scanning and surveillance hi-tech system is installed and attended 24 hours to safeguard client's commodities and company's facilities, property and staff.

SDTV is equipped with two shore pneumatic unloaders used to unload grain, each having an average capacity of 300 tons/hour and 8,000 tons/day. SDTV also has a Liebherr LHM 250 grab crane with a lifting capacity of 69 metric tons and operating a 21 metric tons per scoop, achieving 600 metric tons per hour and is used primarily for discharge of fertiliser.

SDTV has 12 fixed bagging lines, sub-divided to grain station 1 to 6, synchronised on direct ship discharge and silo option at nominal capacity of 60 metric tons per hour per line and 6,000 metric tons per day on average and fertiliser station 7 to 12, synchronised on direct ship discharge line and silo option at nominal capacity of 45 metric tons per hour per line and 4,000 metric tons per day on average.

SDTV also has mobile bagging gantries and Terminal 2 mobile bagging gantries are equipped with 3 bagging lines each releasing 20 bags of 50 kg per minute. Its unloads with 2 double hoisting rope Remote Controlled Grabs with tare of 7 tons on synchronised operation with vessel crane of SWL 25T for 8MT/cargo scoop. These units are for handling both grain and fertiliser. It can be used in SDTV berths or optional berth 13th upon Port authorization.

The fixed bagging station located rear grain silo is dedicated to grain silo bagging and stacking on trucks. It has three lines that each bag 60 MT/H per line and 3000 MT/Day on average. It serves as a backup solution which creates the advantage of using flatbed silo by handling multiple client cargoes under segregation whilst vessel operation undergoes independently.

Table 11.7 gives the port volume statistics for SDTV while Table 11.8 gives port performance statistics and 11.9 provides forecasts of container and bulk cargo volumes.

Table 11.7: Port Volumes – SDTV

Type		Unit	Year	Year	Year	Year	Year
Containers	Domestic	TEU					
	Transit	TEU					
	Transhipment	TEU					
General Cargo	Domestic	Tons					
	Transit	Tons					
Dry Bulk	Domestic	Tons					
	Transit	Tons					

Table 11.8: Performance Indicators – SDTV

Vessel Type	Number of Arrivals (Year)	Median Waiting Time at Anchor	Median Waiting Time at Quay	Average Ship Size (GT)	Average Cargo Carrying Capacity (DWT)	Maximum Cargo Carrying Capacity (DWT)	Average Container Capacity
Container							
Dry Bulk							
Break Bulk							

Table 11.9: Forecasts of container and bulk cargo volumes for SDTV

Type		Unit	Year	Year	Year	Year	Year
Containers	Domestic	TEU					
	Transit	TEU					
	Transhipment	TEU					
General Cargo	Domestic	Tons					
	Transit	Tons					
Dry Bulk	Domestic	Tons					
	Transit	Tons					

11.3 Horizon Oil Terminal

Horizon Djibouti Terminals Ltd is part of Horizon Terminals Limited which is wholly owned by Emirates National Oil Company of the United Arab Emirates. The terminal handles petroleum products, liquified petroleum gas, chemicals, and edible oils.

It has 31 tanks with a total capacity of 399,300 m^3 but the capacity of the depot to store fuel destined for Ethiopia is less than half of Horizon's capacity, at 170,250m^3 as follows:

- White diesel - 72,800m^3
- Jet A1/ Kerosene - 72,450m^3
- Gasoline - 10,000m^3
- Heavy black diesel - 10,000m^3
- Light Black diesel - 5,000m^3

Horizon has two berths, one able to accommodate ships of 80,000DWT, 18m draft, and 244m in length, and the other able to accommodate ships of 30,000 DWT, 10m draft and 180m in length. However, because the gasoline storage depot is limited to 10,000 m^3, ships of less than 30,000 to

40,000 metric tons can be used to supply fuel. This makes the use of Horizon more expensive than it could be if larger ships were used. In addition, it takes between 3.5 and 5 days to load 10,000 cubic meters of gasoline from the depot to road tankers, so unloading 40,000 cubic meters of fuel from a ship takes up to 15, meaning that the tanker will need to stay in port for up to 15 days, which increases the costs of demurrage.

The facility has 12 truck loading bays (top and bottom loading) for petroleum products and one LPG bulk truck loading bay. It has a pumping capacity of 2,000 tons/hour/line.

All fuel used by Ethiopia, including Jet-A1, diesel and petroleum, comes through Horizon Oil Terminal. At present there is no connection between Horizon Oil Terminal and the Doraleh Rail Terminal, which is less that one kilometre from the Oil Terminal. This means that all fuel that is imported by Ethiopia, and from Horizon oil Terminal, is imported by road.

Horizon Oil Terminal charges are as follows:

- For the first 1 million cubic metres of fuel - USD7.3/m^3
- From 1 - 1.5 million cubic metres of fuel - USD6.15/m^3
- From 1.5 - 2.0 million cubic metres of fuel - USD5.65/m^3
- More than 2 million cubic meters of fuel - USD5.00/ m^3

11.4 Berbera Port

Berbera port is located on the south coast of the Gulf of Aden approximately 250 kilometres east of Djibouti.

Figure 11.4: Image of Berbera Port

Source: https://www.dpworld.com/news/releases/dp-world-expands-offering-at-berbera/#:~:text=DP%20World%20plans%20to%20transform,more%20than%20140%20million%20people.

Berbera port was first built by Russians in 1968 and had a quay length of 320 metres. In 1985 the Americans added another 320 metres of quay to the existing quay. In 2016 the Government of Somaliland signed a 30-year concession for management and operation of the port with Dubai Ports World (DPW). The original shareholding agreement for the company managing the port was a joint venture, with DPW holding 51 per cent of the company's shares and the Government of Somaliland holding 30 per cent of the shares. The Government of Ethiopia was offered 19 per cent of the shares but, by 2022, because Ethiopia had not taken up the offer, the Government of Somaliland withdrew the offer. The current shareholding arrangement is with DPW holding 64 per cent of the shares of the management company, the Government of Somaliland holding 30 per cent and British International Investment (the renamed Commonwealth Development Corporation) holding the remaining 6 per cent.

Berbera port was previously administered by the Berbera Port Authority, which was a public institution directly accountable to the Government of Somaliland. However, with the DPW deal, Somaliland established the Somaliland Ports Authority by Presidential Decree, and the management of the Berbera Port was transferred to DP World.

Since taking over management of the port's operations in 2017, DP World has seen an increase in cargo volumes by 35 per cent and vessel productivity by 300 per cent. By implementing new digital systems, sustainable business practices and through its increased, trained staff complement, vessel waiting times have been significantly reduced.

DP World has completed the first phase of the Berbera container terminal, which includes a quay extension of 400m (which takes the port's container capacity from 100,000 to 500,000 per annum and its general cargo capacity from 1 million metric tons to 2 million metric tons); an increase in depth from 11m to 17m; and installation of 3 ship-to-shore gantry cranes.

DP World has committed to investing up to USD442 million to develop and expand Berbera port, with the first phase completed. Further work is already underway on expansion of the quay to 1000 metres which will increase capacity to two million TEUs, operated by 10 quay cranes.

Details of the Container Terminal are as follows:

- Vessel Operations
    - 24/7 vessel operations
    - Moves per hour: 50 – 75 moves
    - Draft of 17 meters
- Gate Operations
    - 2 X weighbridge, in and out
    - Configuration to allow out of gauge cargo
    - VBS (Vehicle appointment system)
    - Automated Gates and OCR is in project pipeline
- Reefer Services
    - No of reefer plugs: 336 (624)
    - Automated reefer monitoring
- CFS Stripping / Stuffing
    - Special yard area for import stripping
- Warehousing
    - Existing 2 x warehouses with area of ?? square meters each

- Port Infrastructure
    - Extension dedicated for containers with 400m additional quay, 17m draft. Capable of handling up to 400m LOA vessels, 8 high, 24 wide. The container terminal currently has 500,000 TEU capacity.
- Equipment
    - 3 x super post Panamax STS
    - 8 x RTG equipped with PDS and auto-steering
    - 26 x ITV
    - 3 x Mobile Harbor Cranes
    - 9 x Reach Stackers
    - 6 x Empty Container Handlers
    - 8 x forklifts

Table 11.10 gives the port volume statistics for Berbera port while **Table 11.11** gives port performance statistics.

Table 11.10: Port Volumes – Berbera Port

Type		Unit	Year	Year	Year	Year	Year
Containers	Domestic	TEU					
	Transit	TEU					
	Transhipment	TEU					
General Cargo	Domestic	Tons					
	Transit	Tons					
Dry Bulk	Domestic	Tons					
	Transit	Tons					
Wet Bulk	Domestic	Tons					
	Transit	Tons					
Ro-Ro	Domestic	Tons					
	Transit	Tons					

Table 11.11: Performance Indicators – Berbera Port

Vessel Type	Number of Arrivals (Year)	Median Waiting Time at Anchor	Median Waiting Time at Quay	Average Ship Size (GT)	Average Cargo Carrying Capacity (DWT)	Maximum Cargo Carrying Capacity (DWT)	Average Container Capacity
Container							
Dry Bulk							
Break Bulk							
Ro-Ro							
Liquid Bulk							

Port Development Strategy

DP World plans to transform Berbera into an integrated maritime, logistics and industrial trade hub to serve the Horn of Africa. As part of this plan, and to add to the developments that have already taken place at the Berbera port, DP World has:

- recently opened the Berbera Economic Zone (BEZ), 15 km from the port along the Berbera to Wajaale road (Berbera Corridor) that connects to Ethiopia. BEZ offers the opportunity for

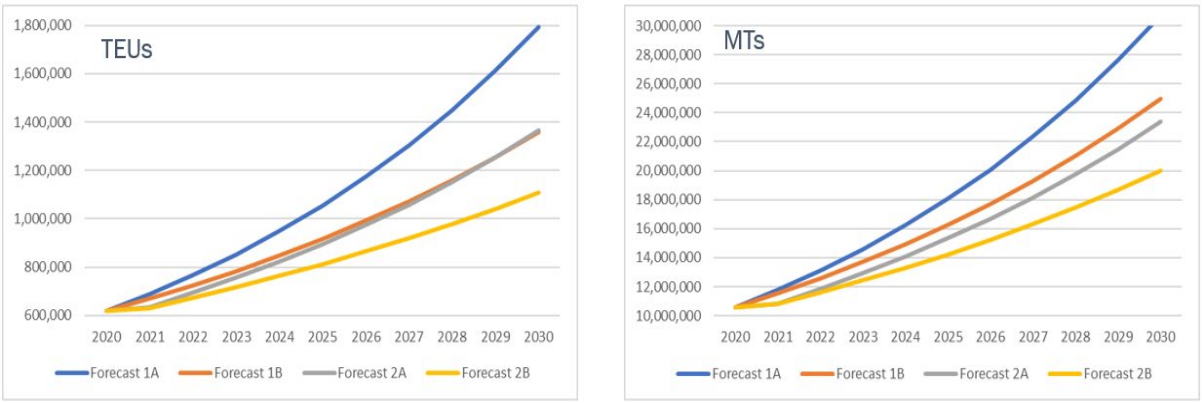
investors to build their own facilities (site and service), including commissioning BEZ to construct a custom-built facility, or to rent a pre-built warehouse; and

- started to develop a new edible oil terminal at Berbera port and has agreed to a long-term lease for the facility. The terminal will initially have a storage capacity of 18,000 tonnes, which will be expanded as demand grows. It will be able to service vessels with a draught of up to 16 metres, allowing Berbera port to handle bulk imports of edible oil so that edible oil can be imported in bulk and packaged locally. The lessor, Mzahim Investment LLC, a subsidiary of Essa Al Ghurair Investments (EGI) of the United Arab Emirates, will develop a local packaging plant in Berbera.

Forecasts

A study financed by UK Aid entitled "Refresh of the Berbera Corridor Diagnostic Study" of May 2022, prepared by Tripleline and Konung International estimates that, by 2030, Berbera port will be handling between 1.1m TEUs and 1.8m TEUs per annum and between 20m metric tons and 30.7m metric tons of non-containerised cargo, as shown in **Table 11.12** and **Figure 11.5.**

Figure 11.5: Forecasts of container, bulk cargo volumes and vehicles for Berbera port in 2030



Source: Refresh of the Berbera Corridor Diagnostic Study. May 2022.

Table 11.12: Forecasts of container, bulk cargo volumes and vehicles for Berbera port in 2030

Type		Unit	Forecast 1A	Forecast 1B	Forecast 2A	Forecast 2B
Containers	Imports	TEU	896,803	678,477	682,077	553,485
	Full Exports	TEU	258,809	258,809	196,841	196,841
	Empty Exports	TEU	637,995	419,668	485,236	356,644
Dry Bulk	Imports	Tons	11,692,218	8,845,753	8,892,692	7,216,148
	Exports	Tons	7,132,826	7,132,826	5,424,978	5,424,978
Wet Bulk	Imports	Tons	8,234,842	6,230,073	6,263,133	5,082,341
Break Bulk	Imports	Tons	3,442,783	2,604,639	2,618,460	2,124,800
Vehicles	Imports	Tons	223,032	168,735	169,630	137,650

Source: Refresh of the Berbera Corridor Diagnostic Study. May 2022.

11.5 Port Sudan

Port Sudan, established in 1910, occupies a strategic location in the centre of the west coast of the Red Sea about 1200 km northeast of Khartoum and about 260 km southwest of Jeddah in Saudi

Arabia. Port Sudan handles mainly general cargo, livestock, cement, containers, oil products, grains, pesticides and vehicles[31].

The Seaports Corporation (SPC) of Sudan, an independent state corporation, governs, constructs, and maintains the ports, harbours and lighthouses of Sudan.

Port Sudan is divided into four components:

- The North Port B quays include 12 berths of a total 1,866 metres long with alongside depths from 8.5m to 10.7m, handling primarily general cargo, edible oils, and molasses. The five berths that handle general cargo and molasses are 822 metres long with alongside depths from 8.5m to 10.7m. Four berths of 365.7 metres with alongside depth of 10.7m handle general cargo and edible oils.

Table 11.13 provides a summary of berths at the North Port

Table 11.13: Summary of Berths at the North Port

Berth Number	Length in Metres	Draft in Metres	Purpose
1-2-3-4-5	597.0	8.5	General cargo, molasses, bulk cement
5A	229.8	9.5	Molasses, cement, general cargo
6-7	365.7	10.7	Bulk cement, general cargo
8-9	365.7	10.7	Edible oils, general cargo
11	106.7	8.5	General cargo, bulk cement
12	201.8	8.5	General cargo, bulk cement

- The South Port has 6 berths, berth 15 for the handling of grains and general cargo and berths 13 through to 18 for containerised traffic.
- The Green Port consists of 4 berths with a total length of 1226 meters and a depth of 14.7 meters. It is equipped to handle dry bulk cargo and vessels of up to 50,000 DWT.
- The Alkhair (Dama Dama) oil terminal can accommodate tankers of up to 50,000 DWT with a draft of 14.6 meters.

The Port is designed and has the capacity to handle Panamax size bulk carriers. **Table 11.14** give the port volume statistics for Port Sudan and **Table 11.15** gives the port performance statistics.

Table 11.14: Port Volumes – Port Sudan

Type		Unit	Year	Year	Year	Year	Year
Containers	Domestic	TEU					
	Transit	TEU					
	Transhipment	TEU					
General Cargo	Domestic	Tons					
	Transit	Tons					
Dry Bulk	Domestic	Tons					
	Transit	Tons					
Wet Bulk	Domestic	Tons					
	Transit	Tons					
Ro-Ro	Domestic	Tons					
	Transit	Tons					

Table 11.15: Performance Indicators – Port Sudan

[31] https://dlca.logcluster.org/21-sudan-port-port-sudan

Vessel Type	Number of Arrivals (Year)	Median Waiting Time at Anchor	Median Waiting Time at Quay	Average Ship Size (GT)	Average Cargo Carrying Capacity (DWT)	Maximum Cargo Carrying Capacity (DWT)	Average Container Capacity
Container							
Dry Bulk							
Break Bulk							
Ro-Ro							
Liquid Bulk							

11.6 Kenya Ports

11.6.1 Mombasa Port

Mombasa port is equipped to handle a wide range of cargoes including dry bulk such as grain, fertilisers, cement and soda ash and liquid bulk such as crude oil and oil products. This is in addition to bagged products (coffee, tea, sugar, etc), general break-bulk (iron and steel, timber), motor vehicles, machinery – and containerised cargo.

The port has a total of 19 deepwater berths. Six of these are for container ships, others include tanker berths, bulk and breakbulk cargo berths. Lighterage and Dhow berthing are also catered for.

Mombasa port is served by road and rail to inland destinations including the capital Nairobi, and the neighbouring states of Ethiopia, Uganda, Rwanda, Burundi, the eastern DRC, and South Sudan. The standard gauge railway links Mombasa with Nairobi at Embakasi.

Table 11.16 give the port volume statistics for Mombasa port and **Table 11.17** gives the port performance statistics.

Table 11.16: Port Volumes – Mombasa Port

Type		Unit	Year	Year	Year	Year	Year
Containers	Domestic	TEU					
	Transit	TEU					
	Transhipment	TEU					
General Cargo	Domestic	Tons					
	Transit	Tons					
Dry Bulk	Domestic	Tons					
	Transit	Tons					
Wet Bulk	Domestic	Tons					
	Transit	Tons					
Ro-Ro	Domestic	Tons					
	Transit	Tons					

Table 11.17: Performance Indicators – Mombasa Port

Vessel Type	Number of Arrivals (Year)	Median Waiting Time at Anchor	Median Waiting Time at Quay	Average Ship Size (GT)	Average Cargo Carrying Capacity (DWT)	Maximum Cargo Carrying Capacity (DWT)	Average Container Capacity
Container							
Dry Bulk							
Break Bulk							
Ro-Ro							
Liquid Bulk							

11.7 Lamu Port

Lamu Port is expected to consist of 32 berths when complete, will cost US$3.5 billion and be 400 ha (1,000 acres) in size. The port will be a deep-water port at 18 m depth. The first phase of the port includes 3 deep water berths with a capability of handling ships with a deadweight capacity of up to 100,000 tonnes.

A consortium of companies led by China Communications Construction Company (CCCC) won the bid for construction of the first three berths at Lamu port. Although Lamu port has been operational since 2021, it has only handled 22 vessels in 2 years[32].

11.8 Port Tariffs

Ports have a wide-ranging list of charges, some of which are bespoke for a port's requirements. To standardise tariffs, the ESCAP/UNDP port tariff model has been used to compare tariffs. The model organises tariffs into four service groups, i.e. navigation, berth, cargo operations and other business. The tariffs obtained were organised slightly differently (marine, terminal handling, stevedoring and storage). **Table 11.18** shows and describes the standard model on the left, and places the tariffs obtained for the four parts opposite their respective categories on the right of the table.

To properly compare the ports' charges, these should be applied to a typical vessel call which is the same across the ports. From the previous section of this chapter, a representative vessel that calls at all the ports would be a 2,000 TEU feeder. The expected dimensions of such a vessel would be approximately 25,000t DWT (dead-weight tonnage); 26,500t GRT (Gross Registered Tonnage); 75,000m^3 CBM (cubic metres); and 200m LOA (Length Overall). Note that this range of dimensions is required because the ports use different units of measurement to determine applicable charges. Such a vessel would require the assistance of one tugboat for berthing/unberthing.

The "call size" refers to the number of containers offloaded/loaded per call, which will usually be a portion of the total vessel capacity to cater for all the ports served on a route. A viable call size is at least 200 TEUs (i.e. offload 200 and onload 200), but the selected size for tariff comparison purposes is set higher at 500 TEUs.[33]

[32] https://www.the-star.co.ke/news/2023-06-05-new-cranes-to-boost-lamu-port-operations/

[33] E.g. see https://qa.www.spglobal.com/marketintelligence/en/mi/research-analysis/2017-review-port-call-sizes-continue-to-rise.html

Table 11.18: ESCAP/UNDP Model Port Tariff Structure

ESCAP/UNDP Model Port Tariff Structure						ESLSE-provided Tariffs	
Service Group	Component/ Type of service	Charging system				Category	Cost
		Basis	Units	Payer	Recipient		
Navi-gation	Port dues	Ship size	GRT	Liner	Port	Marine	Shelter/ Port Dues Per Call
	Pilotage	Ship size/ Time	GRT / Hours	Liner	Port/ Pilotage Ass.	Marine	Pilotage
	Tug services	Tug time/ Ship size	Number/ GRT	Liner	Port/ Tug owner	Marine	Towage / Tug
	Mooring/ unmooring	Ship size	GRT	Liner	Port	Marine	Mooring/ Unmoor.
	Ancillary services	Various	Various	Liner	Port		
						Marine	Anchorage Stay Dues
						Marine	Light Dues
Berth	Berth hire	Time of ship alongside/ Ship size	Hours/ GRT	Liner	Port	Marine	Berth Stay Dues
	Wharfage	Volume/ weight/ Cargo size	Tonnes/ TEU/ m^3	Consignee/nor	Port	Terminal Handling Charge	
	Ancillary services	Amount consumed	Various	Liner	Port		
Cargo Opera-tions	Stevedorage	Volume/ weight/ Cargo size	Tonnes/ TEU/ m^3	Liner	Service provider	Stevedoring	
	Wharf handling	Volume/ weight/ Cargo size	Tonnes/ TEU/ m^3	Consignee/nor	Service provider		
	Extra-movement	Volume/ weight/ Cargo size	Tonnes/ TEU/ m^3	Consignee/nor	Service provider		
	Special cargo handling	Volume/ weight/ Cargo size/ Type	Unit/ Types	Liner	Service provider		
	Storage	Time	Tonnes/ TEU/ m^3/ Days	Consignee/nor	Service provider	Storage	
	Packing/ unpacking	Volume/ weight/ Cargo size	Tonnes/ TEU/ m^3/ Unit type	Liner	Service provider		
	Equip./ service/ facility hire	Hours of use by item	Hours	Stevedore	Equip./ services owner		
Other							

Data on vessel waiting time and time in port are still awaited. For time at anchor outside the port, 2 days is assumed. Published data show that container vessel dwell times differ greatly, i.e. 0.89 days for Djibouti, 2.58 days for Kenya and 11.57 days for Sudan.[34] For comparison purposes, a middle value of 4 days berth dwell time is used.

Container dwell times would equally be quite different across the ports, and the ports provide for long duration storage in their tariffs. For comparison, a three-week (21 day) container dwell time is assumed for imports and one week (7 days) for exports.

Table 11.19 shows the results of applying the port tariffs as provided by ESLSE to the reference vessel call. The first two columns show the standard tariff nomenclature and the third column the ESLSE terms. The charges are either paid by the shipping liner or the cargo consignor/consignee. The charges are expressed in US Dollars, which is the tariff currency for all the ports except Port Sudan which quotes in Euros. The total port charges are substantially lower for Mombasa, with the other ports charging from about half to two thirds more.

Table 11.19: Calculated Charges for a Reference Vessel Call (USD/call)

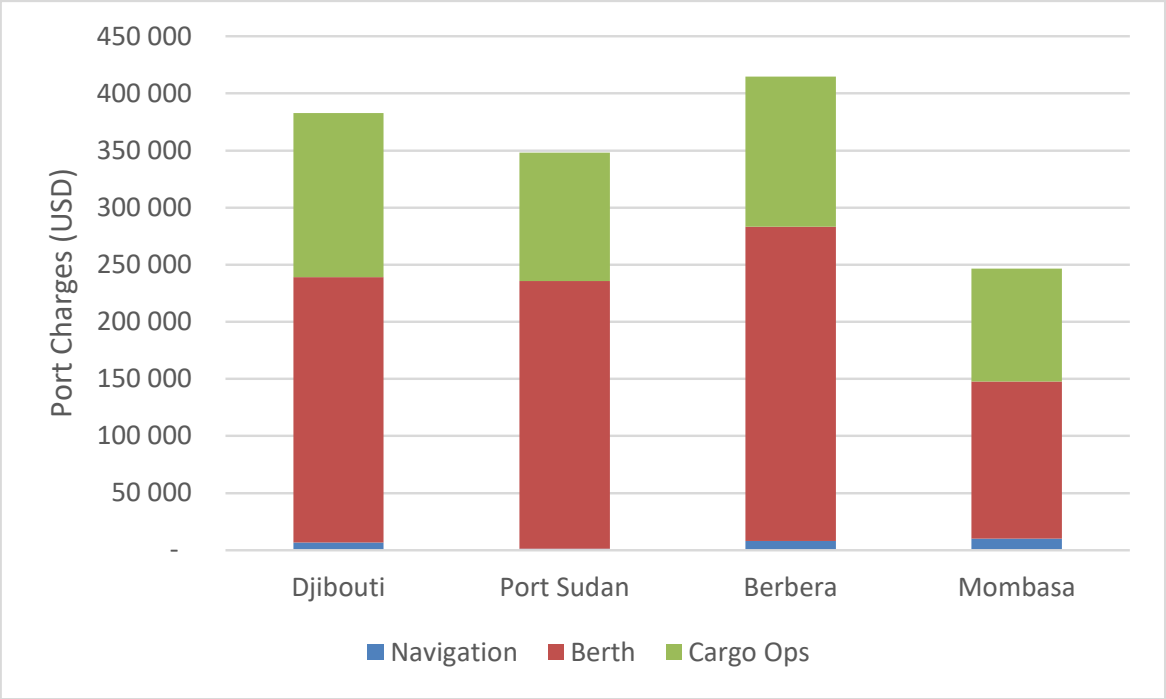
ESCAP/UNCTAD		ESLSE (ESL)	Paid By	Djibouti	Port Sudan	Berbera	Mombasa
Navigation	Port dues	Shelter/ Port Dues Per Call	Liner	783	-	3 180	4 320
	Pilotage	Pilotage	Liner	1 357	401	1 755	1 590
	Tug services	Towage / Tug	Liner	3 093	671	2 385	1 988
	Mooring/ Unmooring	Mooring/ Unmooring	Liner	564	-	350	875
	Ancillary	Anchorage Stay Dues	Liner	771	70	280	-
		Light Dues	Liner	-	-	-	1 458
Berth	Berth hire	Berth Stay Dues	Liner	3 668	18 977	2 400	4 992
	Wharfage	Terminal Handling Charge	Consignee	228 975	215 596	273 000	132 500
Cargo Operations	Stevedorage	Stevedoring	Liner	133 000	112 530	130 000	99 000
	Storage	Storage	Consignee	10 750	-	1 563	-
Sub-Total			Liner	143 237	132 649	140 350	114 221
Sub-Total			Consignee	239 725	215 596	274 563	132 500
Total				382 962	348 244	414 913	246 721
per TEU				383	348	415	247
Per TEU % above Mombasa				+55%	+41%	+68%	-

Note: The Wharfage/Terminal Handling Charge for Port Sudan is not available, and the value shown is the average for the other three ports

The distribution of values across the tariff categories provides an indication of the differences in tariff structures. The comparison is simplified by considering the aggregate charges categories, as presented in **Figure 11.6**. For the non-Mombasa ports, Berth charges represent about two thirds and Cargo Operations charges one third of total port charges. Relatively, navigation charges are negligible. At Mombasa, especially berth charges are lower, so that the Berth to Cargo ratio is 56% to 40%.

[34] Refer https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=170027

Figure 11.6: Port Charges per Service Group (USD/call)



Since the charges are dominated by the Wharfage/Terminal Handling and Stevedoring charges, it is useful to consider how these compare by port (refer **Table 11.20**). Here it can also be seen how imported containers are charged more than exports, reflecting that containerised import volumes dominate exports in these countries. Due to the clearing requirements imports also spend more time in-port than exports.

Table 11.20: Container Charges (USD/box)

Category	Shipment	Djibouti	Port Sudan	Berbera	Mombasa
Terminal Handling	TEU Import	322	N/A	370	155
	FEU Import	644	N/A	690	230
	TEU Export	136	N/A	176	110
	FEU Export	272	N/A	307	170
Stevedoring	TEU	133	110	130	99
	FEU	166	220	195	148

11.8.1 SGTD Port Tariffs

The latest ____ Port Tariff Book was issued on ___ and effective from ____. Some of the tariffs are given in **Table 11.21**:

Table 11.21: SGTD Port Tariffs

Service Type		Charge per Move (USD)	
		≤20 ft	>20 ft
Import/Export Normal Containers	Discharging/Loading Full		
	Discharging/Loading Empty		
	Full Transhipment		
	Empty Transhipment		
Hazardous Containers	Discharging/Loading Full		
Container Shifting	Shifting Empty Containers		
Terminal Handling Charges	Transit		

Reefer Charges			
Storage Normal Containers (Import, Export, Transit)		**Charge per TEU per Day of part thereof (USD)**	
First 8 Days			
From Day 9 till Day 14			
From Day 15 till Day 21			
From Day 22 till Day 28			
From Day 29 till Delivery			

11.8.2 Doraleh Multipurpose Port Tariffs

The latest Mombasa Port Tariff Book was issued on ___ and effective from ____. Some of the tariffs are given in Table 11.22:

Table 11.22: Mombasa Port Tariffs

Service Type		**Charge per Move (USD)**	
		≤20 ft	**>20 ft**
Import/Export Normal Containers	Discharging/Loading Full		
	Discharging/Loading Empty		
	Full Transhipment		
	Empty Transhipment		
Hazardous Containers	Discharging/Loading Full		
Container Shifting	Shifting Empty Containers		
Terminal Handling Charges	Transit		
Reefer Charges			
Storage Normal Containers (Import, Export, Transit)		**Charge per TEU per Day of part thereof (USD)**	
First 8 Days			
From Day 9 till Day 14			
From Day 15 till Day 21			
From Day 22 till Day 28			
From Day 29 till Delivery			

11.8.3 SDTV Port Tariffs

The latest Mombasa Port Tariff Book was issued on ___ and effective from ____. Some of the tariffs are given in **Table 11.23**:

Table 11.23: Mombasa Port Tariffs

Service Type		**Charge per Move (USD)**	
		≤20 ft	**>20 ft**
Import/Export Normal Containers	Discharging/Loading Full		
	Discharging/Loading Empty		
	Full Transhipment		
	Empty Transhipment		
Hazardous Containers	Discharging/Loading Full		
Container Shifting	Shifting Empty Containers		
Terminal Handling Charges	Transit		
Reefer Charges			
Storage Normal Containers (Import, Export, Transit)		**Charge per TEU per Day of part thereof (USD)**	
First 8 Days			
From Day 9 till Day 14			

From Day 15 till Day 21	
From Day 22 till Day 28	
From Day 29 till Delivery	

11.8.4 Horizon Port Tariffs

The latest Mombasa Port Tariff Book was issued on ___ and effective from ____. Some of the tariffs are given in **Table 11.24**:

Table 11.24: Mombasa Port Tariffs

Service Type		**Charge per Move (USD)**	
		≤20 ft	**>20 ft**
Import/Export Normal Containers	Discharging/Loading Full		
	Discharging/Loading Empty		
	Full Transhipment		
	Empty Transhipment		
Hazardous Containers	Discharging/Loading Full		
Container Shifting	Shifting Empty Containers		
Terminal Handling Charges	Transit		
Reefer Charges			
Storage Normal Containers (Import, Export, Transit)		**Charge per TEU per Day of part thereof (USD)**	
First 8 Days			
From Day 9 till Day 14			
From Day 15 till Day 21			
From Day 22 till Day 28			
From Day 29 till Delivery			

11.8.5 Berbera Port Tariffs

The latest Berbera Port Tariff Book was issued on 15th December 2022 and effective from 1st January 2023. Some of the tariffs are given in Table **11.25**:

Table 11.25: Berbera Port Tariffs

Service Type		**Charge per Move (USD)**	
		≤20 ft	**>20 ft**
Import/Export Normal Containers	Discharging/Loading Full	130	196
	Discharging/Loading Empty	80	120
	Full Transhipment	141	175
	Empty Transhipment	124	159
Hazardous Containers	Discharging/Loading Full	195	293
Container Shifting	Shifting Empty Containers	50	100
Terminal Handling Charges	Transit	630	635
Reefer Charges		65	130
Storage Normal Containers (Import, Export, Transit)		**Charge per TEU per Day of part thereof (USD)**	
First 8 Days		Free	
From Day 9 till Day 14		2	
From Day 15 till Day 21		5	
From Day 22 till Day 28		7.50	
From Day 29 till Delivery		10.50	

11.8.6 Mombasa Port Tariffs

The latest Mombasa Port Tariff Book was issued on ___ and effective from ____. Some of the tariffs are given in **Table 11.26**:

Table 11.26: Mombasa Port Tariffs

Service Type		**Charge per Move (USD)**	
		≤20 ft	**>20 ft**
Import/Export Normal Containers	Discharging/Loading Full		
	Discharging/Loading Empty		
	Full Transhipment		
	Empty Transhipment		
Hazardous Containers	Discharging/Loading Full		
Container Shifting	Shifting Empty Containers		
Terminal Handling Charges	Transit		
Reefer Charges			
Storage Normal Containers (Import, Export, Transit)		**Charge per TEU per Day of part thereof (USD)**	
First 8 Days			
From Day 9 till Day 14			
From Day 15 till Day 21			
From Day 22 till Day 28			
From Day 29 till Delivery			

12. Transport Services - Shipping

12.1 Services and Route Structures

Eighty-nine liner services call at the ports considered in the Ethiopia Logistics Masterplan Diagnostic, these being Djibouti, Port Sudan, Massawa, Assab (although there was no data available for Assab) Mogadishu, Mombasa, Kismayo and Berbera. To qualify, a service needs to call at a port at least once. If only services that call at least once a month are considered, the total number of services reduces to 67 (refer to **Table 12.1** for a list of services and ports/regions of call).

None of the services is purely intra-regional, i.e. looping between only a selection of the nominated ports. Of the 67 services, six are regional in that they loop between one or more of the nominated ports and ports in the Gulf, Red Sea and Middle East. The majority of the services are, therefore, extra-regional in that they link one or more nominated port, possibly with a regional port(s), and with port(s) outside the immediate region.

The structure of the services is shown in finer detail in **Table 12.2**. The left-hand column presents the seven ports of interest (excluding Assab), and the row headings show the ports or regions connected. The number in the row-column intersect is the number of services. The total row sometimes shows a number in excess of the total number of services, because the same service may be calling at more than one port of interest and is therefore double counted in the sum.

From these tables it can be seen that:

- Mombasa and Djibouti have the most extensive service connectivity networks, followed by Berbera and Port Sudan.
- Mombasa, Djibouti and Berbera are relatively well connected amongst the ports of interest.
- These three ports also have strong connectivity to the surrounding region. Thereafter, services extend mostly to the Indian Sub-Continent and further East, followed by East Africa and Europe.

Table 12.1: Services Ports/Regions of Call (for services that call at least once per month)

service code	service name	Berbera	Djibouti	Kismayu	Mogadishu	Mombasa	Massawa	Port Sudan	Red Sea	Gulf	MIDEA	FEAST	SE-AS	EUR	INDIA	AFR-E	NAM-E	AFR-S	AFR-N	SAM-W	NAM-W	AFR-W	AUSTR	IOISL	SAM-E	Intra	Reg	Extra
ASEA2	ASEA KENYA					1				1		1	1		1													1
ASEA	ASEA TANZANIA				1	1			1	1		1	1	1	1	1								1				1
EAX1	ASIA EAST AFRICA EXPRESS SERVICE 1					1						1	1															1
EAX3	ASIA EAST AFRICA EXPRESS SERVICE 3					1				1		1	1		1													1
EAX1	Asia East Africa Service (EAX1)					1				1		1	1															1
EAX3	Asia East Africa Service (EAX3)					1						1	1		1													1
AKX-E	Asia Kenya Express (AKX) Eastbound					1						1	1		1													1
AKX-W	Asia Kenya Express (AKX) Westbound					1				1		1	1		1													1
AEM2	Asia Mediterranean Service (AEM2)																											
VEC	CAR CARRIER LINE		1				1		1	1		1	1	1	1					1								1
VEC	CAR CARRIER LINE (VEC)																											
CEA	CHINA EAST AFRICA EXPRESS					1						1	1		1	1							1					1
CEAX	CHINA EAST AFRICA EXPRESS					1						1	1		1	1							1					1
DESF	DAR ES SALAAM FEEDER																											
EA1	East Africa 1 - Mombasa (EA1)					1				1		1	1	1	1													1
EAX	EAST AFRICA EXPRESS	1			1	1				1		1			1	1		1										1
EAS	EAST AFRICA SERVICE (EAS)					1			1	1		1	1		1	1							1					1
EARS	EAST AFRICA TO RED SEA	1		1		1				1			1		1													1
AEF	Evergreen Asia-East Africa Service(AEF)					1				1		1	1		1								1					1
RES2	EVERGREEN FAR EAST-RED SEA SERVICE 2(RES2)		1						1	1		1	1															1
FTE	FEEDERTECH (FTE)	1	1			1		1	1	1		1	1	1	1	1		1		1								1
FAL1	FRENCH ASIA LINE 1 FAL 1																											
FAL	FRENCH ASIA LINE 1 (FAL 1)																											
GIA-N	Gulf India Africa Express (GIA) Northbound																											
GIA-S	Gulf India Africa Express (GIA) Southbound					1				1			1	1	1	1								1				1
IA	INTRA ASIA																											
IR5	INTRA-REDSEA FEEDER 5 (IR5)							1	1				1	1	1													1
JEDDEX	JEDDAH EXPRESS SERVICE					1			1	1		1	1	1		1												1
KENYA	KENYA EXPRESS					1						1	1										1					1
KYX	KENYA EXPRESS					1						1	1										1					1
KYX	Kenya Express (KYX)					1						1	1					1					1					1
KISIWA (25Z)	KISIWA EXPRESS					1						1			1	1								1				1
MASHARIKI (28J)	MASHARIKI EXPRESS					1			1			1	1			1												1
MASHARIKI	MASHARIKI EXPRESS SERVICE EASTBOUND																											
MASHARIKI	MASHARIKI EXPRESS SERVICE WESTBOUND					1			1			1	1		1	1												1
MASIIKA (28D)	MASIIKA EXPRESS		1			1			1	1					1	1		1						1				1
MASIKA	MASIKA EXPRESS EASTBOUND					1				1					1	1												1

service code	service name	Berbera	Djibouti	Kismayu	Mogadishu	Mombasa	Massawa	Port Sudan	Red Sea	Gulf	MIDEA	FEAST	SE-AS	EUR	INDIA	AFR-E	NAM-E	AFR-S	AFR-N	SAM-W	NAM-W	AFR-W	AUSTR	IOISL	SAM-E	Intra	Reg	Extra
MASIKA	MASIKA EXPRESS WESTBOUND		1			1				1			1		1	1												1
MAWINGU	MAWINGU EXPRESS EASTBOUND																											
MAWINGU	MAWINGU EXPRESS WESTBOUND					1				1					1													1
MAWINGU (28X)	MAWINGU SERVICE					1			1	1			1		1													1
MECL1	MECL1 SERVICE EASTBOUND		1							1					1		1		1									1
MEX	Mediterranean Club Express																											
MOGADISHU	MOGADISHU EXPRESS			1	1	1			1	1		1	1	1	1	1						1						1
MXS	MOGADISHU EXPRESS SOUTHBOUND																											
MFX	MOMBASA FAR EAST (MFX)	1				1				1		1	1	1	1								1					1
MUSTANG	MUSTANG																											
NW2	New West Latin America Service 2																											
NOURA	NOURA EXPRESS	1			1	1			1	1		1	1		1	1		1						1				1
NWCIPAK	NWC TO IPAK		1						1	1		1	1	1	1	1		1	1		1	1						1
PETRA	PETRA SERVICE		1						1	1	1	1	1	1	1	1		1	1									1
REX2	Red Sea Express 2	1	1						1	1		1	1	1	1													1
REX2	RED SEA EXPRESS 2 (RS2)		1						1	1		1	1		1													1
RS2	RED SEA LOOP2		1						1	1		1	1															1
RES2	RED SEA SERVICE (RES2)		1			1		1	1	1		1	1		1			1										1
RSS	RED SEA SERVICE (RSS)		1						1	1		1	1	1	1		1											1
RS2	Red Sea Service 2 (RS2)																											
RSGIS	RED SEA/GULF/IPAK Service		1			1		1	1	1	1			1	1	1			1									1
RSSEAS	RED SEA/SOUTH-EAST AFRICA SERVICE		1			1		1	1		1			1	1	1		1	1									1
RGS	REDSEA GULF SERVICE (RGS)	1	1						1	1		1	1		1													1
EA3	SERVICE EA3					1				1		1	1															1
EAF	SERVICE EAF	1				1			1	1		1	1		1	1												1
SWAX2	SWAHILI EXPRESS					1				1		1	1		1	1												1
TANGA (24Z)	TANGA FEEDER					1						1		1		1												1
VE1	VEHICLE CARRIER SERVICE 1																											
VE1	Vehicle Carrier Service 1 (VE1)																											
BLUENILE (28A)	BLUE NILE EXPRESS		1			1			1	1				1	1													1
BNX	BLUE NILE EXPRESS EASTBOUND		1						1	1																	1	
BNX	BLUE NILE EXPRESS WESTBOUND		1						1	1		1	1		1													1
BMSXN	BMS EXPRESS SERVICE NORTHBOUND	1							1	1																	1	
BMSXS	BMS EXPRESS SERVICE SOUTHBOUND	1							1	1																	1	
EURAF5	EUROPE AFRIQUE 5																											
GULFSAK2	FAS GULF EMIRATES IRAQ SHUTTLE 2																											
GULFJJS1	FAS GULF JEDDAH FEEDER 1	1	1						1	1				1	1													1
INDKHIQ	FAS INDIAN SUB CONT. KHALIFA AND IRAQ SRV																											
GULFJYS	FAS JEBEL ALI YEMEN SERVICE	1	1						1	1					1													1

service code	service name	Berbera	Djibouti	Kismayu	Mogadishu	Mombasa	Massawa	Port Sudan	Red Sea	Gulf	MIDEA	FEAST	SE-AS	EUR	INDIA	AFR-E	NAM-E	AFR-S	AFR-N	SAM-W	NAM-W	AFR-W	AUSTR	IOISL	SAM-E	Intra	Reg	Extra
REDSEAFD	FAS RED SEA FEEDER	1						1	1	1				1	1													1
REDSEAYF	FAS YEMEN FEEDER																											
MECL (600)	MECL		1			1			1	1		1	1		1		1		1									1
ME2 (405)	MIDDLE EAST 2 SERVICE (ME2)																											
MXN	MOGADISHU EXPRESS NORTHBOUND																											
MONA	MONA EXPRESS	1	1				1	1	1	1																	1	
MUSAFIR (27Z)	MUSAFIR EXPRESS				1					1																	1	
NUBIAN (28B)	NUBIAN EXPRESS		1					1	1	1		1		1	1				1									1
GULFJYS	SSLEUR JEBEL ALI YEMEN SERVICE	1							1	1																	1	
SUDAN (28F)	SUDAN FEEDER							1	1	1								1										1
UMX	UMX SERVICE (APL)		1							1		1			1		1		1									1
FEEDER (Y43)	Y43 JAL SLV BBO JED FEEDER	1							1	1		1	1															1
YX1	YEMEN EXPRESS 1	1	1						1	1		1	1		1			1	1									1
	Total	17	26	2	5	41	2	9	39	53	3	45	45	20	48	23	4	11	9	2	1	2	8	5	-	-	6	61

Note: Services with no numbers had fewer than one call per month

Table 12.2: Number of Services Connecting to Ports of Interest

	Ports of Interest							Surrounding Region			Distant Zones															Total
	Berbera	Djibouti	Kismayu	Mogadishu	Mombasa	Massawa	Port Sudan	Red Sea	Gulf	MIDEA	INDIA	FEAST	SE-AS	AFR-E	EUR	AFR-S	AFR-N	AUSTR	IOISL	SAM-W	NAM-E	NAM-W	AFR-W	SAM-E	
Berbera		7	1	2	6	1	3	14	17	-	12	9	9	4	5	4	1	1	1	1	-	-	-	-	98
Djibouti	7		-	-	8	2	6	23	25	3	22	16	15	7	11	7	9	-	1	2	4	1	1	-	170
Kismayu	1	-		1	2	-	-	1	2	-	2	1	2	1	1	-	-	-	-	-	-	-	1	-	15
Mogadishu	2	-	1		4	-	-	3	5	-	4	4	3	4	2	2	-	-	2	-	-	-	1	-	37
Mombasa	6	8	2	4		-	4	16	28	2	32	31	32	21	11	7	3	8	5	1	1	-	1	-	223
Massawa	1	2	-	-	-		1	2	2	-	1	1	1	-	1	-	-	-	-	1	-	-	-	-	13
Port Sudan	3	6	-	-	4	1		9	7	2	7	3	3	3	6	4	3	-	-	1	-	-	-	-	62
Total	20	23	4	7	24	4	14	68	86	7	80	65	65	40	37	24	16	9	9	6	5	1	4	-	

Note: Dark grey shows 20 or more services and light grey 10 or more services

Regions: Gulf = Arabian Gulf; MIDEA = Middle East; FEAST = Far East; SE-AS = South-East Asia; EUR = Europe; INDIA = Indian Sub-Continent; AFR-E = East Africa; NAM-E = North America East Coast; AFR-S = Southern Africa; AFR-N = North Africa; SAM-W = South America West Coast; NAM-W = North-America West Coast; AFR-W = West Africa; AUSTR = Australasia; IOISL = Indian Ocean Islands; SAM-E = South-America East Coast

12.2 Liners

There are 21 liners participating in services to the ports of interest. These may be "operating" liners that actually provide the service or "sharing" in that they purchase capacity on another liner's vessel. The relationship between liners may take the form of cooperating alliances, of which the major ones are 2M (Maersk and MSC), Ocean Alliance (CMA CGM, Cosco, Evergreen, OOCL), and Alliance 2022 (Hapag-Lloyd, ONE, Yang Ming, HMM).

Table 12.3 presents the services linked to the participating liners, and **Figure 12.1** the summary per liner. The two dominant liners are Maersk and CMA-CGM, followed by ANL and MSC. Interestingly, the liner alliances are not active in their formal structures, with no shared 2M or Ocean Alliance services, but with CMA-CGM often joining up with ANL and CNC.

Figure 12.1: Number of Services Participated in per Liner

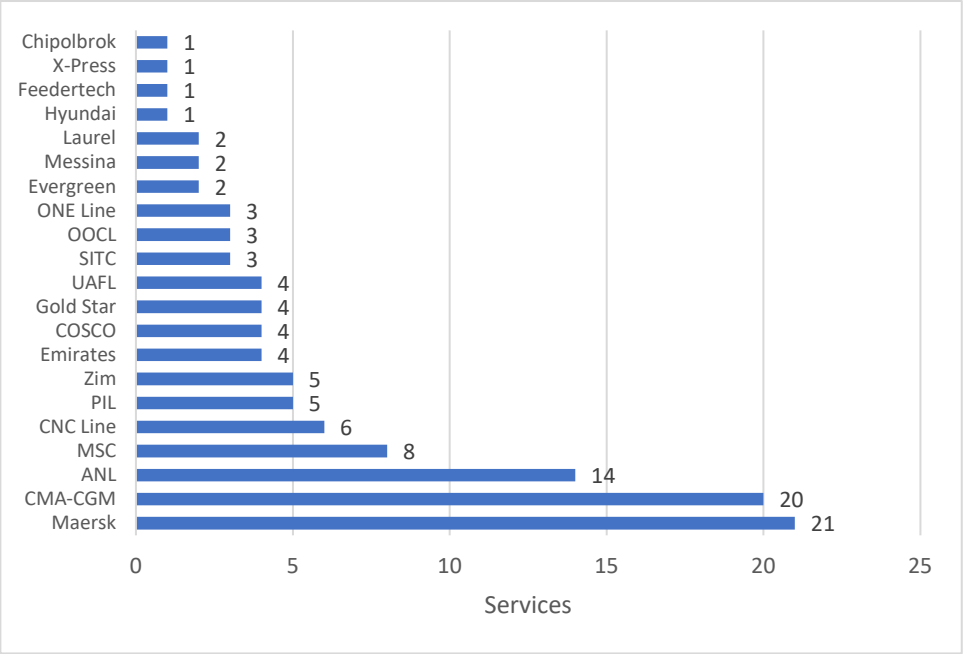


Table 12. 3: Services per Liner

Service Code	Service Name	CMA-CGM	MSC	Maersk	COSCO	PIL	ANL	OOCL	CNC Line	Evergreen	Hyundai	Feedertech	Emirates	ONE Line	Messina	Zim	Gold Star	Laurel	X-Press	UAFL	SITC	Chipolbrok
ASEA2	ASEA KENYA	1					1		1													
ASEA	ASEA TANZANIA	1					1		1												1	
EAX1	ASIA EAST AFRICA EXPRESS SERVICE 1							1														
EAX3	ASIA EAST AFRICA EXPRESS SERVICE 3							1														
EAX1	Asia East Africa Service (EAX1)				1																	
EAX3	Asia East Africa Service (EAX3)				1																	
AKX-E	Asia Kenya Express (AKX) Eastbound												1									
AKX-W	Asia Kenya Express (AKX) Westbound												1									
AEM2	Asia Mediterranean Service (AEM2)				1																	
VEC	CAR CARRIER LINE															1	1					
VEC	CAR CARRIER LINE (VEC)															1						
CEA	CHINA EAST AFRICA EXPRESS																1					
CEAX	CHINA EAST AFRICA EXPRESS																	1				
DESF	DAR ES SALAAM FEEDER		1																			
EA1	East Africa 1 - Mombasa (EA1)													1								
EAX	EAST AFRICA EXPRESS		1																			
EAS	EAST AFRICA SERVICE (EAS)					1																
EARS	EAST AFRICA TO RED SEA		1																			
AEF	Evergreen Asia-East Africa Service(AEF)									1												
RES2	EVERGREEN FAR EAST-RED SEA SERVICE 2(RES2)									1												
FTE	FEEDERTECH (FTE)											1										
FAL1	FRENCH ASIA LINE 1 FAL 1	1																				
FAL	FRENCH ASIA LINE 1 (FAL 1)	1					1		1													
GIA-N	Gulf India Africa Express (GIA) Northbound												1									
GIA-S	Gulf India Africa Express (GIA) Southbound												1									
IA	INTRA ASIA																					1
IR5	INTRA-REDSEA FEEDER 5 (IR5)					1																
JEDDEX	JEDDAH EXPRESS SERVICE	1					1															
KENYA	KENYA EXPRESS																	1				
KYX	KENYA EXPRESS																1					
KYX	Kenya Express (KYX)															1						
KISIWA (25Z)	KISIWA EXPRESS			1																		
MASHARIKI (28J)	MASHARIKI EXPRESS			1																		
MASHARIKI	MASHARIKI EXPRESS SERVICE EASTBOUND			1																		
MASHARIKI	MASHARIKI EXPRESS SERVICE WESTBOUND			1																		
MASIIKA (28D)	MASIIKA EXPRESS			1																		

Service Code	Service Name	CMA-CGM	MSC	Maersk	COSCO	PIL	ANL	OOCL	CNC Line	Evergreen	Hyundai	Feedertech	Emirates	ONE Line	Messina	Zim	Gold Star	Laurel	X-Press	UAFL	SITC	Chipolbrok
MASIKA	MASIKA EXPRESS EASTBOUND			1																		
MASIKA	MASIKA EXPRESS WESTBOUND			1																		
MAWINGU	MAWINGU EXPRESS EASTBOUND			1																		
MAWINGU	MAWINGU EXPRESS WESTBOUND			1																		
MAWINGU (28X)	MAWINGU SERVICE			1																		
MECL1	MECL1 SERVICE EASTBOUND			1																		
MEX	Mediterranean Club Express	1					1		1													
MOGADISHU	MOGADISHU EXPRESS		1																			
MXS	MOGADISHU EXPRESS SOUTHBOUND																			1		
MFX	MOMBASA FAR EAST (MFX)																		1			
MUSTANG	MUSTANG		1																			
NW2	New West Latin America Service 2										1											
NOURA	NOURA EXPRESS	1					1															
NWCIPAK	NWC TO IPAK		1																			
PETRA	PETRA SERVICE		1																		1	
REX2	Red Sea Express 2	1																				
REX2	RED SEA EXPRESS 2 (RS2)	1					1		1													
RS2	RED SEA LOOP2							1														
RES2	RED SEA SERVICE (RES2)				1																	
RSS	RED SEA SERVICE (RSS)					1																
RS2	Red Sea Service 2 (RS2)					1																
RSGIS	RED SEA/GULF/IPAK Service														1							
RSSEAS	RED SEA/SOUTH-EAST AFRICA SERVICE														1							
RGS	REDSEA GULF SERVICE (RGS)					1																
EA3	SERVICE EA3													1								
EAF	SERVICE EAF													1								
SWAX2	SWAHILI EXPRESS	1					1		1													
TANGA (24Z)	TANGA FEEDER			1																		
VE1	VEHICLE CARRIER SERVICE 1															1	1					
VE1	Vehicle Carrier Service 1 (VE1)															1						
BLUENILE (28A)	BLUE NILE EXPRESS			1																		
BNX	BLUE NILE EXPRESS EASTBOUND			1																		
BNX	BLUE NILE EXPRESS WESTBOUND			1																		
BMSXN	BMS EXPRESS SERVICE NORTHBOUND																			1		
BMSXS	BMS EXPRESS SERVICE SOUTHBOUND																			1		
EURAF5	EUROPE AFRIQUE 5	1					1															
GULFSAK2	FAS GULF EMIRATES IRAQ SHUTTLE 2	1					1															
GULFJJS1	FAS GULF JEDDAH FEEDER 1	1					1															

Service Code	Service Name	CMA-CGM	MSC	Maersk	COSCO	PIL	ANL	OOCL	CNC Line	Evergreen	Hyundai	Feedertech	Emirates	ONE Line	Messina	Zim	Gold Star	Laurel	X-Press	UAFL	SITC	Chipolbrok
INDKHIQ	FAS INDIAN SUB CONT. KHALIFA AND IRAQ SRV	1					1														1	
GULFJYS	FAS JEBEL ALI YEMEN SERVICE	1																				
REDSEAFD	FAS RED SEA FEEDER	1					1															
REDSEAYF	FAS YEMEN FEEDER	1					1															
MECL (600)	MECL			1																		
ME2 (405)	MIDDLE EAST 2 SERVICE (ME2)			1																		
MXN	MOGADISHU EXPRESS NORTHBOUND																			1		
MONA	MONA EXPRESS	1																				
MUSAFIR (27Z)	MUSAFIR EXPRESS			1																		
NUBIAN (28B)	NUBIAN EXPRESS			1																		
GULFJYS	SSLEUR JEBEL ALI YEMEN SERVICE	1																				
SUDAN (28F)	SUDAN FEEDER			1																		
UMX	UMX SERVICE (APL)	1																				
FEEDER (Y43)	Y43 JAL SLV BBO JED FEEDER			1																		
YX1	YEMEN EXPRESS 1		1																			
Total		20	8	21	4	5	14	3	6	2	1	1	4	3	2	5	4	2	1	4	3	1

12.3 Port Calls

The ports under consideration received some 193 vessel calls per month on average (see **Figure 12.2**). As is the case for the number of liner services, Mombasa (nearly half) and Djibouti (about a third of calls) dominate, with Berbera accounting for about a tenth of calls.

Figure 12.2: Calls per Month per Port of Interest

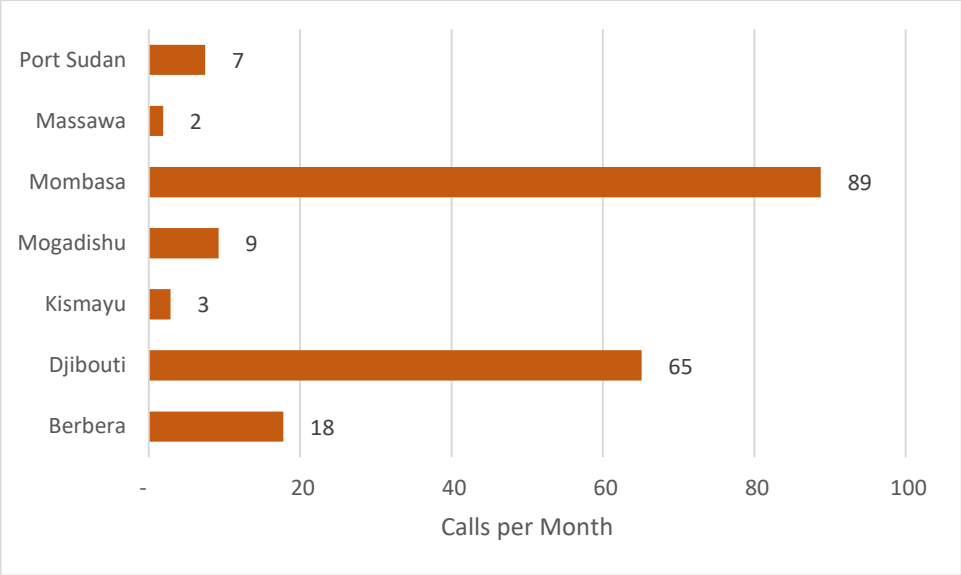


Table 12.4 shows the detailed origin-destination (OD) matrix for the ports. The dominant frequencies are to/from Mombasa and South-East Asia, East Africa and the Indian Sub-Continent; and to/from Djibouti and the Red Sea and Gulf. Each of these five OD pairs represents about 10 per cent of the vessel call activity.

The period under consideration (October 2021 to June 2022) includes the tail-end of the Covid pandemic. However, as shown in **Figure 12.3**, there does not appear to have been a major correction in the number of vessel calls as the pandemic abated. Rather, the call numbers seem to demonstrate a seasonal pattern which is similar across all the ports. For the busiest ports, the variability (measured by standard deviation) is the smallest, i.e. the traffic the most stable.

Figure 12.3: Monthly Call Numbers

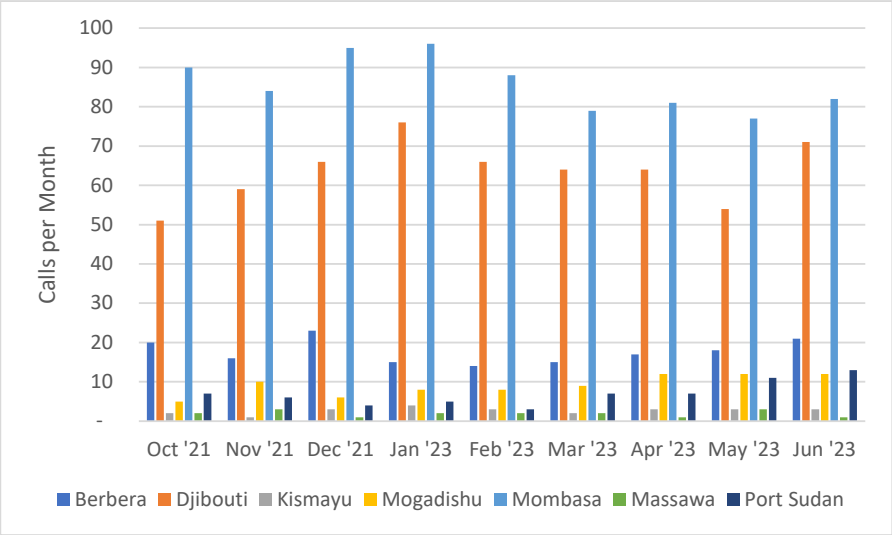


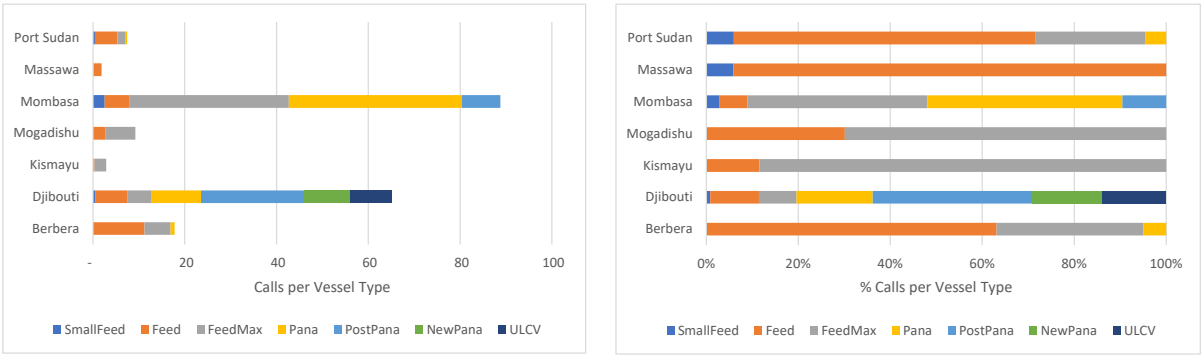
Table 12.4: Average Monthly Calls from/to Port of Interest and Region

	Berbera	Djibouti	Kismayu	Mogadishu	Mombasa	Massawa	Port Sudan	Red Sea	Gulf	MIDEA	INDIA	FEAST	SE-AS	AFR-E	EUR	AFR-S	AFR-N	AUSTR	IOISL	SAM-W	NAM-E	NAM-W	AFR-W	SAM-E	Total
Berbera	-	1	0	-	2	0	-	5	4	-	5	0	0	-	-	-	-	-	-	-	-	-	-	-	18
Djibouti	1	-	-	-	0	0	0	23	18	-	7	3	12	-	2	-	-	-	-	-	-	0	-	-	65
Kismayu	-	-	-	2	1	-	-	-	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	3
Mogadishu	-	-	1	-	2	-	-	-	4	-	1	-	0	0	-	0	-	-	1	-	-	-	-	-	9
Mombasa	2	0	2	2	-	-	-	2	8	-	17	7	21	18	0	6	-	2	0	-	-	-	0	-	89
Massawa	1	0	-	-	-	-	-	0	0	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	2
Port Sudan	0	0	-	-	-	-	-	6	1	-	0	-	0	-	0	-	-	-	-	-	-	-	-	-	7
Red Sea	5	8	-	-	3	1	6																		193
Gulf	8	27	-	3	15	-	0																		
MIDEA	-	-	-	-	-	-	-																		
INDIA	-	3	0	1	22	-	0																		
FEAST	0	2	-	-	2	0	0																		
SE-AS	0	16	-	0	24	-	0																		
AFR-E	-	-	-	-	10	-	-																		
EUR	-	2	-	-	0	0	-																		
AFR-S	0	-	-	-	6	-	-																		
AFR-N	-	-	-	-	-	-	-																		
AUSTR	-	-	-	-	3	-	-																		
IOISL	-	-	-	1	0	-	-																		
SAM-W	-	-	-	-	-	-	-																		
NAM-E	-	-	-	-	0	-	-																		
NAM-W	-	-	-	-	-	-	-																		
AFR-W	-	-	-	-	0	-	-																		
SAM-E	-	-	-	-	-	-	-																		
Total	18	60	3	9	89	2	7																		188

12.4 Vessel Sizes

Figure 12.4 shows the breakdown of calls by vessel size, in absolute and relative (percentage) terms. As expected, the busier ports also attract vessels of a larger carrying capacity. The maximum vessel size at Mombasa is a Post Panamax, whilst at Djibouti, vessels reach a ULCV size (probably related to Djibouti's location on a major sea lane and the positioning of the Société de Gestion du Terminal à conteneurs de Doraleh (SGTD) as a transit hub. At the other ports, vessels are mostly of a Feeder (up to 3,000 TEU) and Feeder-max (up to 5,000 TEU) size. These are vessels that are often equipped with their own gear which enables them to self-handle cargo and not rely on port cranes.

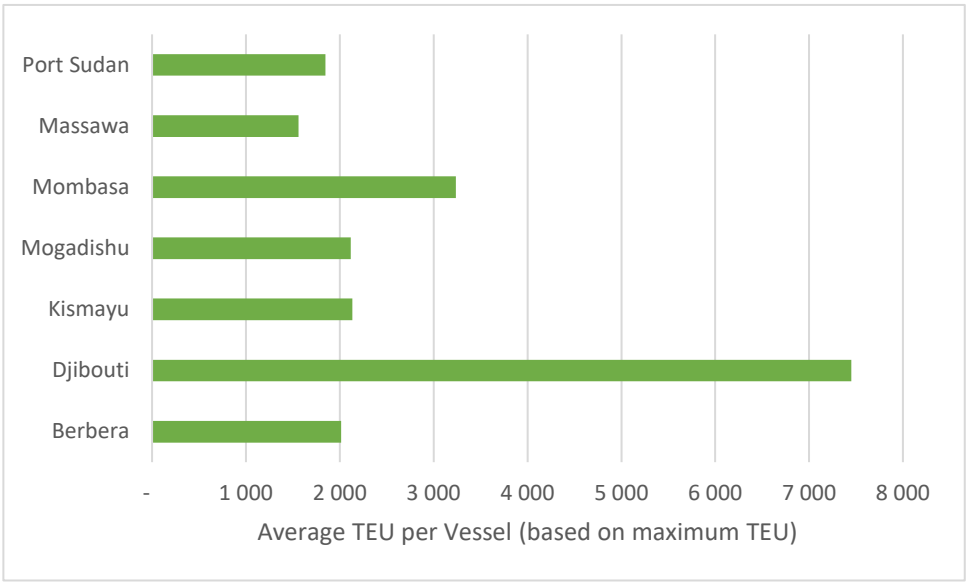
Figure 12.4: Vessel Size Distribution per Port of Interest



Note: Small Feeder < 1,000 TEU; Feeder < 2,000 TEU; Feeder-max < 3,000 TEU; Panamax < 5,000 TEU; Post-Panamax < 10,000 TEU; New Panamax < 15,000 TEU; ULCV (ultra-large container vessel) > 15,000 TEU

Figure 12.5 shows the average vessel size for each port of interest. Djibouti typically handles a Post-Panamax vessel and Mombasa a Panamax. The other ports all typically receive vessels at the upper end of the Feeder size.

Figure 12.5: Average Vessel Size



13. Transport Services - Rail

For over a century, the history of Ethiopia's railway sector has been closely tied to the Ethio Djibouti Railway Company. This railway is one of the oldest in Africa and played a significant role in Ethiopia's development. Spanning 781 km and linking Addis Ababa with the Port of Djibouti, the 1000mm gauge railway ran for 681 km in Ethiopia and 100 km in Djibouti. Ownership of the narrow-gauge railway has been shared by the governments of the Federal Democratic Republic of Ethiopia and the Republic of Djibouti.

In Ethiopia, the dominant mode of transport, both for passenger and freight has been the road transport. Road transportation is associated with low transport capacity, high transport cost, high energy consumption, and exhaust emissions that pollute the environment. In contrast, electrified railway transport is a green transportation option that offers high transport capacity, reliability, space and energy savings, environmental friendliness, and faster speeds. The land required for railway projects is only about half of that needed for roads, and with electric traction, energy consumption is only a fraction of that used by road transport.

13.1 Ethiopia Railway Corporation and the Standard Gauge Railway

In 2007, a TAG was established under the Ethiopian Ministry of Transport to define a framework for the development of a railway corridor. This included a pre-feasibility study on socio-economic and macro-economic benefits, and a detailed corridor analysis. The TAG recommended the introduction of a railway system throughout Ethiopia as the primary national mass transportation system. The study emphasised the importance of modernisation and expansion of the existing 1m gauge (1,000 mm) railway to a standard gauge (1,435 mm) line to provide faster access to the Port of Djibouti from inland Ethiopia. In the same year, the Council of Ministers established the Ethiopian Railway Corporation (ERC) by regulation No. 141/2007 to develop the railway infrastructure and provide freight and passenger transport services in Ethiopia.

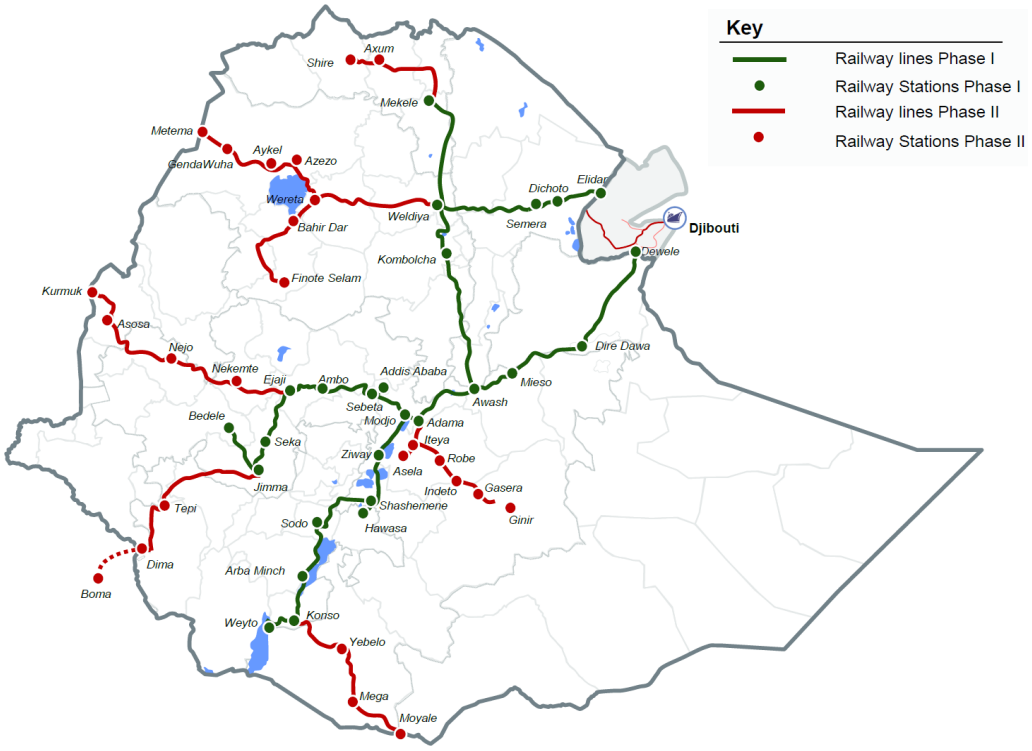
In June 2010, the Transport Ministers of both countries signed an MoU in Djibouti on the Development and Operation of a Standard Gauge Railway Line between Ethiopia and Djibouti. The Ethiopian Government subsequently adopted its five-year Growth and Transformational Plan (GTP) to achieve economic structural transformation and sustainable accelerated growth towards Ethiopia's longer-term vision of being a middle-income country by 2020–2023. The GTP included the development of dry ports, rail and road networks, and air transport. It aimed to develop the standard gauge railway line for Ethiopia and Djibouti and a 34 km light rail system for Addis Ababa as priority projects.

ERC has developed railway alignments on eight corridors in Ethiopia with a total length of about 5,000km and as shown in **Figure 13.1** and listed in **Table 13.1**

Table 13.1: The National Railway Network of Ethiopia in Eight National Corridors

NO	RAILWAY NETWORK ROUTES SELECTED	PHASE	LENGTH (KM)
Route 1	Addis Ababa – Modjo – Awash – Dire Dawa -Djibouti	1	656
Route 2	Mojo–Shashemene-Awasa-Konso-Woyito-Including Konso-Moyale		903
Route 3	Addis Ababa-Ejaji-Jimma-Guraferda-Dima-Directed to Boma		637
Route 4	Ejaji-Nekemet-Asossa-Kummruk		460
Route 5	Awash-Kombolcha-Mekelle-Shire	1	730
Route 6	Fenoteselam-Bahirdar-Wereta-Weldia-Mile- Djibouti		740
Route 7	Wereta-Azezo-Metema		248
Route 8	Addis Ababa-Adama-Indeto-Gasera-Ginir		248

Figure 13.1: Planned National Railway Network of Ethiopia



Source:

ERC's current priority is to construct the first phase of the national railway network, which spans over 2,000 km. To streamline the process, the corridors have been divided into sub-sections. The projects are at varying stages of development, as shown in **Table 13.2**, with some already completed and commercial operation has commenced. Some are in advanced stages of physical construction, and others are still in the feasibility study stage.

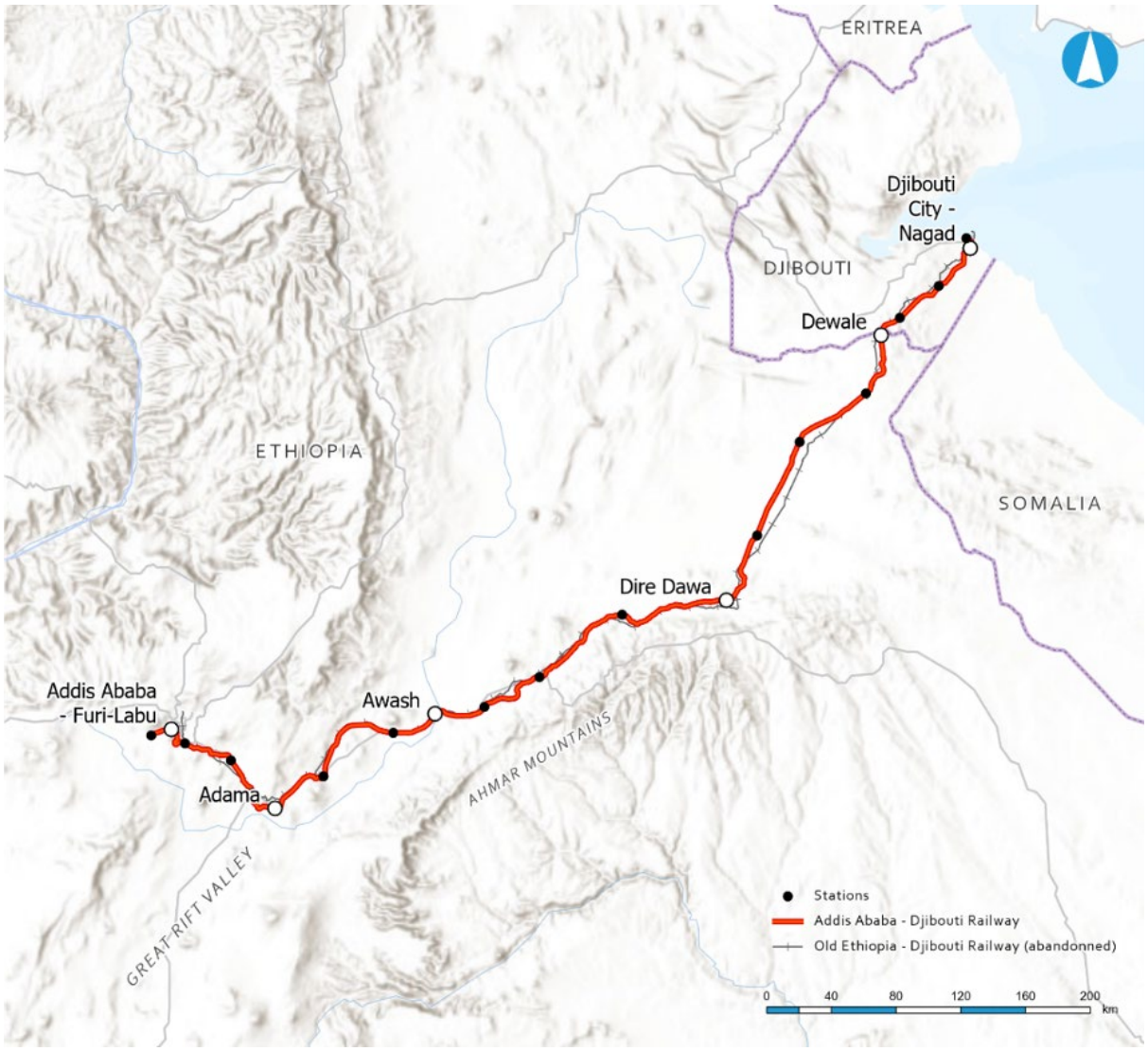
Table 13.2: Implementation status of Railway Infrastructure Projects

	Name of the Project	Status
1	Addis Ababa – Djibouti Railway Project	Completed and in commercial operation
2	Mekelle – Weldya Railway Project	58% physical progress
3	Awash Weldya Railway Project	92% physical progress
4	Asayita – Tadjoura Railway Project	Feasibility study stage
5	Sebeta – Jimma – Bedele	Feasibility study stage
6	Modjo – Moyale Railway Project	Feasibility study stage

13.2 Addis Ababa – Djibouti Railway line

13.2.1 Description of the Line

Figure 13.2: Map of the Addis Ababa to Djibouti Standard Gauge Railway



Source: https://www.gihub.org/connectivity-across-borders/case-studies/addis-ababa-djibouti-railway/

The Addis Ababa–Djibouti Railway Standard Gauge Railway (SGR) is a 753 km electrified single-track standard gauge line between Ethiopia´s capital Addis Ababa and the Port of Djibouti, with 45 stations in total. The SGR runs parallel to, and replaces, the original one-metre gauge railway built more than 100 years ago. However, although the standard-gauge railway follows the route of the old one-metre gauge line, it is built on a new, straighter right-of-way that allows for much higher speeds. New stations have been built outside city centres, and most of the old railway stations have been decommissioned. There are 68 viaducts and bridges and there are no tunnels.

The total length of the railway line is 759 km, of which 754 km run between the two terminal stations at Sebeta and the Port of Doraleh. The remaining five kilometres are for shunting operations. A total of 666 km of the railway line is in Ethiopia, while a total of 93 km is in Djibouti. The 115 km section

from Sebeta to Adama is the only double-track section of the line, and it also has the highest grades with a net elevation loss of 650 meters. It features several viaducts with lengths of up to 800 meters. The remainder of the railway is single-track, with passing loops distributed evenly along its length.

There are 21 dedicated railway stations along the railway and all of them can serve as passing loop stations as they have three tracks or more (except the Adigala station which has only two tracks). Four of the 21 railway stations are designed as passing loops only, so there is no freight loading/unloading or passenger service. Two of the remaining 17 stations are freight yards only and two others are for passengers only. The remaining 13 stations can handle both passenger services as well as freight loading/unloading.

As a landlocked country, the line serves as the main transport corridor for Ethiopia to its gateway of the Port of Djibouti, which handles over 90% of Ethiopia's international trade. The line runs from Addis Ababa/Sebeta through the two large Ethiopian cities of Adama and Dire Dawa and links industrial parks and dry ports.

The railway line is owned by the Ethiopia-Djibouti Railway (EDR), a joint venture company of the two state-owned companies, Ethiopia Railway Corporation (ERC), owning 75 per cent of the railway and La société de chemin de fer Djibouti (SDCF), owning 25 per cent of the railway.

The project was constructed by China Railway Group Limited (CREC) and China Civil Engineering Construction Corporation (CCECC). CREC and CCECC also have a contract to operate the railway for six years following construction completion.

The line was opened for freight in October 2015 and was formally inaugurated for passenger services in October 2016. It became officially commercially operational as of 1st January 2018.

In summary, the Addis Ababa–Djibouti Railway was designed to the Chinese National Railway Class 2 Standard but with some modifications as requested by ERC. It is a Standard Gauge railway, with trains using Jannery AAR couplers and air brakes. Electrification is via a 25kvA 50Hz AC overhead catenary. The target speeds are 120km/h for passenger trains and 80km/h for goods trains. The maximum freight train load is 3,500 ± 93 tonnes and the design capacity is 20 million tonnes annually, with a gross transport capacity of 24.9 million tonnes annually (taking double-track sections into account). The maximum gradient is 1.85 per cent (1 in 54) and the length of arrival and departure track at passing loops is 850 metres (dual locomotive is 880 metres), meaning that the maximum train length is approximately 800 metres.

Although road traffic in Ethiopia drives on the right, trains drive on the left in the double-track sections. This is consistent with Chinese railway practice.

All rolling stock was purchased by ERC and has been transferred to EDR.

13.2.2 Operation of the Addis Ababa – Djibouti Railway line

The railway line is operated by the Ethio-Djibouti Standard Gauge Railway Share Company (EDR), a public joint venture owned by the Governments of Ethiopia and Djibouti. EDR has signed an operations and management contract for six years with the joint venture between China Railway Engineering Corporation (CREC) and China Civil Engineering and Construction Corporation (CCECC).

In April 2017, the Ethio-Djibouti Standard Gauge Railway Share Company (EDR) was established as a result of a Bilateral Agreement signed on 16th December 2016 between the Governments of Ethiopia and Djibouti. The Shareholders' Agreement was signed on 11th January 2017. The Shareholders agreed to establish a share company with an initial share capital of USD500 million, consisting of 10,000 shares of USD50,000.00 each. The purpose of the company is to operate and maintain the

Addis Ababa-Djibouti Standard Gauge Railway Line, including the maintenance and renewal of all of the line infrastructure and equipment, and to operate freight and passenger transport services on the Line.

Since the opening of the railway line, the transport volumes and passenger numbers have been below planned volumes and numbers as shown in **Figure 13.3** and **Figure 13.4.**

Figure 13.3: Tons of cargo transported on the Ethiopia-Djibouti Railway (2018-2022)

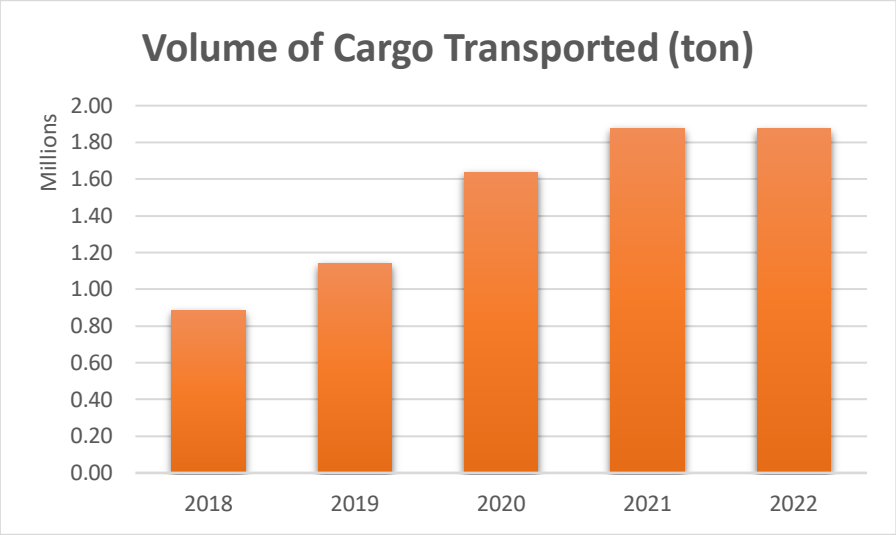
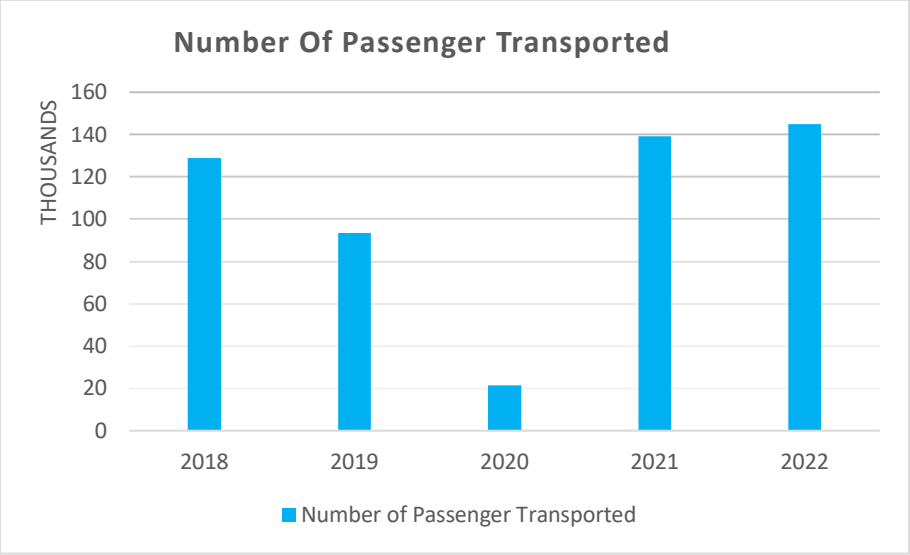


Figure 13.4: Numbers of Passengers transported on the Ethiopia-Djibouti Railway (2018-2022)



14. Transport Services – Road Infrastructure

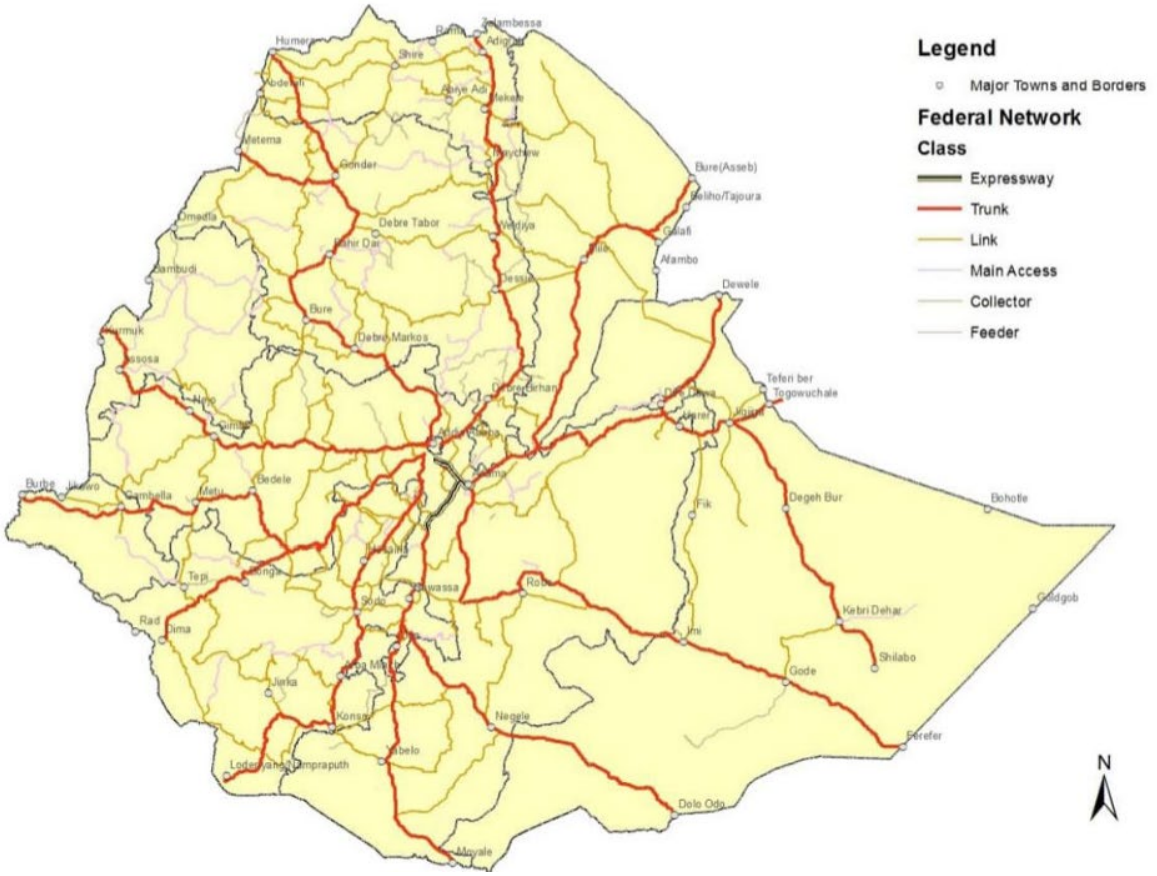
14.1 Situational Analysis

Ethiopia's government was one of the first in Africa to establish a dedicated road agency (1951), the Imperial Highway Authority (later to become the Ethiopian Roads Authority, now the Ethiopian Roads Administration - ERA). The goal of the Authority was to rehabilitate/restore, extend, and maintain the country's entire road network through its own force account operations. After changes in government and political orientation (in which the remit, name, and oversight of the Authority changed) and following the 1991 shift from a command-based economy to a market-oriented economy, the ERA was re-established. The revision provided strong administration under the leadership of a Board. As part of this reform, the government assigned the administration of rural roads to the regional governments and administration of national roads to ERA as part of the federal government's responsibility. ERA's role in rural roads administration was then limited to rendering support such as overall network planning, training, and technical assistance as required by regional governments.

Road transport accounts for more than 95 per cent of the country's total domestic passenger and cargo traffic, although the country has a limited road network, a small transport vehicle fleet and a low coverage of road transport services.

Figure 14.1 is a map showing the Federal and Regional Road Network.

Figure 14.1: Federal and Regional Road Network



Source: Road Functional Classification of Existing and Planned New Roads

The total classified road network (2021) of Ethiopia is about 147,942 km. The unclassified road network is estimated to be 49,573 km, meaning that the total road asset is about 197,800 km. **Table 14.1** shows that about 91,600 km of road, which is about 60 per cent of the total classified road network, are minor roads under the regional and woreda road administrations.

Table 14.1: Ethiopian Road Network by Administration, Surface Type and Condition

Administration	Surface Type (km)			Road Condition (%)		
	Gravel	Asphalt	Total	Good	Fair	Poor
ERA (Federal Roads)	12,813	15,886	28,699	22	40	38
RRAs (Regional Roads)	35,806	0	35,806	30	20	50
Community/Woreda (URRAP Roads)	55,808	0	55,808	18	35	47
Municipality Roads	24,416	3,213	27,629	24	30	46
Total	**128,843 (87%)**	**19,099 (13%)**	**147,942**	**23**	**32**	**45**

14.2 Expressway Development

Expressways, which in Ethiopia are tolled, already constructed or under construction are shown in **Table 14.2.**

Table 14.2: Expressways constructed or under construction.

S. No	Road	Road Characteristics					
		Length (km)	Operation	Design Class	No. of Lane	Carriageway width (m)	Design Speed (km/h)
	I. Currently Operating						
1	Addis – Adama	78	Toll	Expressway	6	2x (3x3.75)	120
2	Mojo – Batu	90	Toll	Expressway	4	2x (2x3.65)	120
	II. Under Construction						
3	Batu – Hawassa		Toll	Expressway	4	2x (2x3.65)	120
4	Adama – Awash		Toll	Expressway	4	2x (2x3.65)	120

Table 14.3 gives the average annual daily traffic (AADT) figures for the Expressways and the Dire Dawa- Dewele Trunk Road by month.

Table 14.3: Average Annual Daily Traffic (AADT) figures for the Expressways by month

S. No	Month	Monthly Total			AADT		
		2020	2021	2022	2020	2021	2022
	I. Addis – Adama Expressway Road				*24,505*	*26,928*	*29,032*
1	Jan	802044	813497	798218			
2	Feb	755890	802424	744087			
3	Mar	809919	866817	828151			
4	Apr	765614	786310	767692			
5	May	789828	858692	827562	Percent of Light vehicles = 62%		
6	Jun	759479	825074	-			

S. No	Month	Monthly Total			AADT		
		2020	2021	2022	2020	2021	2022
7	Jul	580961	826727	833175	Perc. of 2-axle medium bus and small trucks = 18% Perc. of 3-axle & above medium, heavy & truck trailer = 14%		
8	Aug	700788	834142	834461			
9	Sep	692357	813341	795831			
10	Oct	765135	845145	814012			
11	Nov	718876	750908	795024			
12	Dec	803462	805809	816412			
	II. Mojo – Batu Expressway Road				-	-	*3600*
1	Jan			112359			
2	Feb			113078			
3	Mar			123918			
4	Apr			106966			
5	May			115415	Percent of Light vehicles = 45% Percentage of 2-axle medium bus and small trucks = 30% Percentage of 3-axle & above medium, heavy & truck trailer = 25%		
6	Jun			114261			
7	Jul			116180			
8	Aug			104735			
9	Sep			102224			
10	Oct			103546			
11	Nov			97797			
12	Dec			103405			
	III. Dire Dawa – Dewele Trunk Road				*1015*	*1255*	*1314*
1	Jan	30182	30190	40328			
2	Feb	29782	29007	40633			
3	Mar	30169	31859	43881	Percent of Light vehicles = 14% Percentage of 2-axle medium bus and small trucks = 13% Percentage of 3-axle & above medium, heavy & truck trailer = 62% Percentage of three-wheeler = 11%		
4	Apr	24780	31687	39859			
5	May	31387	33206	41014			
6	Jun	33829	38503	40320			
7	Jul	29336	36305	39912			
8	Aug	31666	45846	47111			
9	Sep	31143	39109	45907			
10	Oct	35376	46089	43071			
11	Nov	31593	49351	40106			
12	Dec	31137	47092	17609			

14.3 Trunk Road Network

Trunk roads are roads that radiated from Addis Ababa and connect with regional capitals and border points. Trunk roads are usually single carriageway, two lane roads, with design speeds in the range of 50 to 100 km/h. The trunk road network length, traffic volume and riding condition, in terms of road roughness (IRI) are shown in **Table 14.4**.

Table 14.4: Trunk Road Network

No	Trunk Road Corridor	Length (Km)	IRI (Right/ Outbound)	IRI (Left/ Inbound	2021 AADT Range (Min – Max)
1	Addis – Galafi Route	679	2.63	2.66	988 – 15,770
2	Awash jun. – Dawalle Route	500	2.53	2.63	928 – 3414
3	Dengego – Togochale Route	198	2.84	2.82	1071 – 2835
4	Ditcheto – Bure (Asseb) Route	142	-	-	-
5	Addis – Zalambsa Route	938	4.11	4.24	892 – 2269
6	Addis – Humera Route	980	2.96	3.03	1865 – 5438
7	Gonder - Metema Route	198	-	-	-
8	Addis – Kurmuk Route	800	3.94	3.85	339 – 6801
9	Addis – Jimma – Jikawo Route	916	5.43	4.14	687 – 5893
10	Modjo – Moyale Route	670	2.75	2.66	635 – 4436

Table 14.5 shows the length, in kilometres, of asphalt and gravel roads by road functional class.

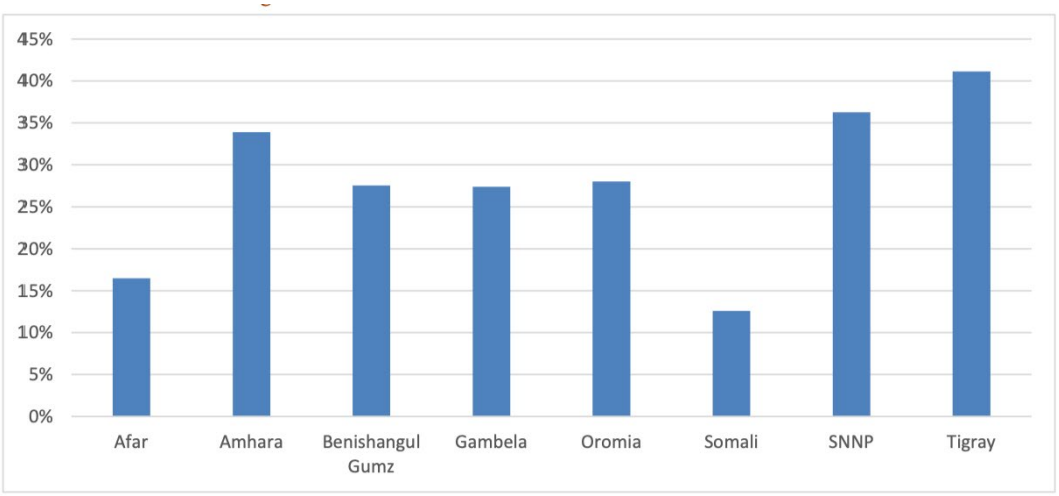
Table 14.5: Asphalt and gravel roads by road functional class.

S. No.	Road Class Id	Road Functional Class	Length (km)		
			Asphalt	Gravel	Total
1	A	Trunk Road	7614	1224	8838
2	B	Link Road	6196	5606	11802
3	C	Main Access Road	1454	3124	4578
4	D	Collector Road	684	1891	2575
5	E	Feeder Road	8	126	134
6	Unclassified Road		421	261	682
	Total		**16,377**	**2,231**	**28,609**

In summary, the country's road network has increased from 26,550 km in 1997 to 147,942 km in 2020, so an average growth rate of 8 per cent per year. In addition, the road density per 1000 sq. km has increased from 24.1 km in 1997 to 131 km in 2020. Also, substantial improvement has been registered in the condition of the country's road network, with the proportion of road network in good condition increasing from 22 per cent in 1997 to 71 per cent in 2020.

The population living within 2 km from an all-weather road is 28 million people which gives a Rural Accessibility Index (which is an indication of the percentage of the population living within a 20-minute walk from an all-weather road) of 31 per cent, which is low for sub-Saharan Africa, which has an average RAI of 42 per cent. The RAI for the Somali and Afar Regions of Ethiopia are significantly worse than for the rest of the country as is shown in **Figure 14.2**.

Figure 14.2: Rural Accessibility Index by Region in Ethiopia



Source: National Integrated Transport Master Plan Study

To improve the road network coverage and improve road conditions, the FDRE Government has completed five phases of the Road Sector Development Programme (RSDP), starting in 1997 and completed in 2020. Under the RSDP, physical works have been undertaken on a total of 159,218.4 km of roads excluding routine maintenance work and community roads, financed mainly (84.9 per cent) from domestic sources, including the general budget and the Road Fund Office, but also from external sources (15.1 per cent).

Figure 14.3: Financing Source of the RSDP

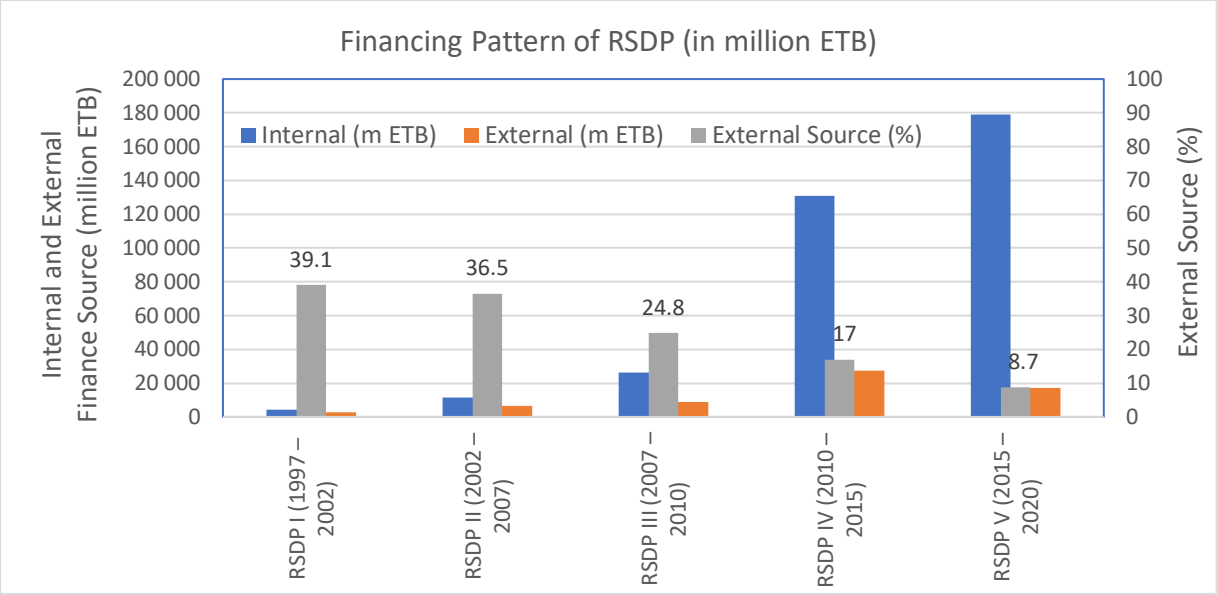


Table 14.6 shows expenditure on road infrastructure by type of road

Table 14.6: Share of road sector expenditure (1997 – 2020)

Expenditure Category	Share of Expenditures (%)
Federal Roads	**77.6**
- Construction of Expressways	4.5
- Rehabilitation of Trunk Roads	5.7
- Upgrading of Trunk Roads	9.1
- Upgrading of Link Roads	19.3
- Construction of Link Roads	32.2
- Maintenance	4.2
- Others (including Institutional Support)	2.6
Regional Roads	**11.5**
- Construction	10.2
- Emergency and Routine Maintenance	1.3
Woreda / Community Roads	**10.7**
Urban Roads (only maintenance)	**0.2**
Total	**100.00**

Impressive and positive results have been achieved by the Road Sector Development Programmes but, despite the progress made, average road density and road quality in Ethiopia remain below the average of other African countries, as is shown in **Table 14.7**.

Table 14.7: Road Density and Road Quality Averages

Indicators	World Average	MICs Average	Africa Average	SSA Average	Ethiopia performance
Road Density km per 1000 sq.km	394	335	204	140	131
Road Density km per 1000 people	6.7	7.0	-	3.3	1.4
Road covered with Asphalt (%)	60	57	25	25	13
Roads in good condition (%)	-	82	75	70	23

Note: - MICs: Middle Income Countries; SSA: Sub Sahara Africa

15. Transport Services – Truck Fleet

As can be seen from **Table 15.1**:

- Most cross-border trucks, about 60 per cent, are rated as having a carrying capacity of 38 tons or more. This is an interesting statistic in itself as the maximum axle loads for a truck under the COMESA-EAC-SADC Tripartite Transport and Transit Facilitation Agreement (TTTFP), which Ethiopia has signed up to, is about 8 tons an axle, depending on the axle combinations. Most cross-border trucks registered in Ethiopia are 6-axle truck/trailer combinations which have a tare weight of about 18 to 20 tons. If a 6-axle truck with a tare weight of 18 tons carries a load of 40 tons (which is the allowed cargo weight in Ethiopia) the total weight (or gross vehicle mass) will be 58 tons, which is above the maximum gross vehicle mass of 56 tons allowed under the TTTFP. The axle loading will be almost 10 tons per axle, which is about a 20-25 per cent overloading. As Ethiopia's roads are designed for axle loads of about 8 tons per axle, and as the damage caused to pavements from overloading is a log (or exponential) function, an overloading of 20 per cent will half the life expectancy of the road pavement. Given that it costs about USD1m to USD2m to build a pavement of a single lane going in both directions, overloading is a massive economic cost to any economy.
- Most cross-border trucks, or about 75 per cent, are owned by the truckers' associations.
- About 50 per cent of the trucks owned by the truckers' associations are in good condition (level 1), about 30 per cent are in fair condition and about 20 per cent are in poor condition.
- Of the trucks owned by the private sector, about 70 per cent are in good condition.

Table 15.1: Ethiopia's Cross-Border trucking Fleet – Carrying Capacity

	Carrying Capacity in Quintals				
	200-299	**300-349**	**350-379**	**>380**	**Total**
Number of Cross-Border trucks	**2,871**	**710**	**1,734**	**7,800**	**13,115**
Ownership - Private Total	**154**	**91**	**221**	**2,782**	**3,248**
Level 1	17	24	105	2151	2,297
Level 4	137	67	116	631	951
Ownership - Associations Total	**2717**	**619**	**1513**	**5018**	**9,867**
Level 1 (Good condition)	165	118	1041	3735	5,059
Level 2 (Fair Condition)	1299	256	352	1102	3,009
Level 3 Poor Condition)	1253	245	120	181	1,799

Although not shown in **Table 15.1** about 16 per cent of the total cross-border fleet is either not operational or is being maintained which means that the number of trucks providing a cross-border service is about 11,000. Of these 11,000 trucks, about 2,700 belong to private sector operators and about 8,300 belong to the truckers' associations.

Table 15.2 shows the cross-border trucking fleet by its age. Of the 13,115 cross-border trucks, about 46 per cent are new trucks, so less than 10 years old, 21 pe cent are between 10 and 15 years old, about 14 per cent are between 15 and 20 years old and about 18 per cent are older than 20 years old.

Of the cross-border truck fleet owned by the private sector about one third are less than 10 years old, most in good condition, compared to about 45 per cent of the fleet owned by the truckers' associations being less than 10 years old, also most being in good condition.

Table 15.2: Ethiopia's Cross-Border Trucking Fleet – Age of Vehicles

	Age			
	0-10 years	**10-15 years**	**15-20 years**	**>20 years**
Number of Cross-Border trucks	**6,061**	**2,802**	**1,860**	**2,392**
Ownership - Private Total	**1,640**	**1,184**	**255**	**169**
Level 1	1,153	913	176	55
Level 4	*487*	271	79	114
Ownership - Associations Total	**4421**	**1618**	**1605**	**2223**
Level 1 (Good condition)	4375	639	39	6
Level 2 (Fair Condition)	38	961	1513	497
Level 3 Poor Condition)	8	18	53	1720

At present, fuel from the ports, which now exclusively from Horizon Oil Terminal in Djibouti, is transported to domestic stations and depots by road tankers, meaning that there is no fuel transported by rail. Although there is no exact data on the number and location of the fuel transporting trucks in operation to meet the growing demand for fuel, it is estimated that the number is between 3,500 and 5,000. Companies that run their own fuel stations also tend to transport fuel. So, for example, National Oil Company of Ethiopia (NOC) have an operational tanker fleet of about 1,035 vehicles and about 45 fuel stations; Total have about 406 operational tankers and about 19 fuel stations; Libya Oil Ethiopia has about 660 operational tankers and about 15 fuel stations; Taf Oil has about 190 operational tankers and about 15 fuel stations; and United National Petroleum has about 233 operational tankers and about 38 fuel stations. There are many more companies which have their own fuel transport fleets and also own or manage fuel stations. These companies also partner with each other in terms of transporting fuel. For example, TotalEnergies Marketing Ethiopia partners with more than 10 fuel transport companies and has about 600 fuel trucks traveling across Ethiopia every day.

Work on the Djibouti side requires attention; By completing these works, the capacity to transport fuel by rail should be created and work should be done to make domestic fuel distribution from local depots.

16. Transport Services - Air Transport

Ethiopian Air Lines was founded on 21 December 1945 and commenced operations on 8 April 1946, expanding to international flights in 1951. The firm was, and remains, wholly owned by the Government of Ethiopia but operates as a private company, with its own Board of Directors, and Government does not get involved in the management of the company. It became a share company in 1965 and changed its name from Ethiopian Air Lines to Ethiopian Airlines. The airline has been a member of the International Air Transport Association (IATA) since 1959 and of the African Airlines Association (AFRAA) since 1968. Ethiopian Airlines is a Star Alliance member, having joined in December 2011.

Ethiopian Airlines is headquartered at Bole International Airport in Addis Ababa, from where it serves a network of 127 passenger destinations, 23 of them domestic and 44 freighter destinations.

Ethiopian Airlines was organised into an aviation holding group in July 2017 consisting of:

- Ethiopian Airports Enterprise (EAE);
- Passenger Airline Company;
- Cargo Airline and Logistics Company;
- Ethiopian Aviation Academy;
- Ethiopian In-flight Catering Services;
- Ethiopian Maintenance, Repair and Overhaul (MRO) Services - the largest such operation in Africa and the Med-Eastern region and fully accredited by FAA and EASA; . and
- Ethiopian Hotel and Tourism Services.

Ethiopian Airlines is Africa's largest airline in terms of passengers carried, destinations served, fleet size, and revenue. Ethiopian is also the world's 4th largest airline by the number of countries served[35]. From its main hub, Bole international Airport, Ethiopian Airlines provide daily passenger flight services to destinations in Ethiopia and throughout the African continent, as well as offering nonstop service to Asia, Europe, and North and South America. In 2020, Ethiopian Airlines carried 11.02 million international passengers and this traffic expected to grow to over 52 million international passengers by 2030. A total of 2.16 million domestic passengers were carried in 2020 and this is expected to grow to over 12 million by 2030.

Ethiopian Airlines carried 0.47 million tons of cargo in 2020 and this is expected to increase to 1.5 million tons[36].

Ethiopian Airlines has 177 aircraft, of which 129 are passenger aircraft, 12 are cargo freighters and 36 are training aircraft.

The Ethiopian Cargo Terminals are as follows:

- Ethiopian Cargo Terminal I (ETCT-I) – Capacity of 300,000 ton/year.
- Ethiopian Cargo Terminal II (ETCT-II) - Design Capacity of 600,000 ton/year – 36,900 $m^{2.}$
- Perishable Cargo - 336,000 ton/year – 16,500m^2 -56% handling 276,000 tons (82%) import cargo per year; 17,000 tons (5%) of transit cargo per year and 43,000 tons (13%) of export cargo per year.

[35] Ethiopian factsheet, December 2017

[36] "Ethiopian Airline Group's restructuring to enhance customer experience". *24 July 2017*.

Ethiopian Cold Storage facilities include:

- A floor area of 12,789.5m^2 and a room volume of 99,502.25m^3 of warehousing with controlled temperatures of 2-8^{o}c.
- A floor area of 1,939m^2 and a room volume of 10,868m^3 of warehousing with controlled temperatures of 15-25^{o}c.
- A floor area of 130m^2 and a room volume of 455m^3 of deep-freezing warehousing with controlled temperatures of up to -25^{o}c at ETCT-II
- A floor area of 112.26m^2 and a room volume of 449m^3 of deep-freezing warehousing with controlled temperatures of up to -25^{o}c at ETCT-I

Ethiopian Airlines handles about 264,000 tons of dry cargo annually and has warehousing space of about 20,400 m^2.

Additional facilities at the Cargo Terminal include a van and truck fleet, pallet movers, forklifts, stackers, generators and an administrative office equipped with air conditioned, data centre rooms and battery charging rooms.

The cargo terminals have fully Automated Guided Elevating Transfer Vehicles (ETV machines) integrated with Inventory Control System (ICS) application software in both cargo terminals having load handling capacity of 7,000 KG

In addition to the state-owned enterprise, Ethiopian Airlines, there are an additional eight air transport operators in Ethiopia:

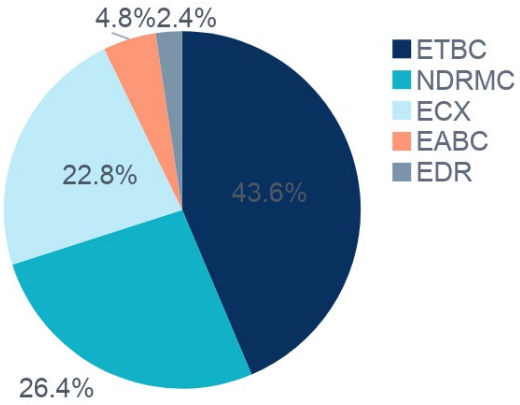
- Abyssinia Flight Service: 18 aircraft, of which 8 are used for passenger flight service and the remaining ten are used for training purposes.
- National Airways: 3 passenger aircraft.
- Waliya Airways Flight Service: 2 passenger aircraft.
- Aquaris Aviation: 1 passenger aircraft.
- Amibara General Aviation Service: 2 aerial spraying aircraft.
- East Africa Aviation: 1 passenger aircraft.
- Trans-nation Airways Flight Service: 1 passenger aircraft.
- Zemen Flight Service: 2 aerial spraying aircraft.

17. Warehousing and Warehousing Systems

The warehouse system in Ethiopia is decentralised across many organisations, both public and private. Warehouses in Ethiopia are used for the storage of various types of products, including industrial goods, consumer goods, pharmaceutical supplies, or cold stores. However, Ethiopia being an agrarian country, most warehouses are used for storing agricultural commodities such as grains, oilseeds, coffee, and other non-perishable agricultural products.

Key public entities involved in warehouse management include the Ethiopian Trading Businesses Corporation (ETBC), the National Disaster Risk Management Commission (NDRMC), the Ethiopia Commodity Exchange (ECX), the Ethiopian Agricultural Businesses Corporation (EABC), and the Ethio-Djibouti Railway (EDR). Accurately accounting for the total number and capacity of warehouses, especially the private ones, can be challenging because of the many warehouse owners. However, the combined warehouse capacity of the main public entities is estimated to be around 1,685,784 tons. As shown in Figure 17.1, ETBC takes the largest share.

Figure 17.1: Share of Ethiopian Warehouse Capacity among the Main Public Entities



The availability of warehouses in Ethiopia is currently limited because most warehouses are already used by the main entities mentioned above. The few available options often come with high costs. Additionally, most of the warehouses are independent scattered facilities.

There is a notable lack of coordination and integration among entities involved in the warehouse system, resulting in inadequate stock management and ineffective price control. This issue is further compounded by the seasonality of many stored products, particularly agricultural commodities such as wheat, leading to periods of under-utilisation in warehouses during certain months of the year.

Most warehouses in Ethiopia typically lack value-added services and often operate with limited personnel. The available workforce is often characterised by low qualifications and strong unionisation, resulting in low productivity rates.

Warehousing in Ethiopia is, in general, inefficient which is caused by a lack of qualified personnel and long loading/unloading and shifting times. Warehouses are not specialised and are almost always at an advanced stage of their useful life. Their overall security is fair, and their management systems are still manual in most cases, without IT systems. This leads to serious planning issues, resulting in poor stock management and long storage, dwell, and turnaround times. It can also lead to the contamination of stock, such as grain, stored for long periods of time. The general lack of

coordination and integration between all procurement bodies makes it difficult to find available warehouses and leads to poor control of warehouses prices.

Table 17.1 highlights the key features of the Ethiopian warehouse system. While the overall condition of the warehouses is generally satisfactory according to the data collected for the Masterplan Diagnostic by the team from the University of Addis Ababa, many of them are at an advanced stage of their useful life. In most cases, management systems are still manual, without the support of IT systems. Notably, the warehouses operated by the ETBC have minimal machinery and rely heavily on manual operations. As a consequence of all these factors, the dwell and turnaround times tend to be very long, with, for example, 24 hours of average truck turnaround time according to the ECX. This leads to prolonged storage times, which increases the risk of potential product contamination because of humidity and high temperatures.

Table 17.1: Key Features of the Ethiopian Warehouse System

Entity	Total warehouse capacity (tons)	Number of warehouses	Volume dispatched in 2021-22 (tons)	Main products	Warehouse management system	Overall security
ETBC	735,677	235	205,895	Coffee, wheat, teff and maize	Manual	Fair
NDRMC	445,000	60	445,000	Food (wheat) and non-food (basic commodities)	Manual, computerised in progress	Fair
ECX	383,827	64	187,345	Coffee and sesame	Computerised	Good
EABC	81,100	19	44,560	Fertiliser	Computerised	Fair
EDR	40,180	7	N/A	Grain	Manual	Good

The distribution of warehouses in Ethiopia is geographically uneven, as depicted in **Figure 17.2**. Warehouses are primarily concentrated in the central and northern regions of the country, with a notable concentration around the city of Addis Ababa. This distribution pattern aligns with the population density and agricultural production centres in those areas.

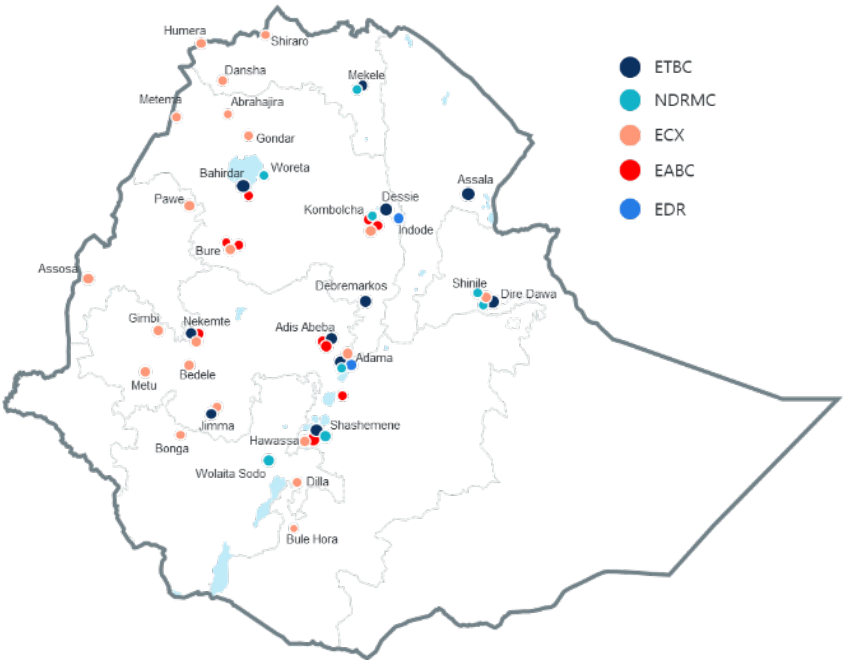
Most of these warehouses enjoy good accessibility, as they are located close to major road networks that traverse the country. Additionally, some warehouses have the added advantage of being accessible via the Ethio-Djibouti railway line, which further facilitates the transportation and movement of goods.

17.1 Ethiopian Trading Businesses Corporation (ETBC)

The Ethiopian Trading Businesses Corporation (ETBC) is a federal government public enterprise established through amalgamation of the Ethiopian Grain Trade Enterprise, the Ethiopian Fruits and Vegetable Marketing S.C., the Ethiopian Trading Enterprise and the Procurement Services Enterprise.

The ETBC has a multi-faceted objective that includes maintaining a stable domestic market by procuring and selling agricultural and industrial products, as well as basic consumer commodities from both local and foreign markets at prevailing market prices. In addition to this, the ETBC aims to offer support and encouragement to farmers, introduce new trading systems, develop a skilled workforce, and provide consultancy services related to procurement, among other initiatives.

Figure 17.2: Geographic Distribution of Warehouses in Ethiopia



The ETBC possesses the highest quantity of warehouses in Ethiopia, although many of them are relatively small. These warehouses are occasionally lent to other entities like the World Food Programme (WFP) or the National Disaster Risk Management Commission (NDRMC). On average, ETBC's warehouses have been in operation for around 30 years, with some of them in need of urgent renovation or refurbishment. It is important to mention that while ETBC warehouses store grain and coffee, the storage of wheat has been stopped recently in adherence to the government's policy of ceasing wheat imports.

The 235 warehouses of ETBC are segmented into thirteen business centres as shown in Table 17.2.

Table 17.2: Characteristics of ETBC warehouses

Business Centers	Number of warehouses	Business Centers	Number of warehouses
Addis Ababa	19	Bahirdar	35
Nekemte	25	Debremarkos	29
Adama	30	Dessiee	8
Shashamene	15	Jimma	6
Dire Dawa	15	Addis Ababa for cereals	26
Assala	13	Addis Ababa for coffee	7
Mekelle	7	**Total**	**235 (735,677 Tons)**

17.2 National Disaster Risk Management Commission (NDRMC)

The National Disaster Risk Management Commission (NDRMC), also known as Ethiopian Disaster Risk Management Commission (EDRMC), is an autonomous Federal Government office responsible for disaster prevention and response coordination. The commission plays a crucial role in distributing substantial amounts of food and non-food items each year.

Table 17.3: Characteristics of NDRMC Warehouses

Logistics plants	Number of warehouses	Capacity in Tons
Adama	20	120,000
Kombolcha	15	100,000
Diredawa	3	22,000
Welaita sodo	5	55,000
Shashemene	3	23,000
Mekele	5	47,000
Shinile	5	35,000
Woreta	4	43,000
Total	**60**	**445,000**

Figure 17.3: NDRMC Warehouses for non-food products

Figure 3.16: NDRMC Warehouses for Grain

By facilitating the flow and storage of goods and materials, the NDRMC aims to alleviate the suffering of vulnerable individuals across the country. Its wide-ranging functions encompass preparedness, planning, procurement, transportation, tracing, and last-mile delivery.

The NDRMC oversees a network of 8 logistics plants, comprising a total of 60 warehouses. These warehouses are primarily owned by the Ministry of Finance. The distribution of goods is demand-driven, and the allocation is carried out on a zonal basis, ensuring efficient and effective distribution. The warehouses are strategically located in major cities and are well-connected to the country's main road networks. Among the logistics plants, the Adama plant boasts the highest warehouse capacity.

17.3 Ethiopia Commodity Exchanges (ECX)

The Ethiopia Commodity Exchange (ECX) is a centralised marketplace in Ethiopia for trading agricultural commodities. It was established in 2008 with the aim of providing a transparent and efficient platform for buying and selling various agricultural products. The ECX facilitates trade in commodities such as coffee, sesame seeds, maize, wheat, and other agricultural products.

The exchange operates through a trading system that allows registered market participants, including farmers, cooperatives, traders, and exporters, to engage in buying and selling commodities. It provides standardised grading, quality certification, warehousing, and settlement services to ensure fair and transparent trading practices.

The ECX plays a significant role in promoting fair pricing, reducing transaction costs, improving market efficiency, and ensuring quality standards in Ethiopia's agricultural commodity trade. It has contributed to the growth and development of the agricultural sector by providing a reliable and transparent market platform for market participants.

ECX warehouses have a computerised management system and provide several value-add-services such as the issuing of an Electronic Goods Received Note of each product. Moreover, they have a recording system for incoming and outgoing commodities to ensure the control of daily stock, as well

as exchange of information between ECX and the area warehouses. ECX maintains the quality of received products through continuous quality control procedures. The ECX Inventory Management system guarantees the quality and quantity of the commodity throughout the pre-determined period of storage. Further, ECX warehouses are insured at maximum coverage to protect against loss and damage of deposits.

The ECX is operating 64 warehouses located in 23 delivery locations in the country. These warehouses cover an area of 142,000 square metres with a capacity of storing about 400,000 metric tons of commodities at a time. All warehouses are operated by ECX, which owns some of the warehouses and leases out others. All warehouses are electronically connected to the main office system to manage day-to-day operation and to exchange information instantly, efficiently and securely in an automated fashion.

Table 17.4: Characteristics of ECX warehouses

Locations	Capacity in Quintals		Locations	Capacity in Quintals
Abrha jira	186,240		Hawassa	203,700
Adama	80,676		Humera	289,356
Assossa	47,153		Jimma	141,458
Bedelle	94,306		Kombolcha	131,624
Bonga	188,611		Metema	236,741
Bulehora	161,667		Metu	47,153
Bure	470,181		Nekemte	141,458
Dansha	95,282		Pawe	336,806
Dilla	107,993		Saris	282,917
Dire Dawa	54,697		Shiraro	46,560
Gimbi	161,667		Sodo	103,736
Gonder	228,284		**Total**	**3,838,265**

17.4 Ethiopian Agricultural Businesses Corporation (EABC)

The Ethiopian Agricultural Businesses Corporation (EABC is a state-owned enterprise in Ethiopia. It operates as a central procurement entity for various agricultural products and commodities in the country. The EABC plays a crucial role in facilitating the procurement, distribution, and marketing of agricultural goods, ensuring fair prices and market stability.

The corporation supplies agricultural inputs (improved seeds, fertilisers and agrochemicals), agricultural machinery and spare parts, construction equipment and chemical spraying equipment and offers consultancy and technical training services.

The EABC administers a total of 19 warehouses dedicated to storing fertiliser, with a combined capacity of 81,100 Tons. The management system employed by the EABC for these warehouses is computerised, ensuring efficient inventory tracking and logistics management.

17.5 Ethio-Djibouti Railway

The Ethio-Djibouti Railway (EDR) was established through a Bilateral Agreement between Ethiopia and Djibouti to construct and operate a railway connecting Addis Ababa and Djibouti. The railway project was commissioned in 2018, marking an important milestone in enhancing transportation and connectivity between the two countries.

The Ethio-Djibouti Railway manages a total of seven grain warehouses, collectively capable of storing 40,180 tons of grain. The largest warehouse is in Adama, with a capacity of 6,300 tons.

17.6 World Food Programme (WFP)

The World Food Programme (WFP) provides unconditional food and cash transfers to the most vulnerable families across Ethiopia, including refugees. Ethiopia hosts one of WFP's largest supply chain operations, managing the movement of over 600,000 tons of food per year to 3,000 distribution points and 27 refugee camps.

The WFP operates 10 leased warehouses in Ethiopia to store both food, primarily wheat, and non-food items. While these warehouses are not specifically designed for grain storage, they serve as crucial storage facilities for WFP's operations.

Additionally, the WFP operates a logistics plant in Djibouti that serves as a buffer for their operations. This facility includes four silos with a combined capacity of 40,000 tons, which are primarily used for storing food items. Moreover, there are closed warehouses available within the logistics plant specifically designated for non-food products.

The WFP possesses a significant fleet of trucks that enables them to conduct a maximum of 2.7 roundtrips per month between Djibouti and Ethiopia.

17.7 Other Warehouses Facilities

- The Strategic Grain Reserve Agency (SGRA) is an organisation dedicated to ensuring food security and addressing food price hikes by maintaining strategic grain reserves. SGRA manages seven grain warehouses in Sodo, Shashemene, Shenele, Adama, Wereta, Kombolcha and Meqelle.
- The Ethiopian Grain Trade Enterprise (EGTE) purchases grain, oilseeds, coffee, and pulses both for local wholesale and export. Its head office is in Addis Ababa, but it has 10 branch offices and 91 trade centres throughout the country. Moreover, it has two warehouses at Adama, each with a storage capacity of 5,000 Tons.
- The Ethiopian Sugar Industry Group (ESIG) (previously known as Ethiopian Sugar Corporation (ESC)) serves as the centralized entity responsible for all sugar development activities in Ethiopia. It manages eight producing factories and multiple warehouses across the country. Notably, the Addis Ababa warehouse holds a carrying capacity of 6,000 Tons, while other notable warehouses are in Wonji Shoa, Kessem and Metehara.
- The Ethiopian Pharmaceutical Supply Agency (EPSA) owns 20 warehouses with a combined capacity of over 34,125 pallets, specially designed to handle pharmaceutical products, with a sophisticated computerised information system to facilitate efficient inventory management.
- The Adigrat Catholic Secretariat has 8 warehouses in Tigray with storage capacity of 4,818 tons.
- The Catholic Relief Services has 15 warehouses in Dire Dawa with carrying capacity of 6,000 Tons, 6 warehouses in Amhara with carrying capacity of 2,000 Tons; and 12 warehouses in Oromia with carrying capacity of 13,437 Tons.
- Save the Children has 2 warehouses in Amhara with carrying capacity of 1,800 Tons.

- The Industrial Inputs Corporation has a 5,240 ton warehouse in the Amhara region.

17.8 National Warehouse Receipt System (WRS),

The Warehouse Receipt System Proclamation was legislated in 2003 but it took until November 2021 for the Ministry of Trade and Regional Integration (MTRI) to launch the National Warehouse Receipt System (WRS), a legal regulatory framework for licensing and overseeing of warehouses. Five cooperatives were selected from Amhara and Oromia regions for the pilot project and two agricultural producers participated in the pilot. The system became fully operational in 2022.

The regulatory body, which is established under the MTRI, issues a certificate of competence to warehouse operators, inspectors, and agricultural product certifiers. The regulator will also have an advisory board, comprised of representatives from the Ministries of Trade and Industry and Agriculture, National Bank of Ethiopia (NBE), the Ethiopian Standards Agency, the Federal Cooperatives Agency, the Ethiopian Bankers Association, the Association of Microfinance Institutions and the Ethiopian Chamber of Commerce and Sectoral Association.

The International Financial Corporation (IFC) has been supporting the Ministry to implement the system through a partnership known as the Collateralised Commodity Finance (CCF) Project since 2017. Other stakeholders have also been involved in implementing supportive regulations, collaborated with the Ethiopian Standards Agency to establish a national agricultural warehouse standard, liberalised the warehousing sector in collaboration with the Ethiopian Investment Commission to attract Foreign Direct Investment, and conducted capacity-building initiatives for farmers, cooperatives, agro-processors, and financial institutions along the value chain.

Through the scheme, farmers and other depositors can preserve their produce from post-harvest loss and by accessing bank credit secured against the stored commodity collateral, can avoid selling immediately after harvest when prices tend to be lowest.

As part of this work the stakeholders have put in place enabling regulations, established a national agricultural warehouse standard with the Ethiopian Standards Agency, liberalized the warehousing sector in partnership with the Ethiopian Investment Commission to enable Foreign Direct Investment, and performed capacity building with farmers and their cooperatives, other value chain actors such as agro-processors, and financial institutions.

18. Industrial Parks, Dry Ports and Special Economic Zones

18.1 Industrial Parks

The Government of Ethiopia places high importance to industrial parks development and is establishing over 20 state-of-the-art industrial parks located along key development corridors – each with distinct specialty in priority sectors[37]. These industrial parks will be developed and financed through different mechanisms ensuring a sustainable and inclusive partnership between the Government and private industrial park developers. Of these industrial parks, most of them are currently operational at different regional states of the country. Furthermore, investors planning on entering the industrial parks are meticulously selected to ensure cohesive and cordial relationships among them with a shared vision of ensuring higher productivity and competitiveness in the park.

The key anchor principles for industrial parks in Ethiopia are:

- **Specialised parks**: Enhancing economy of scale and efficiency through the development of specialised/clustered industrial parks that are dedicated to priority sectors such as apparel and textile, leather and leather products, pharmaceuticals, agro processing etc.
- **Export-oriented**: Government provision of industrial park incentives and support measures targeted at increased export performance and competitiveness.
- **Skills development and competitiveness**: Creating and developing a pool of trained industrial work force and enabling environment for skills attraction & retention which will lead to enterprise competitiveness.
- **Vertical integration**: Enhancing backward and forward linkages in the economy;
- **Sustainability**: Maintaining high environmental standards by applying cutting edge environment friendly technologies (zero liquid discharge systems) and other social sustainability standards.

Ethiopia's Industrial Parks are:

- Located along strategic economic corridors, connected to ports by road and rail.
- In close proximity to a labour force pool.
- Ready for plug-and-play, equipped with all the necessary infrastructures.
- With Tailored fiscal and non-fiscal incentives;

Industrial Park Facilities include:

- One stop service including processing and issuance of permits, licenses, registration certificates, agreements, tax identification number, customs clearance, banking services;
- Dedicated power sub-station;
- Waste treatment facilities;
- Health stations;
- Fire brigade;
- 24 x 7 security services;
- Housing facilities;
- Commercial buildings

[37] http://ethioembassycanada.org/docs/IndustrialparksGuide.pdf, access date, June 19, 2021

Currently, there are 13 Federal Government owned and managed industrial parks, 3 regional government owned industrial parks and 7 private industrial parks operating in Ethiopia. Details of the Government and Regional Industrial Parks are given in **Table 18.1**.

Table 18.1: List of Government and Regional Industrial Parks in Ethiopia

Name of the Park		Location	Distance from Addis in KM	Area (ha)	Specialisation
1	Adama Industrial Park	Adama	74	365	Machinery, Apparel, and Garments
2	Addis Industry Village	Addis Ababa	-	88	Multi-sectoral
3	Bahir-Dar Industrial Park	Bahir Dar	560	75	Apparel and Garments
4	Bole Lemi Phase 1	Addis Ababa	-	172	Apparel and Textiles
5	Bole Lemi Phase 2	Addis Ababa	-	181	Apparel and Textiles
6	Debre Birhan Industrial Park	Debre Birhan	131	100	Apparel and Garments
7	Dire Dawa Industrial Park	Dire Dawa	445	150	Garments, Apparel, and Textiles
8	Hawassa Industrial Park	Hawassa	275	140	Apparel, Textiles, and Garments
9	ICT Park	Addis Ababa	-	200	IT manufacturing, Business process outsourcing and IT-enabled service
10	Jimma Industrial Park	Jimma	352	75	Apparel and Garments and agro processing.
11	Kilinto Industrial Park	Addis Ababa	-	279	Pharmaceuticals
12	Kombolcha Industrial Park	Kombolcha	380	75	Apparel and Textiles
13	Mekelle Industrial Park	Mekelle	760	75	Apparel and Textiles
14	Semera Industrial Park	Semera	597	50	Textiles and Garments; Leather products; Packaging materials and Chemicals
15	Bure Integrated Agro-Industrial Park	Bure Regional)	411	260	Agro processing
16	Bulbula Integrated Agro Processing Industrial Park	Bulbula (Regional)	184	271	Agro processing
17	Yirgalem Integrated Agro-Industrial Park (IAIP)	Yirgalem (Regional)	310	294	Agro processing

Hawassa Industrial Park is the largest Industrial Park in Ethiopia because the government has funded several development projects to improve its overall performance. As mentioned before, a new Dry Port is being built in the immediate vicinity of Hawassa Industrial Park.

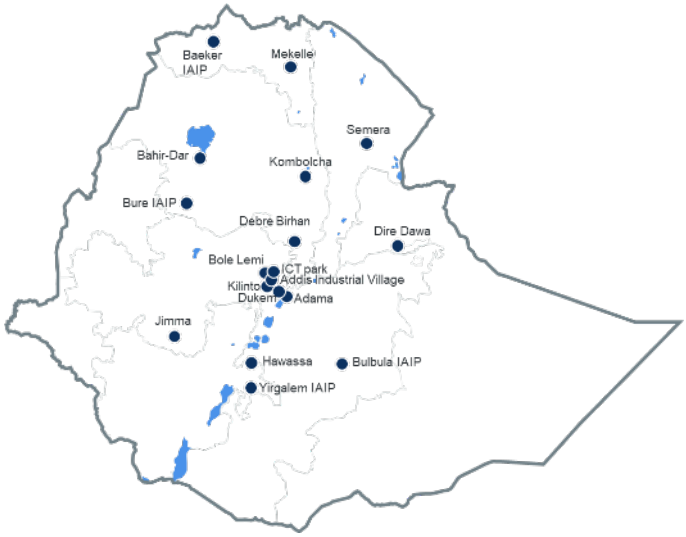
As shown in **Figure 18.1**, all Industrial Parks are concentrated in Central and Northern Ethiopia, just like Dry Ports. Adama Industrial Park is the closest to the Modjo Dry Port. Bole Lemi Phase II and Kilinto Industrial Parks are very close to the Bole International Airport. Other Industrial Parks have also access to airports or railways.

Most factory sheds of Industrial Parks are rented to foreign investors, and they produce mainly products to be exported. In general, Ethiopian Industrial Parks have low land rental prices by global standards (2.50 USD/sqm/month in Hawassa and 2.75 USD/sqm/month in Dire Dawa).

The removal of Ethiopia from the AGOA (African Growth and Opportunity Act) by the US government has affected international trade with the United States and has consequently led to a reduction of the production of main Industrial Parks.

Most Industrial Parks have expressed concerns about difficulties in receiving empty containers for their exports, as well as about long import and export lead times, which reduce the competitiveness of Ethiopian Industry. Other problems are the lack of housing for workers in Hawassa and the poor water supply in Dire Dawa.

Figure 18.1: Location of Ethiopian Industrial Parks



On top of the previous, the Industrial Parks don't have a focus on logistics although sometimes the clients are using them for this activity due the lack of proper facilities. However, the design and characteristics of the facilities is not adequate for these purposes resulting in lower efficiencies and higher costs.

18.2 Dry Ports

Given that Ethiopia is a landlocked country, Dry Ports have a great importance as inland intermodal terminals directly connected by road or rail to foreign seaports (especially Djibouti's ports) which provide access to international markets. All the Ethiopian Dry Ports are managed by the Ethiopian Shipping and Logistics Services Enterprise (ESLSE), which is the result of the merger of four enterprises which were working independently in the sea transport sector: Ethiopian Shipping Lines Share Company, Ethiopian Maritime and Transit Service Enterprise, Dry Port Enterprise, and Comet Transport Share Company.

Dry Ports are mainly focused on container trade, but some of them also offer services for fertiliser or grain trade. The main Dry Ports in Ethiopia are presented in **Table 18.2**.

As shown in the **Figure 18.2**, all Dry Ports are concentrated in Central and Northern Ethiopia. Kality and Gelan Dry Ports are the closest to Addis Ababa; Semera Dry Port is the closest to the border with Djibouti; and Dire Dawa Dry Port is the closest to the border with Somalia. Only the Dry Ports of Dire Dawa and Modjo have direct railway access.

Table 18.2: Main characteristics of Ethiopian Dry Ports (Source: ESLSE)

Dry Port	Start of operations	Surface (hectare)	Container storage surface (hectare)	Storage capacity (TEU)	Container handling capacity (TEU/year)	Tons received in 2021	TEUs received in 2021
Modjo	2009	150	31.7	17,539	136,038	32,770	91,230
Kality	2014	37	3	1,241	23,131	8,507	9,952
Gelan*	2014	23	N/A	N/A	N/A	2,279	N/A

Dry Port	Start of operations	Surface (hectare)	Container storage surface (hectare)	Storage capacity (TEU)	Container handling capacity (TEU/year)	Tons received in 2021	TEUs received in 2021
Semera	2010	160	2.5	1,180	2,378	808	1,058
Dire Dawa	2013	0.78	0.78	368	3,852	2,713	2,122
Kombolcha	2013	15	4	1,888	4,891	456	1,097
Mekelle	2013	3	3	1,440	7,789	N/A	N/A
Woreta	2019	20	3	900	N/A	1,300	432
*Gelan Dry Port is specialised in RoRo							

Figure 18.2: Location of Ethiopian Dry Ports

The **Modjo Dry Port** is the largest operational Dry Port in Ethiopia and handled around 67 per cent of the total tons and 86 per cent of the total TEUs traded by Ethiopian Dry Ports in 2021. Apart from the container storage area, it has six closed warehouses (three of 5,400 sqm for customs inspection, another one of 5,400 sqm rented to the shipping lines and two of 1,600 sqm for fertiliser). As mentioned before, two more warehouses of 5,400 sqm are expected to be built. As shown in Figure 3.19, the Modjo Dry Port has direct access to the Ethio-Djibouti Railway.

Although Ethiopian Dry Ports are generally in good condition and the overall security is good, the global storage capacity is limited by global standards. Therefore, the Ethiopian Transport Master Plan 2022-2052 proposes several new dry ports, mainly along the corridors connecting Addis Ababa with Eritrea, Sudan, Kenya and Somalia, given that the Ethiopia-Djibouti corridor is already well served by the Modjo Dry Port, which is currently being upgraded. Of particular interest is the Dry Port being built in Hawassa, which will serve a major Industrial Park along the Ethiopia-Kenya corridor.

18.3 Special Economic Zones

In August 2022, the Ethiopia Investment Commission published a White Paper which outlines policy considerations for Government on Special Economic Zones.

Special Economic Zones (SEZs) are defined as "geographically delimited areas withing which governments facilitate economic activity through fiscal and regulatory incentives, good governance, and infrastructure and services support."

One of the main reasons for Government's proposed adoption of SEZs is because the Industrial Parks, which is the closest Ethiopia has come to implementing SEZs, have been constrained through a restrictive policy and legal framework with a focus on priority manufacturing industries. The White Paper determines that a comprehensive SEZ policy is required to provide an opportunity to fill gaps that exist in the laws governing Industrial Parks which limit the types of investment activities covered.

The recommended scope of the application of the SEZ policy and law addresses conventional SEZs (Ips, EPZs, FTZs and Logistics Parks), non-conventional SEZs (Science and Technology Parks, Service Parks, Agricultural Zones, Livestock Zones and Wide-Area Parks) and harmonisation of industrial parks law and the new SEZ policy regime.

In terms of the White Paper implications on the logistics sector, the White Paper makes the following recommendations:

- Investors should be allowed to choose their own logistics operators and not be constrained by the FOB Directive and multi-modal transport services should be fully open to international operators.
- A simplified forex regime should be applied in relation to SEZs, but the actual regime is not specified – rather the White Paper says that this merits a thorough investigation. The White Paper does, however, recommend that SEZs should be free to source and use their hard currencies, investors within SEZs should be allowed to open and hold foreign currency account and other recommendations aimed at liberalising access to foreign exchange.
- Facilitated Customs procedures that include directing the Customs Commission to prepare and issue specific SEZ-focussed guidelines the direct the implementation of simplified customs procedures across SEZs and including allowing goods to stay in SEZs for indefinite periods (so remain bonded for indefinite periods), treat goods and services from SEZs as exports, allow unimodal and multimodal consignments destined for SEZs to move as goods in transit and so not complete customs formalities and exempt goods imported into SEZs from the 5 per cent levy.

19. Exports and Imports of Commodities and Value Chains

19.1 Overview

Ethiopia's economy largely depends on agricultural commodities for its foreign exchange earnings and the export cargo volume partly reflects this. Of the top ten major export items by volume, eight are from the agricultural sector, being, in order of importance, pulses, coffee, oilseeds, fruits and vegetables, flowers, chat, live animals, meat products and spices, while the two most important mining products are tantalum and gold.

The export value of flowers, chat and fruit and vegetables have been increasing while the export values of oilseeds, pulses and live animals has been decreasing. Exports of meat, spices, tantalum, and gold are stable but are not major export earners for Ethiopia.

The total export cargo volume of the top ten exported items was 1.2 million metric tons in 2021 and are estimated to grow to 1.37 million metric tons by 2030, which would be almost a return to the volumes exported in 2016, which were 1.39 million metric tons, as shown in **Figure 19.1**.

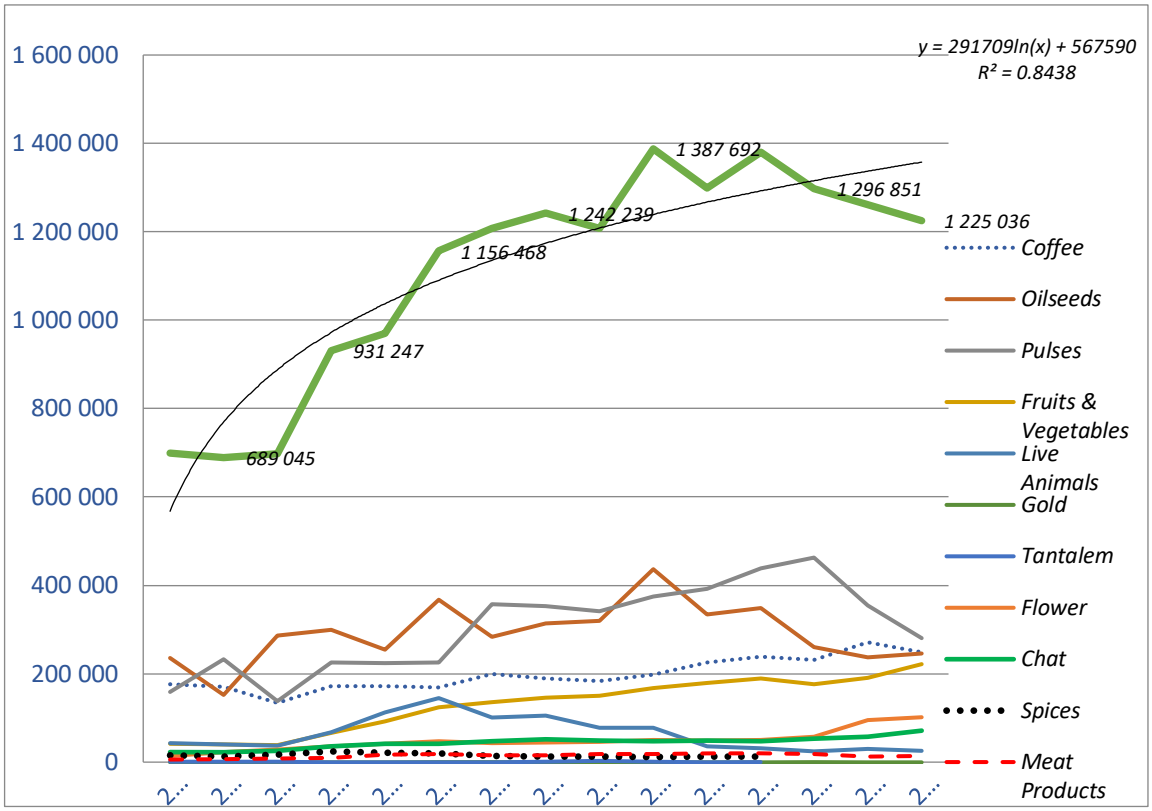
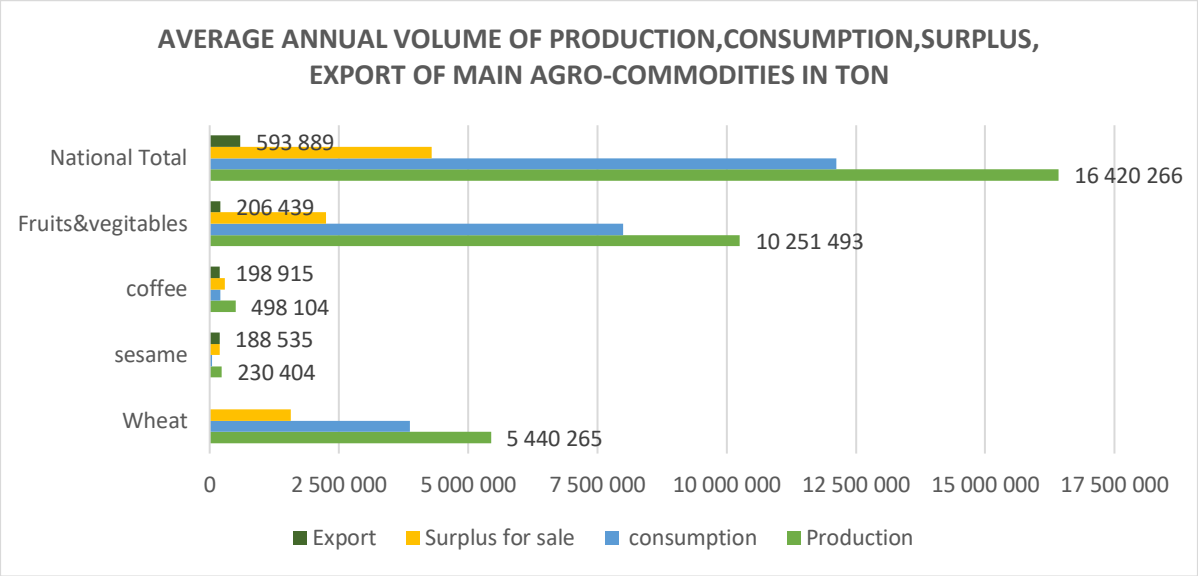


Figure 19.1: Trend of Ethiopia's top ten export items by volume 2007-2021

Ethiopia exported about 594,000 tons of coffee, sesame and fruits and vegetables per year, on average, from 2020 to 2022, according to Ethiopian Central Statistical Agency.

In the same period the total average production for these commodities, plus wheat, was 16.4 million tons, with wheat contributing 5.4 million tons. About 4.3 million tons was consumed within the production areas, with about 11.5 million tons consumed domestically within Ethiopia and about 0.6 million tons was exported. This is shown in **Figure 19.2**.

Figure 19.2: Average annual production and export volume of main agricultural commodities



19.2 Containerised Cargo

Containerised imports account for about 50 per cent of Ethiopia's total imports. As shown in **Figure 19.3**, containerised cargo imports increased during the 2015-2017 period at an average CAGR of 4.3 per cent but have been declining since 2017 at an average CAGR of 8.2 per cent.

Figure 19. 3: Containerised Cargo Imports by Year in Million Tons

Source: UN Comtrade

This decline can be partly attributed to the general economic decline experienced by Ethiopia in this period, and the subsequent lack of access to foreign exchange which means that the population has not been able to import as much, but could also be because of an import substitution effect in that more is being produced locally and, partly the lack of access to foreign currency, means that Ethiopians have less choice and they are "buying local".

Most of the containerised products imported into Ethiopia and exported from Ethiopia pass through the Port of Djibouti, mainly at the Doraleh Container Terminal (operated by SGTD) but also at the Doraleh Multipurpose Terminal (operated by DMP). All goods are subject to customs clearance procedures at the port. Customs officials inspect the goods, verify the accompanying documentation, and assess applicable duties and taxes.

Figure 19.4 shown the business processes that are followed for containerised imports entering Ethiopia from Djibouti through the borders of Galafi or Dewele, destined to Modjo Dry Port.

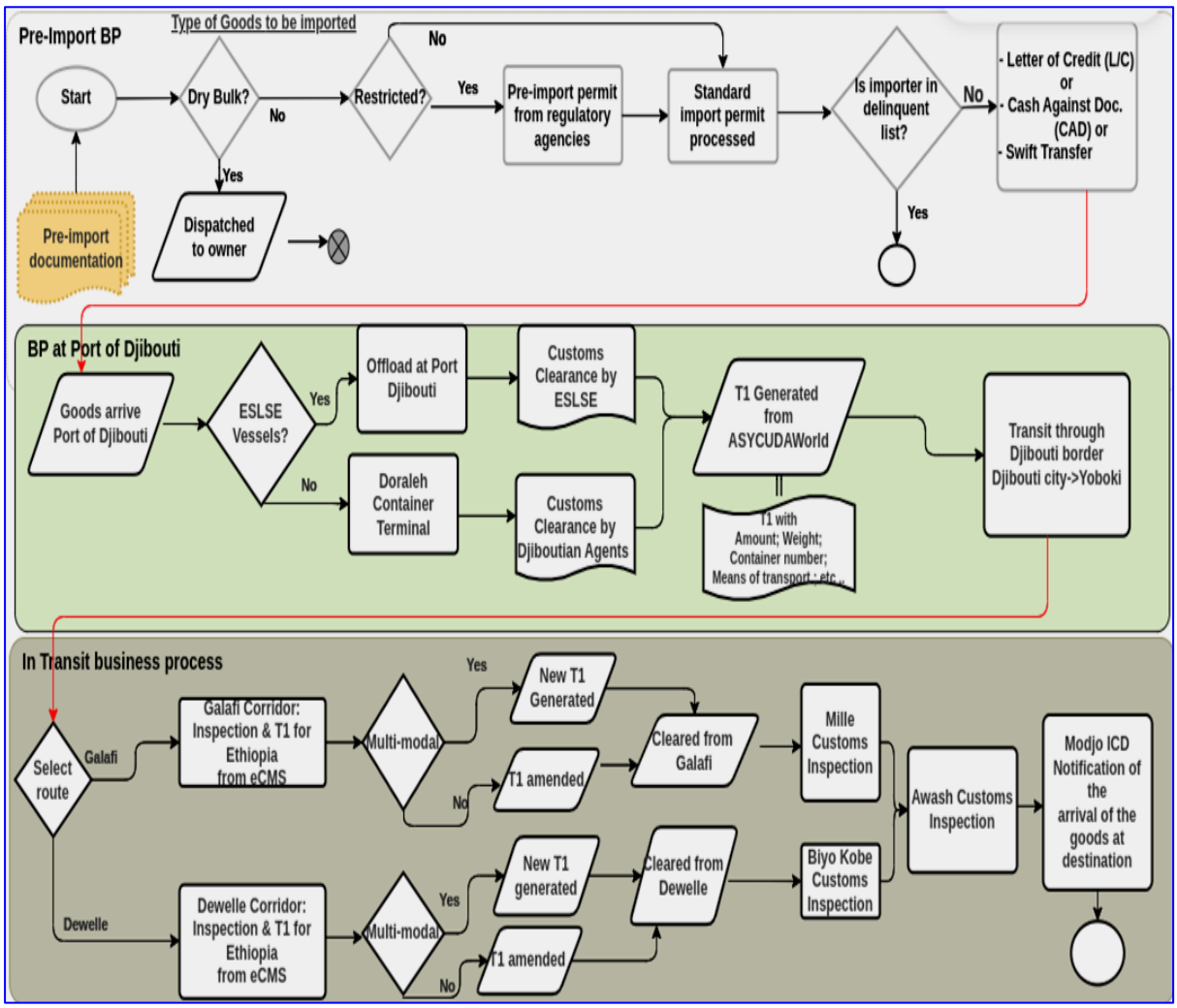
The BPA revolves around three core processes, these being:

i) Pre-import, which starts with preparation of documentation and ends with issuance of international payment options. Getting a pre-import permit is considered to be the main bottleneck for restricted goods, while issuance of a letter of credit is a bottleneck for both restricted and unrestricted commodities, regardless of whether the importer is from the private or public sector.

ii) The Djibouti port service process starts with goods arrival, to transit, to the border crossing. Both offloading and customs clearance are considered the main practical bottlenecks.

iii) The in-transit process starts from the Dewele or Galafi border posts to Modjo dry port for container cargo and fertiliser and final destination for dry bulk cargo. Here, the main bottlenecks are considered at customs check points of Awash, Mille, and Biyo Kobe.

Figure 19.4: Business Process Diagram for imports by road through Djibouti port and through Dewele or Galafi border post to Modjo ICD and to selected destinations in Ethiopia



As the Ethio-Djibouti Railway, linking the port(s) of Djibouti to Addis Ababa, has become operational, increasing volumes of cargo are moving from road to rail so that, currently, more containerised cargo

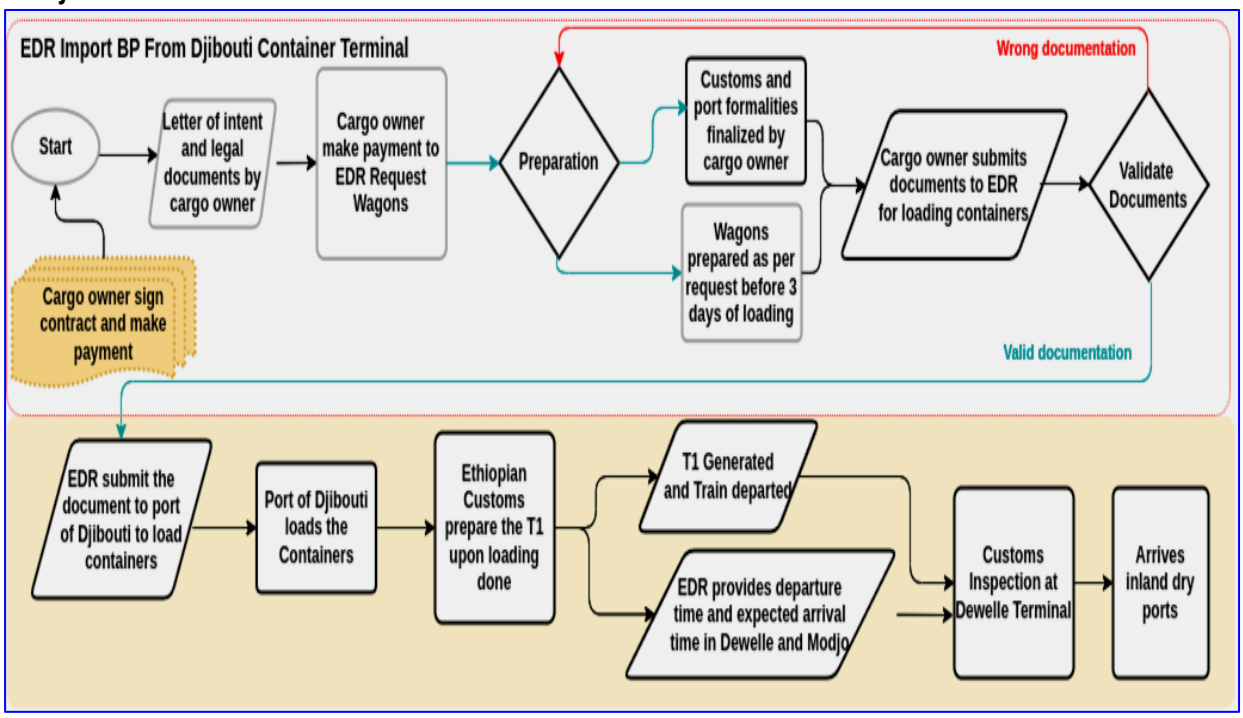
imports from Djibouti are now moving to Addis Ababa and Modjo Dry Port by rail rather than by road.

Figure 19.5 is the Business Process Diagram that shows the process flow for cargo moving by train from Djibouti Port and Modjo Dry Port.

The Business Process for import via rail transport for international container cargo covers two core processes:

- Document validation, which is done by the owner and EDR, starting from contract to document validation. Passing through customs formalities is considered the main bottleneck of this process for cargo owners.
- The issuance of order occurs between EDR and Djibouti port. Here, loading at Djibouti port is considered a major bottleneck.

Figure 19.5: BPA Diagram for imports by rail through Djibouti ports and Dewele border post to Modjo ICD for containers



19.3 Coffee

Ethiopia is Africa's largest coffee producer and the world's fifth largest exporter of Arabica coffee and coffee is one of Ethiopia's main sources of export revenue, generating, on average, about 30 to 35 per cent of the country's total export earnings.

According to the USDA Foreign Agricultural Service, in 2020-21 coffee was cultivated on about 540,000 hectares in Ethiopia and more than 15 million smallholder farmers participate in the coffee value chain, with about 25 per cent of the population directly or indirectly dependent on the coffee value chain.

The major export destinations for Ethiopian coffee are Saudi Arabia, Japan, Germany, China, Switzerland, France, Italy and South Korea. **Table 19.1** shows the average annual production of

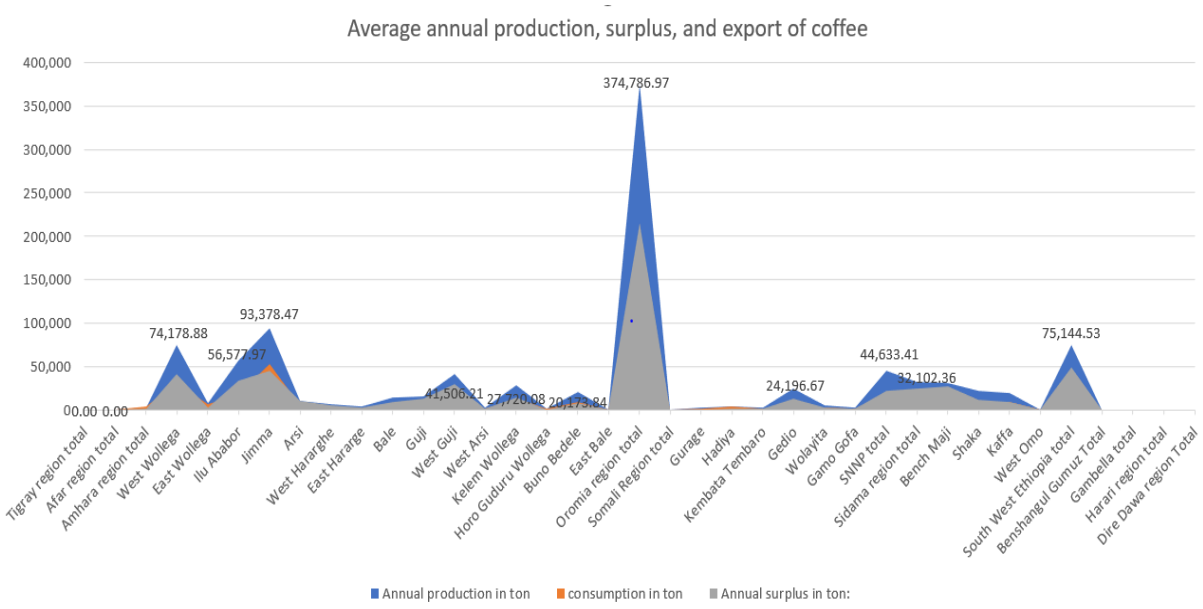
coffee from 2020 to 2022, as per CSA data, of 498,104 tons of which 206,446 tons are consumed within the producing zone, so a surplus of 287,895 tons, of which 198,915 tons are exported.

Table 19.1: Annual Production and Domestic Consumption of Coffee

Region	Annual production (tons)	Consumption (tons)	Annual surplus (tons)	Export
Ethiopia	498,103.93	206,445.79	287,894.88	198,914.84

As shown in **Figure 19.6**, most of Ethiopia's coffee is produced in the Oromia region. In the 2020 to 2022 period about 375,000 tons of the total annual average production of 498,104 tons, or about 75 per cent, was produced in the Oromia region.

Figure 19.6:Annual Production and Domestic Consumption of Coffee



19.3.1 Coffee Value Chain

The coffee value chain is shown in **Figure 19.7**

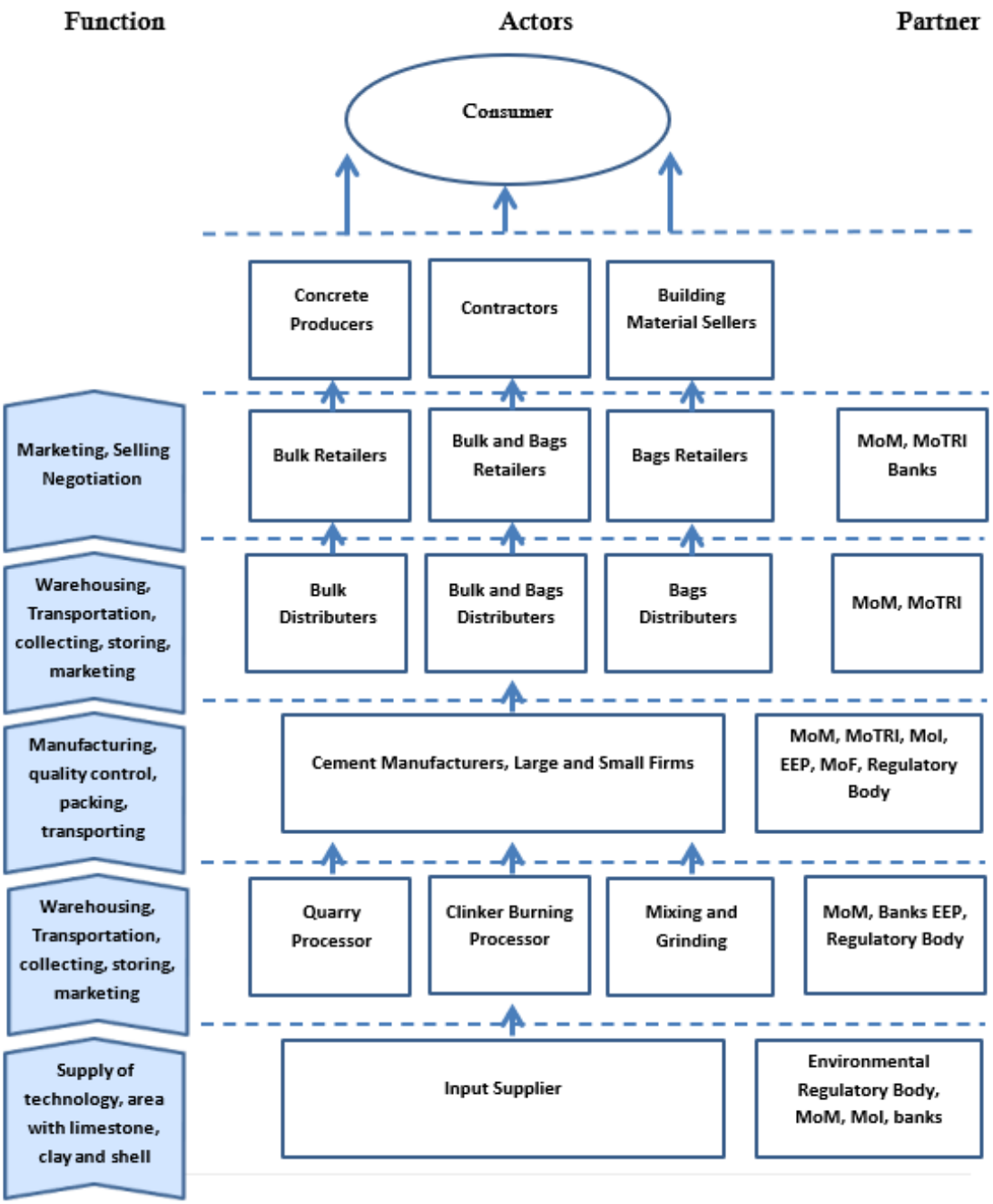
The coffee value chain is reliant on suppliers who provide inputs such as coffee seedlings, new seed varieties, pesticides, fertiliser, farming equipment, cultivating machines, pruning equipment, etc. These inputs are supplied by district offices of agriculture, rural development cooperative promotion and the Agricultural Research Institute.

Coffee producers, both small-scale and large-scale farmers, may be involved in procedures other than growing coffee, such as washing, pulping and sorting.

The large-scale farmers sell their coffee to wholesalers who aggregate and deliver to ECX warehouses for inspection of quality and grading. ECX provides the framework in which coffee is bought and sold in that it has certified grades and standards and offers a membership-based trading environment with enforcement of standardised terms and conditions for contracts.

ECX stores coffee in its 25 warehouses and 60 sheds across the country until laboratory checks are done and the coffee is graded. Once the coffee is graded it is sold through registered agents either for domestic consumption or export.

Figure 19.7: Coffee Value Chain



The main challenges in coffee value chain are:

- Large number of brokers in the value chain;
- Lack of adequate market information at the farmer level;
- Climate change resulting in unpredictable rain, without the option to irrigate the crop;

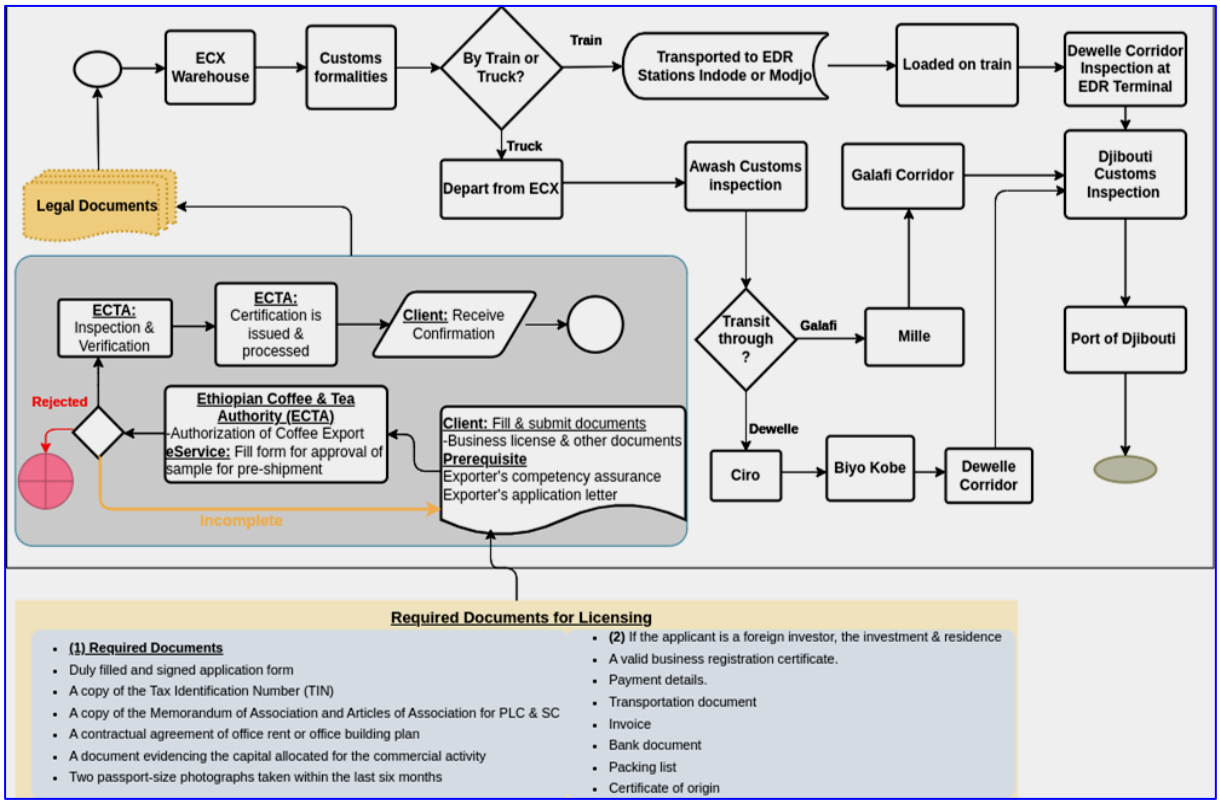
- Disease and pest infestations and associated risks;
- Price fluctuations; and
- Access to transport to get the coffee to market.

Very low-quality control, the deficiency of a strong coffee seed supply system, lack of credit to the coffee producers and a lack of clear national direction are considered the major support related challenges. Limited use of enhanced technology, land degradation and population pressure, limited access to inputs such as fertiliser, seeds, credit and irrigation; and high costs of quality coffee production and processing are also among the challenges identified by the Ethiopian Ministry of Agriculture.

19.3.2 Business Process for Export of Coffee

Figure 19.8 shows the Business Process for Export of Coffee.

Figure 19.8: Business Process for Export of Coffee from Ethiopia



19.4 Sesame

Ethiopia's three main oilseed crops (sesame, soybean, and Niger seed) account for about 20 per cent of the country's total agricultural export profits. The oilseed sector is one of the fastest growing sectors in the country and is the second largest source of foreign exchange earnings after coffee. Sesame is the main oilseed crop in terms of production value. **Figure 19:9** shows the amount of Sesame produced by year.

Ethiopia is one of the world's top six sesame producers and accounts for 14 per cent of total global exports. It is a crop that is cultivated and grows wild in Ethiopia, with a wide range of cultivated

sesame varieties. Sesame is grown in Amhara, Tigray, Oromia, Benishangul-Gumuz, and the Southern Nations, Nationalities, and People's Region (SNNPR) but the major production areas are in Ethiopia's northern and northwestern regions, bordering Sudan and Eritrea.

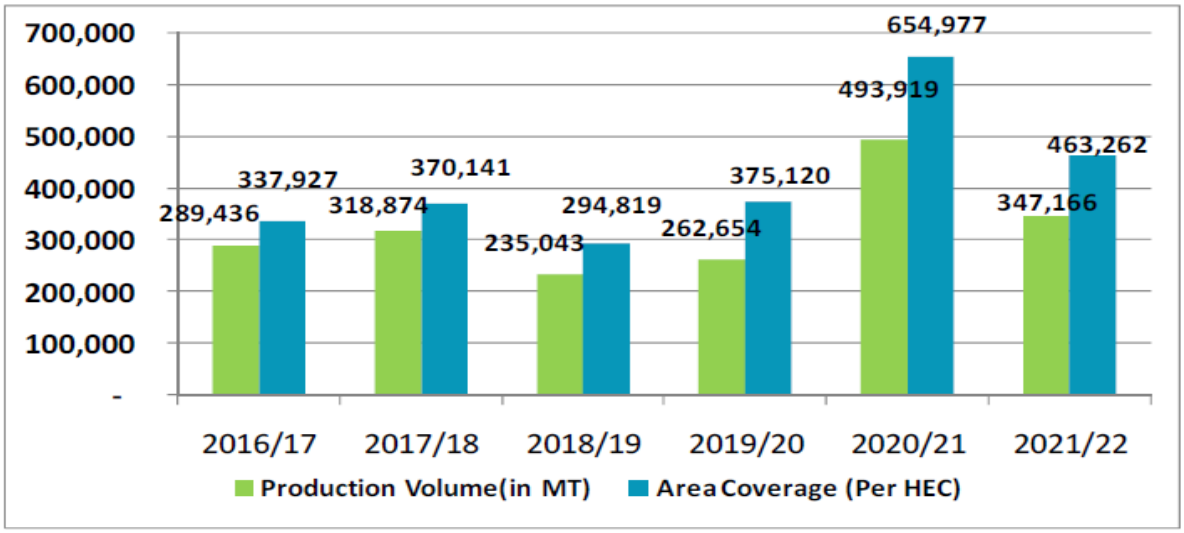
Locally produced oilseeds are an important component of the domestic economy as they are used to produce cooking oil and so save on foreign exchange as an import substitution crop.

The 2020-2022 average annual production of Sesame is 230,404 tons, of which about 41,204 tons are consumed within the producing zone. About 99 per cent, or 188,535 tons, of the surplus of 189,200 tons is exported.

Figure **19.10** shows the average annual production of Sesame seed and the average annual exports by year and **Figure 19.11** shows the trend in exports, in terms of metric tons, of Sesame from Ethiopia from the 2017/18 to 2021/22 seasons.

The major export destinations for Ethiopian Sesame exports are Israel, United Arab Emirates, China, Singapore, Viet Nam, Japan, Turkey, Jordan, Saudi Arabia, Yemen.

Figure 19.9: Ethiopian Sesame Seeds Production and Area Coverage (Source: CSA)



Source: Central Statistical Agency

Figure 19.10: Average Annual Production of Sesame

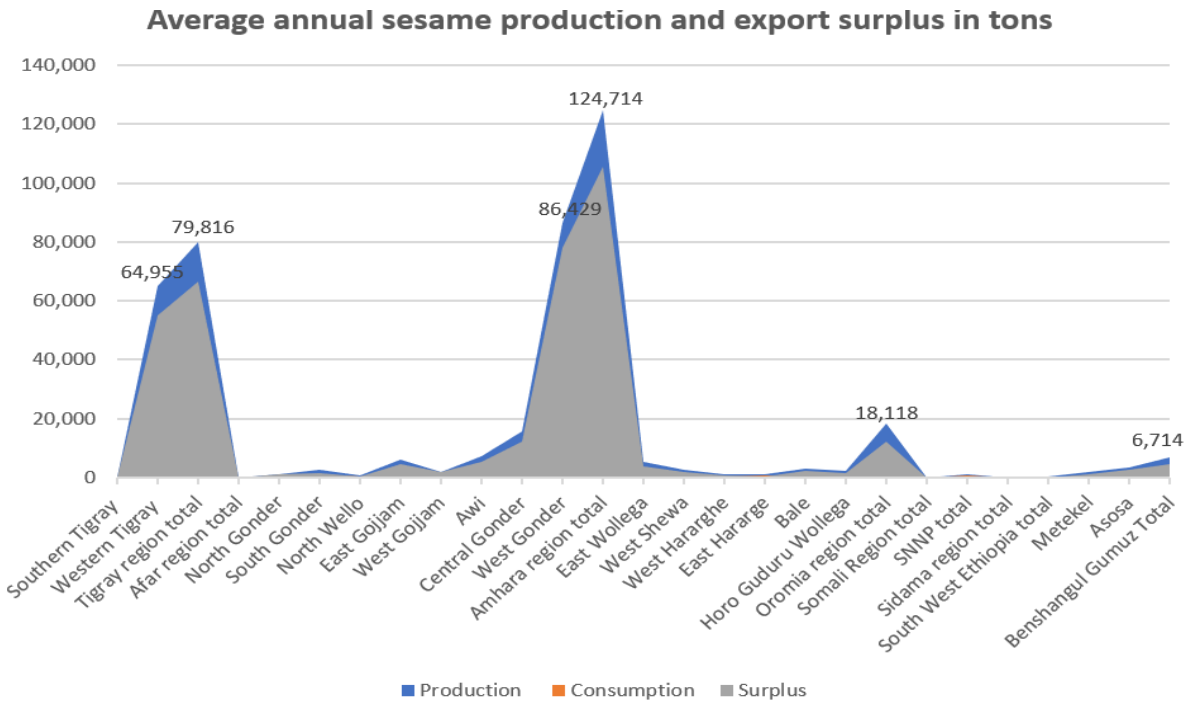
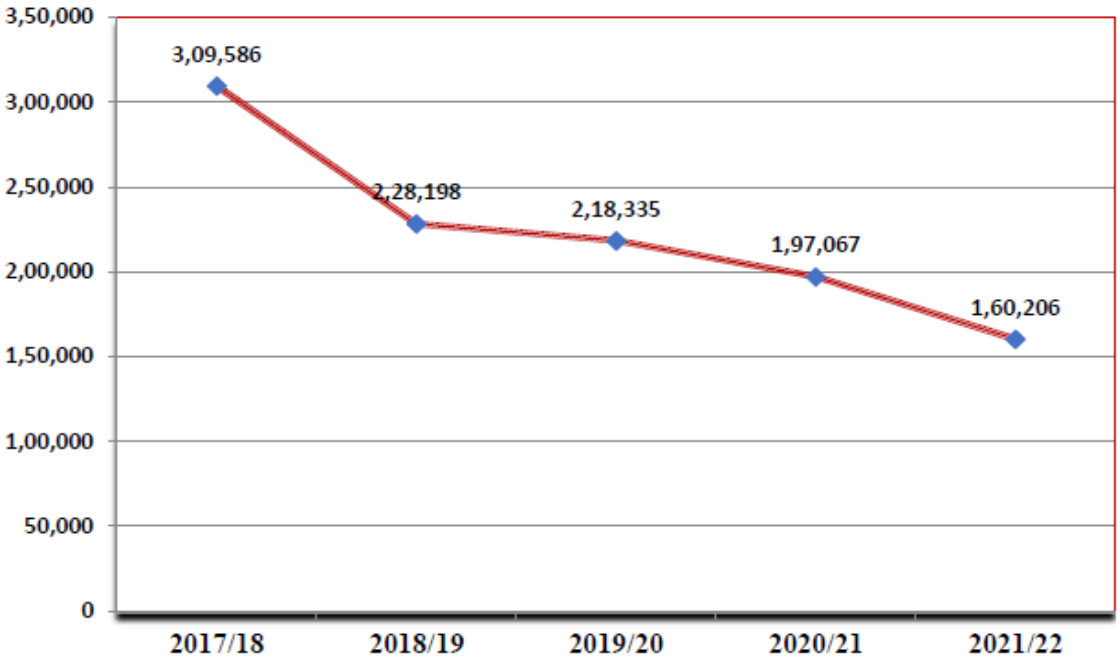


Figure 19.11: Sesame Export trend in Ethiopia from 2017/18 to 2021/2022 in Metric Tons



(Source: Ministry of Trade and Regional Integration)

19.4.1 Sesame Value Chain

Figure 19.12 shows the Sesame Value Chain

The Sesame value chain starts with supplies of inputs such as fertilisers, seeds, pesticides, and farming equipment by Ministry of Agriculture and regional and rural district agriculture bureaux.

After production and harvest, the cooperative union and the wholesaler deliver to the Ethiopian Commodity Exchange (ECX) where laboratory tests take place before the Sesame enters the international market.

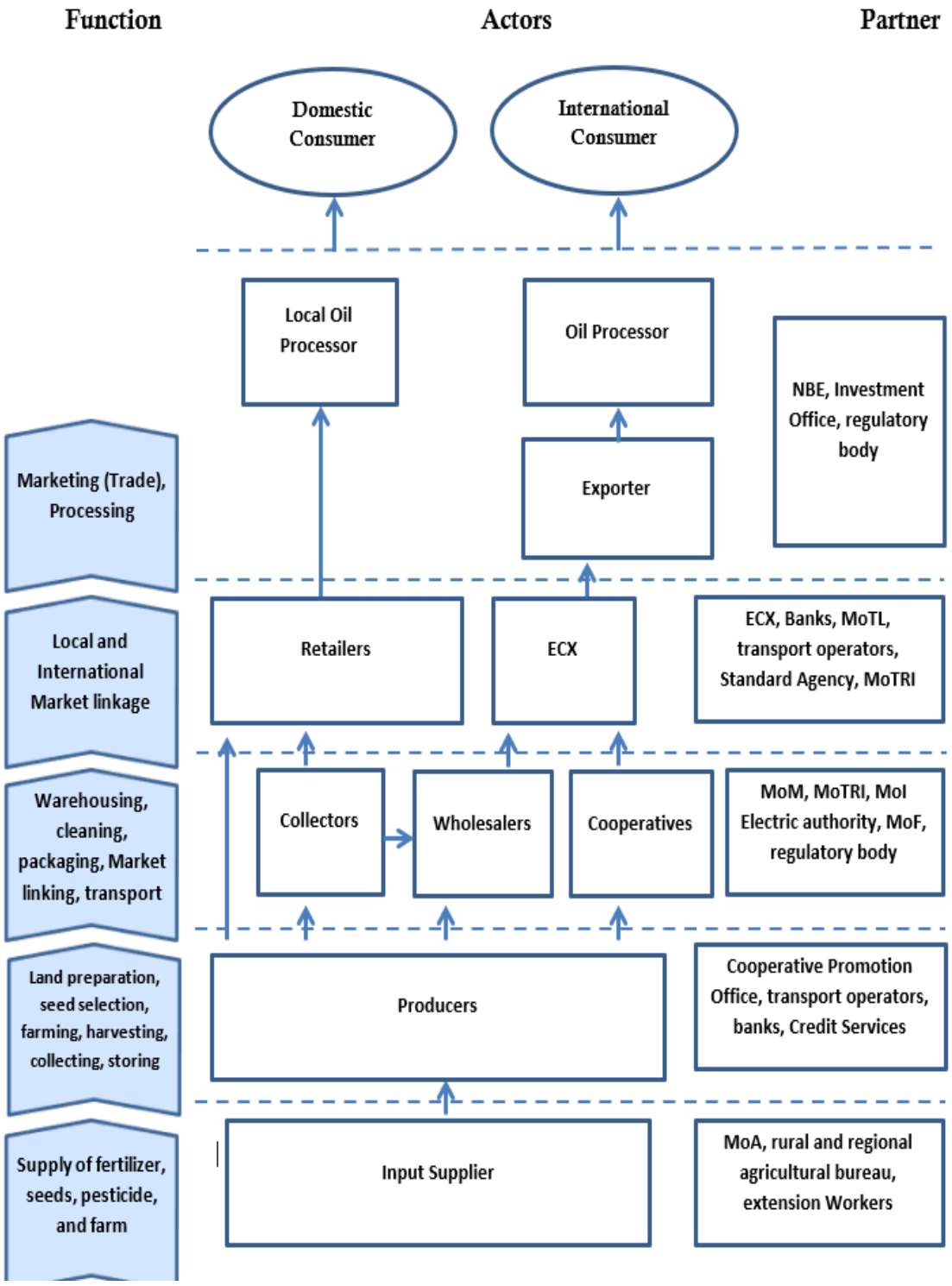
The Sesame seed that is not for export is collected for the local market and pressed so that edible oil is extracted.

The actors in sesame value chain are input suppliers, small- and large-scale producers, collectors, wholesalers, cooperative union, ECX, exporters, importers, retailers and local oil processors.

The main challenges in the sesame value chain are:

- Low productivity and quality;
- Poor marketing linkage and information;
- Price fluctuation;
- Low productivity because of erratic rainfall;
- Large number of brokers in the supply chain; and
- Uninformed or misinformed decision on stock levels resulted a wrong speculation of price.

Figure 19.12: Sesame Value Chain



19.5 Wheat

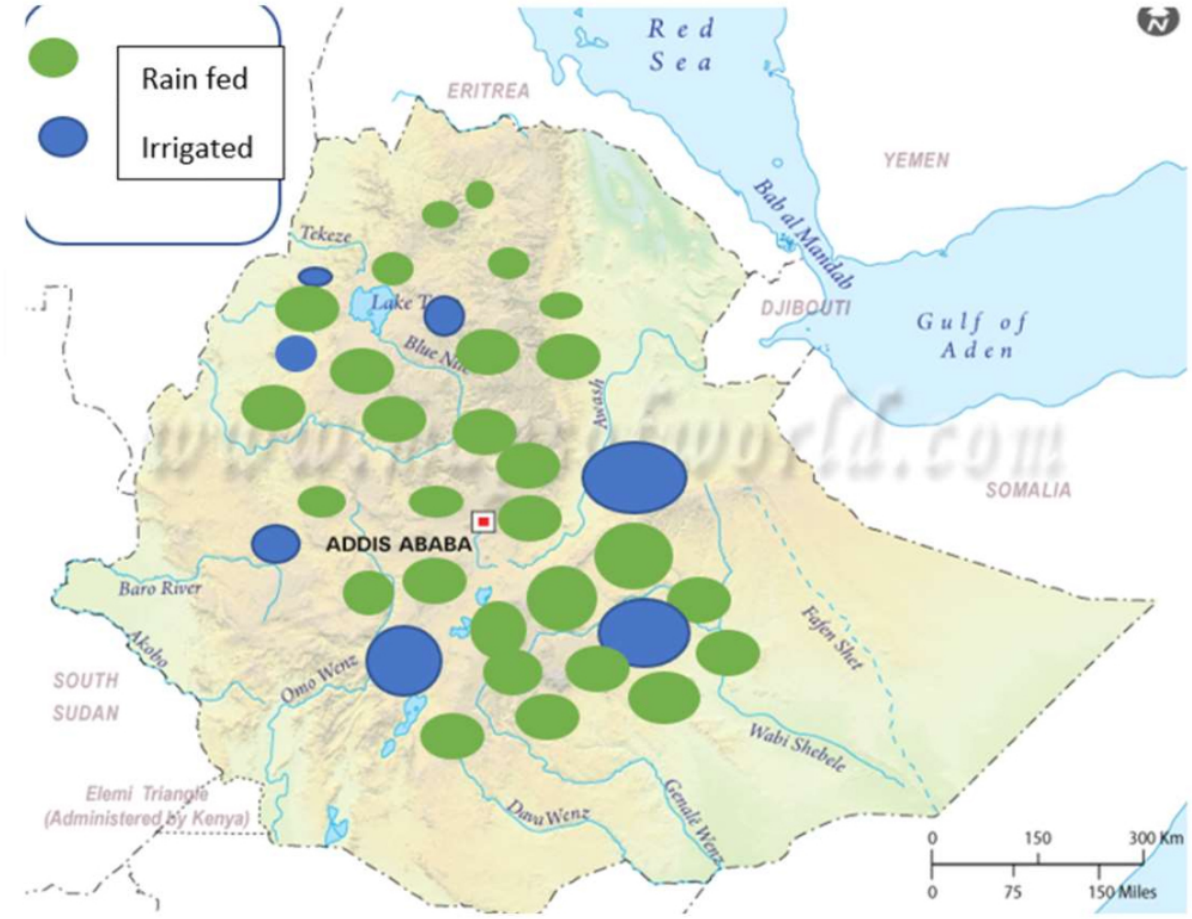
Wheat, one of the most important food security crops in Ethiopia, is cultivated on a total area of 2.1 million hectares, with 1.7 million hectares rain-fed and 0.4 million hectares irrigated. Annual total production in 2020-21 was about 5.52 million tons and about 7.5 million tons in 2021-22.

Wheat is mainly produced by smallholders with landholdings of less than one hectare. About 5 to 10 per cent of Ethiopia's wheat is produced on large-scale farms in the Arsi-Bale wheat belt.

Wheat is the third most important cereal crop in Ethiopia, after teff and maize, accounting for 17 per cent of the country's grain production. Ethiopia is the second largest wheat-producer in Africa, after South Africa.

Rain-fed wheat is grown during the main rainy season in Ethiopia between June and October mainly in the highlands of Amhara and Oromia, where about 85 per cent of Ethiopia's wheat is grown and as shown in **Figure 19.13**. Irrigated wheat is grown between November and April mainly in the lowlands and the Awash, Wabe Shebelle, and Omo Rivers.

Figure 19.13: Map showing Main Areas where Irrigated and Rain-Fed Wheat are Grown.



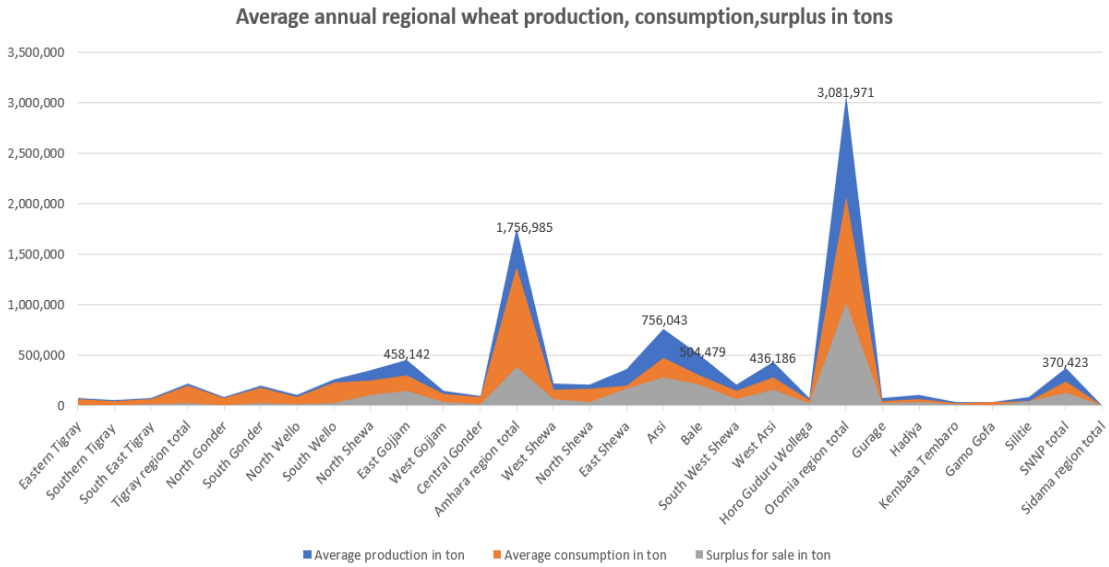
Source: Wheat Production and Breeding in Ethiopia: Retrospect and Prospects[38]

The grain produced in Ethiopia is aggregated by farmers at cooperative societies, local markets, and other designated locations. The quality of wheat is assessed through various tests, and afterwards it is packed in sacks or bags. It is then transported and stored in warehouses because Ethiopia does not have public sector silos which can be used to store wheat.

Figure 19.14 shows the average annual wheat production, consumption and surplus.

38 https://cbgg.hapres.com/htmls/CBGG_1490_Detail.html#:~:text=It%20is%20cultivated%20on%20a,2021%2F22%20%5B1%5D

Figure 19.14: Average Annual Wheat Production, Consumption and Surplus



In 2021 Ethiopia met about 70 per cent of its wheat demand through domestic production and so needed to import the remaining 30 per cent.

Once the domestic supply of wheat is known (or estimated) and total demand is forecasted, government agencies, including the Ethiopian Trading Businesses Corporation (ETBC) and the National Disaster Risk Management Commission (NDRMC), working together and often with external agencies such as the World Food Programme (WFP) will estimate the amount of wheat that needs to be imported. Recently Government determined that the only agency authorised to import wheat was the Ethiopian Trading Business Corporation (ETBC).

Wheat consumption in Ethiopia has increased at a faster pace than production has, as shown in **Figure 19.16**, because of the population increase, change in food habits and rapid urbanisation, which has caused a gap between local wheat production and demand, which means that the country now needs to import significant amounts of wheat to meet this demand.

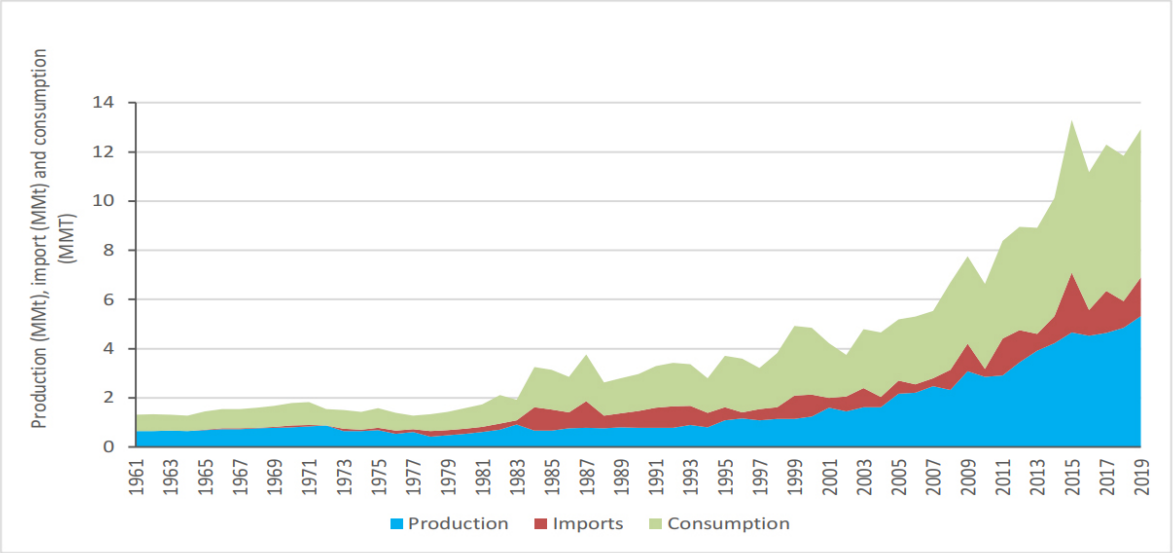
Wheat was the most imported product in Ethiopia in 2021; the third most imported product in 2020 after mineral fuels and fertilisers; and the third most imported product in 2019 after mineral fuels and iron and steel as shown in **Figure 19.17**.

The volumes of grain that are imported vary considerably year-on-year as they depend on domestic crop productivity, natural disasters, civil unrest and other emergencies which lead to reduced production. Wheat imports doubled in 2016 and 2021 compared to the average volumes of other years and stimulated by several factors, including:

- Removal of all the related taxes on imported wheat by the Ethiopian government in 2021, which caused informal wheat imports to become legal (which were not previously counted).
- Civil unrest from November 2020 to November 2022 in the northern part of Ethiopia (Tigray, Amhara and Afar regions), which affected wheat production in the concerned regions and resulted in several million Internally Displaced People (IDP) requiring food aid. Farm tools were destroyed, oxen used to plough farmlands were killed and it was very hard to obtain seed and fertiliser.

- Future price uncertainty because of rising wheat prices (39 per cent increase between 2020 and 2021) and foreign currency shortages (ETB depreciation), which stimulated storage policies.

Figure 19.15: Ethiopia's Wheat Production and Consumption 1961 to 2019



Source: Wheat Production and Breeding in Ethiopia: Retrospect and Prospects

Figure 19.16: Ethiopian Wheat imports evolution in million tons

Source: UN Comtrade

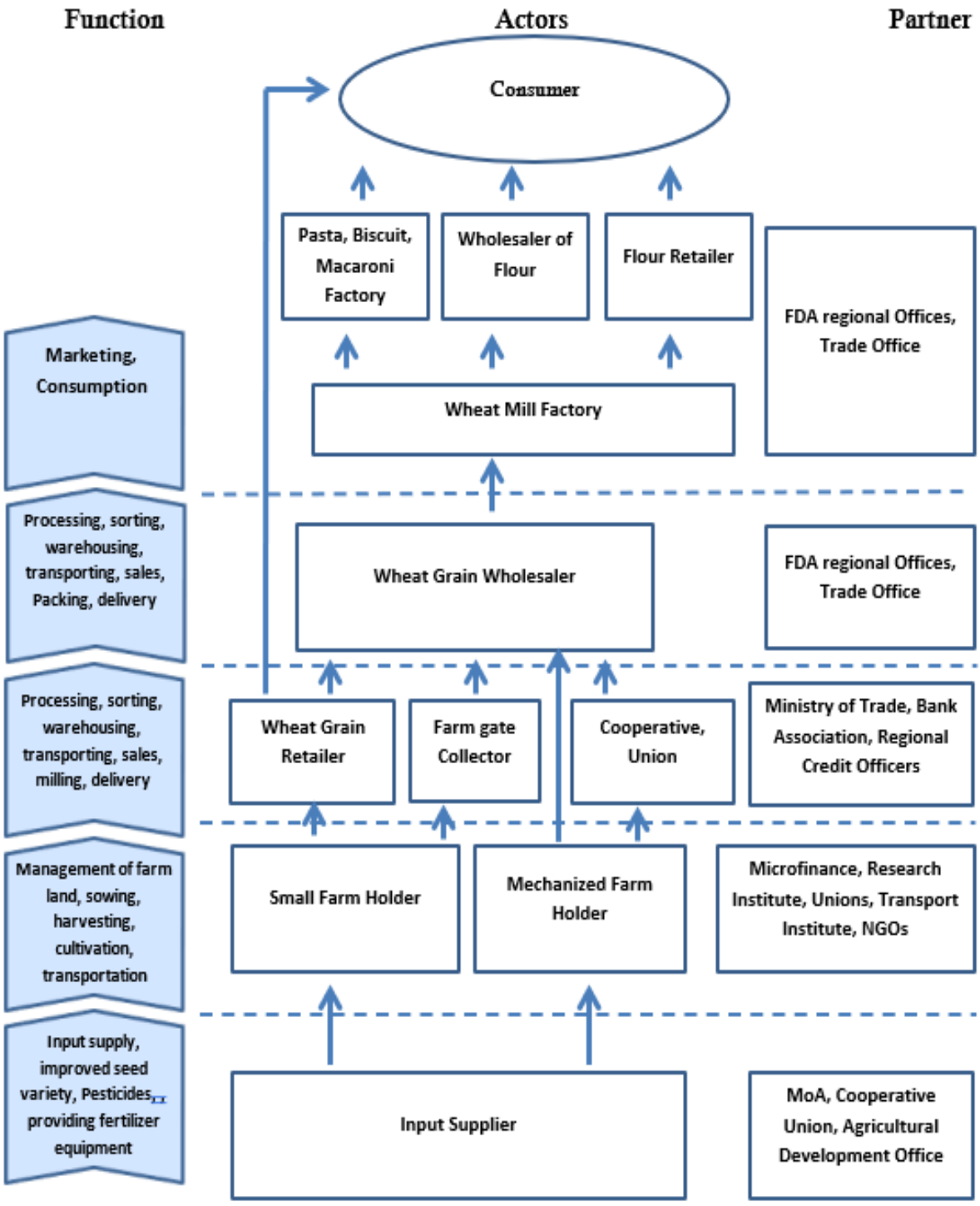
19.5.1 Wheat Value Chain

Figure 19.14 shows the wheat value chain. The main actors in the wheat value chain are smallholder farmers who tend to sell large quantities of their produce during and soon after the main harvest season.

The imported grain arrives mainly through the Port of Djibouti, both at the SDTV Terminal and the Doraleh Multi-purpose Terminal (operated by DMP), but also, to a much lesser extent, and mainly wheat imported through WFP, through the Port of Berbera in Somaliland (operated by DP World). Vessels are unloaded with either suction machines or mechanical grabbers, and the bulk grain is then stored in the port, either in a warehouse (as is the case for SDTV) or in a horizontal silo (as is the case for DMP) or, in the case of WFP, can be transported directly to the WFP silos. Officials inspect the imported grain to verify the quantity, quality, and compliance with regulatory requirements. This

involves examining shipping documents, conducting physical inspections, and collecting samples for laboratory analysis if necessary.

Figure 19.17: Wheat Value Chain



The grain is bagged in 50kg bags at the port facilities before being transported to Ethiopia. The bags are loaded onto the trucks from the bagging area and the trucks then proceed to Ethiopia, usually directly to the warehouse the wheat has been assigned to.

Some wheat off-loaded at DMP is transported by rail. The Ethio-Djibouti Railway railhead in Doraleh is about one kilometre from the port and there is no system (such as a conveyor belt) linking the warehouses or horizontal silos to the Doraleh railhead, so all grain exported by rail is bagged at the quayside, loaded onto a truck, driven to the rail head, and loaded into wagons.

All grain, whether it is transported by road or by rail, is transported bagged and all bags need to be manually loaded, which is time-consuming if not expensive. Once loaded onto a truck the driver and the truck need to navigate roads which are, in sections at least, in very poor condition. The most extreme is the road section between Dikhil and Galafi in Djibouti, where the road has been completely destroyed and trucks carve out new routes. Other challenges to overcome include the number of check points on the road and the border crossing itself.

For cargo loaded onto rail wagons the challenges start with the loading and despatch process. Then the train needs to stop at the border for a physical inspection.

When the train or the truck arrives at its destination there can be long delays incurred at off-loading as the bags need to, again, be manually offloaded and stacked into warehouses.

The distribution of wheat from warehouses to final destinations (retailers, flour mills, food processing companies or refugee camps, among others) is typically carried out by multiple entities, such as wholesalers or NGOs. At the final destinations, the wheat or wheat-based products are made available to end costumers.

There are signs that the wheat sector in Ethiopia is undergoing a significant transformation, and that production is increasing. More and more land is being put under wheat cultivation each year; overall productivity is increasing; new varieties of wheat that are tolerant to heat, drought, salinity; acidity, pre-harvest sprouting, nutrient and water use efficient are being planted; soil acidity is being reduced with the application of lime; and integrated crop management techniques are all being used to increase domestic production. In ECY 2014 (September 2021 to September 2022 in the Gregorian Calendar), wheat production in Ethiopia was 5.66 million tons, harvested from 1.95 million hectares, which represented a 2 per cent increase over the ECY 2013 (5.55 million tons), which in turn represented an 11 per cent increase over the ECY 2012 (4.99 million tons). Wheat production is expected to reach a record level in ECY 2015 (September 2022 to September 2023 in the Gregorian Calendar).

A Federal Government target is for Ethiopia to be self-sufficient in wheat, and to be a net exporter of wheat by 2025-26. To achieve this target, the Federal government has introduced the National Wheat Flagship Programme (NWFP). The objective of the NWFP is to produce an additional 4.2 million tons of irrigated wheat at an average productivity of 4.2 tons/ha. These objectives are supported by the Ethiopia Wheat Value Chain Development Project (EWVCDP) financed by the African Development Bank. The Project is under implementation in four regions of Ethiopia, these being the Amhara, Oromia, Somali, and Afar regions.

19.6 Perishable Products

Ethiopia has the potential to produce and export perishable products such as fruit, vegetables, flowers and meat. But, despite this potential, the horticulture sector has been underdeveloped, compared to food grains and floriculture, partly because of the lack of cold chain logistics infrastructure for sea freight. To tap into this potential, Ethiopia has prioritised horticulture as a key sector for agricultural production and future export growth.

The goal is to enhance horticulture development, contributing to the country's economic and social progress but, currently, a cost-effective cold chain logistic solution is not in place. While successful trial shipments have been made using rail-sea freight combination, airfreight remains the primary mode of accessing global markets, limiting the range of products suitable for export.[39]

Work being done on export by surface transport of perishable products and development of the cool chain is carried out primarily under the National Cool Logistics Network, which is a joint project between the governments of Ethiopia, Djibouti and the Netherlands and involves local businesses and smallholder farmers. The National Cool Chain Logistics Network categorises export cargo flows by primary and secondary flows. The primary flow is the export of fresh produce, which is the priority and catalyst project for the National Cold Chain Logistics Network. Secondary export flows include chilled and frozen meat, as well as refrigerated flowers.

In terms of imports, the following cargo flows are included: perishable medicines, frozen foods, fresh produce, and dry goods.

19.6.1 Export - Fruit and Vegetables

Ethiopia possesses significant potential for horticultural production owing to favourable soil and water conditions, as well as abundant land. The country's main fruit crops include avocados, mangos, bananas, citrus fruits, pineapples, papaya, and strawberries. Fruit production is mainly concentrated in the Rift Valley and southern part of the country. Major vegetable crops grown in Ethiopia include potatoes, tomatoes, onions, cabbage, green beans, carrots, green peppers, and peas.

Currently, Ethiopian exports of fruits and vegetables are limited, with most horticultural crops being exported to neighbouring countries such as Djibouti, Sudan, and Somalia. The lack of a competitive cold chain logistic solution for sea freight exports and high transportation costs contribute to the premature state of overseas exports of fruit and vegetable crops. It is widely believed, especially among horticultural producers and exporters, that addressing this logistical bottleneck is crucial for the growth of the fruit and vegetable industry to take place in Ethiopia.

The horticulture sector is a key focus of Ethiopia's previous consecutive five-year plans, and the more recent 10-year perspective plan (2021-2031). These plans recognise horticulture as a major driver of economic development in Ethiopia, with the aim of increasing income levels, creating employment opportunities, and promoting stability in the farming community. Enhancing foreign currency earnings from the horticulture sector is also a priority, as it will contribute to the country's overall economic and social development.

In terms of horticulture exports, Ethiopia has the opportunity to accommodate overseas markets, particularly in Europe and the Middle East, where there is increasing interest in Ethiopian fruits and vegetables. Ethiopia can take advantage of these export markets during the off-season of other supply countries for specific fruit and vegetable crops. For example, Spain, Chile, and Colombia are

[39] Focus of the Ethiopian government on horticulture | Nieuwsbericht | Agroberichten Buitenlan

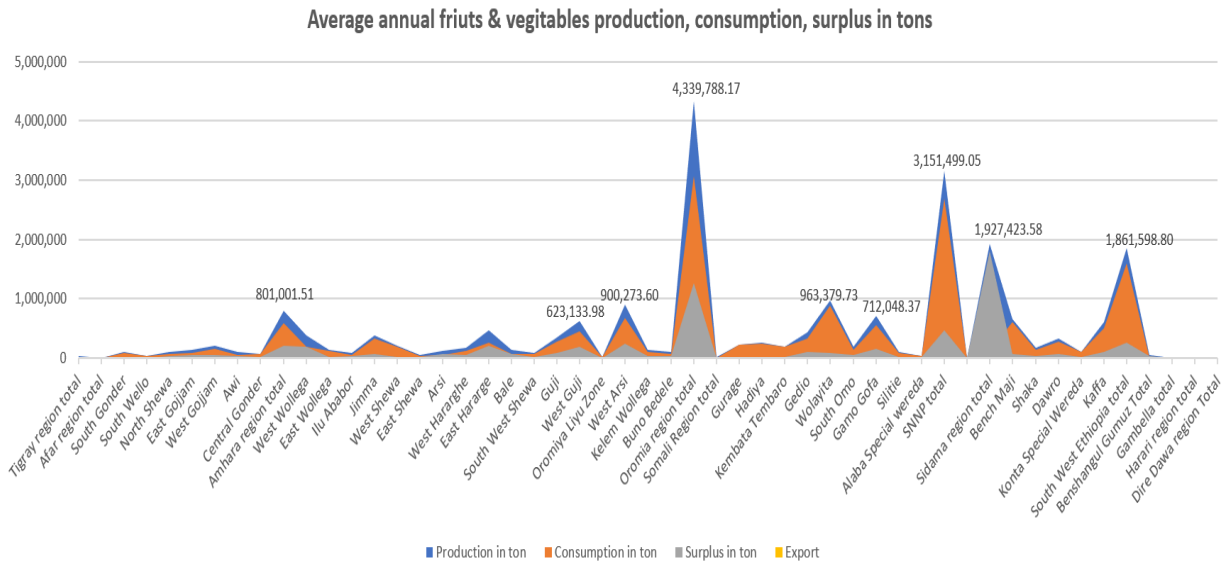
major avocado suppliers to the European market but experience a drop in avocado exports during Ethiopia's prime avocado season from May to October. Ethiopia's geographic proximity provides the opportunity to fill the supply gap for export destinations in Europe and the Middle East during the off-season of other exporting countries.

Ethiopia exports fresh fruits and vegetables, comprising bananas, mangos, avocados, citrus, pineapples, papayas, and strawberries, mainly to the European Union, the Gulf states and the East African region, with the main production areas being East Hararghe, East Shewa, West Shewa, Arsi, Gamo Goffa, Dire Dawa, Harari, Tigray, and Amhara regions and mainly by smallholder farmers in these regions.

Fresh fruits' contribution to Ethiopia's export earnings is fairly small but it is growing quickly. National Bank of Ethiopia data indicates that Ethiopia exported 191.18 million kg of fruit and vegetables in 2019-20; 221.70 million kg in 2020-21; and 222.65 million kg in 2021-22 respectively. Although, in general, imports are growing faster than exports, Ethiopia is a net exporter of fresh fruits.

The export of perishable commodities faces main logistics challenges, and especially in maintaining a cool chain, which requires more refrigerated warehouses, refrigerated trucks and railway wagons and control systems to ensure the cold chain is not broken.

Figure 19.18 Average annual fruits and vegetables production distribution and surplus



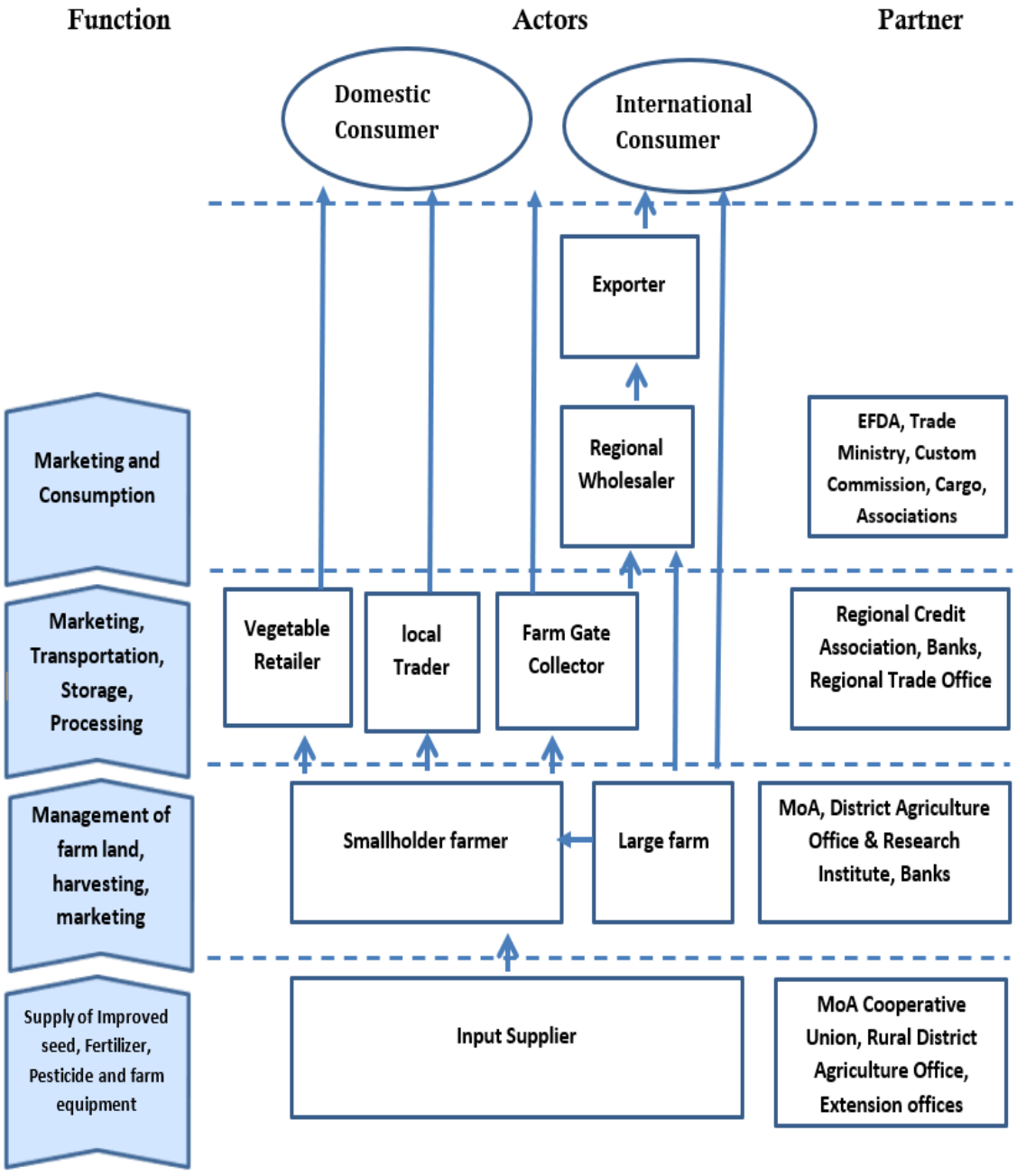
The main functions of the actors are supply of inputs, managing farming land, harvesting, cultivating storage, marketing, transporting, processing, and consumption.

The partners involved in the vegetable value chain include agricultural extension workers. Regional agricultural offices, cooperatives, Unions, credit association, banks, customs, Food and Drug Authority and Ministry of trade and Regional Integration.

19.6.2 Vegetable Value Chain

Figure 19:19 gives the vegetable value chain.

Figure 19.19: Vegetable Value Chain



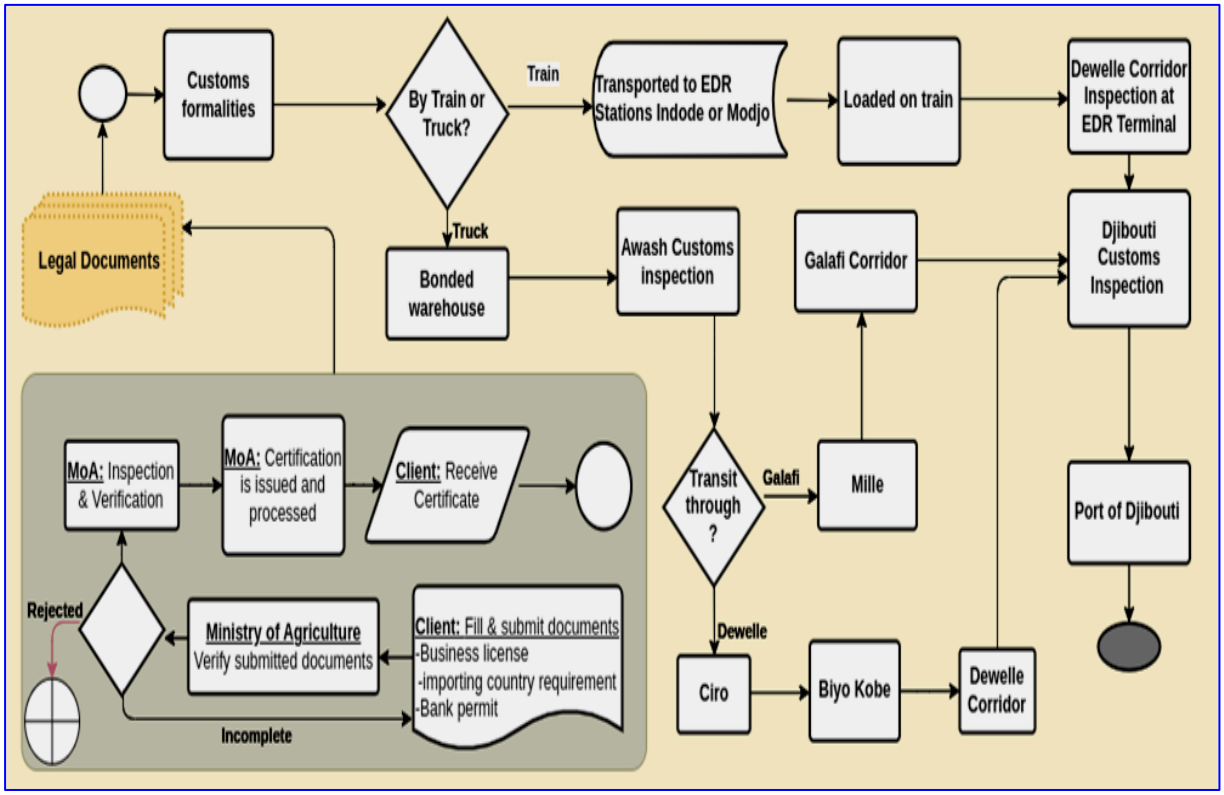
19.6.3 Business Process diagram for Export of Vegetables.

Figure 19.20 shows the business process of exporting fruit and vegetables from Ethiopia through the port of Djibouti.

Although export of fruits and vegetables pass through the two export core processes of documentation and physical transport, it has its unique features. Relatively fewer number of

documents than those for other major export agricultural commodities is required, Ministry of Agriculture is the focal regulator, and customs is the gateway to physical transport process. Here overall lack of cold chain associated with vehicles, warehouses, and related facilities, lack of consolidation centres, and lack of synchronized temperature control technology are often cited as main bottlenecks. The following diagram depicts the details fruits and vegetable export.

Figure 19.20: BPA Diagrams for Export of Fruit and Vegetables from Ethiopia



19.6.4 Export - Flowers

Ethiopia is currently the fifth-largest producer and exporter of flowers in the world. The sector has been growing at a steady pace, with export revenues reaching USD400 million in 2019. However, the flower sector in Ethiopia faces several challenges that could impede its future growth and market potential.

One of the main challenges is the low diversity and volume of exports. Ethiopia's flower exports are heavily reliant on a few key markets, including the Netherlands, the United States, and Japan. This puts the sector at risk of market fluctuations and changes in demand from these countries.

Another challenge is the lack of investment in infrastructure and technology. Ethiopia's flower farms are mostly small-scale and scattered, with limited access to modern equipment and transportation systems. This hinders the sector's ability to scale up production and reach new markets.

A positive outlook for the flower sector in Ethiopia is expected for the years 2027 and 2032, with increased export volumes projected[40].

Currently all flowers are exported from Ethiopia by air freight. Given its flourishing floriculture industry with high export volumes and the relatively close distance of production regions to dry ports, Ethiopia has the potential to transition its flower transportation modes from airfreight to sea freight. This transition would allow the industry to benefit from the cost advantages that sea freight transportation provides. To achieve this, it is important to meet the right logistics performance criteria. In anticipation of the development of cold chain capacity, such as Cool Port Addis, and considering that railway transport is equipped with cold chain and reefer container facilities, it is feasible to include refrigerated flower exports as a secondary export cargo flow.

19.6.5 Export - Meat

The livestock sector plays a significant role in Ethiopia's economy, contributing to its growth and development. However, the sector faces numerous challenges that hinder its commercialisation and growth. In response to this, the Ethiopian government in collaboration with International Livestock Research Institute (ILRI) has developed the Livestock Master Plan (LMP), a five-year investment plan geared towards prioritising livestock production systems and value chains. The LMP aims to improve the sector, focusing on the livelihoods of smallholder farmers, poverty reduction, increased food security, and inclusive economic growth.

Currently, Ethiopia has twelve large meat producing companies, with most abattoirs located in the Modjo region. A significant portion of meat production is targeted for export markets, particularly in the Middle East. However, chilled meat products are the primary products exported, transported via airfreight. The sector envisions a transition from chilled to frozen meat products in the future, which will require the establishment of cold store facilities and the development of experienced handling and transport capacity[41] Cool Port Addis, located in Mojo logistics hub, can serve as a consolidation centre for arranging rail transport and is likely to see an increase in aggregate export volume via sea freight. This shift towards frozen meat products will not only increase the sector's competitiveness but also provide opportunities for smallholder farmers, increase food security, and contribute to the country's economic growth[42].

19.6.6 Import - Medicine

With an estimated population of over 120 million, Ethiopia has a significant rural and underprivileged population that faces challenges accessing basic necessities such as food,

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[40] Study Conducted to Assess the Opportunity of Banks in Financing in Horticulture Sub-Sector in Ethiopia (Study Conducted to Assess the Opportunity of Banks in Financing in Horticulture Sub-Sector in Ethiopia by Moroda Kenea :: SSRN)

Flower production prospects and sustainability challenges in Ethiopia: A systematic review (Frontiers | Flower production prospects and sustainability challenges in Ethiopia: A systematic review (frontiersin.org))

[41] Ethiopia livestock master plan a contribution to the Growth and Transformation Plan II (2015-2020) (https://cgspace.cgiar.org/bitstream/handle/10568/68037/lmp_roadmaps.pdf)

[42] GLOBAL FOOD SECURITY STRATEGY ETHIOPIA COUNTRY PLAN 2019 - 2023 (2017-2020.usaid.gov/sites/default/files/documents/1867/GFSS-Country-Plan-Ethiopia-FINAL-April-2019.pdf)

healthcare, housing, and sanitation. The government is committed to improving the healthcare system and aligning with the United Nations' Sustainable Development Goals (SDGs). Public health sector investments have led to improved health outcomes, but communicable diseases like malaria and HIV remain a challenge. The Ministry of Health (MOH) is taking steps to decentralise management to regional health bureaus, while the Ethiopian Pharmaceutical Fund and Supply Agency (EPFSA) and Ethiopian Food and Drug Administration (EFDA) play crucial roles. EPFSA is in charge of purchasing and supply chain management of pharmaceuticals, medical supplies, and equipment, while EFDA regulates and oversees the registration, importation, and quality of medicines, supplies, and equipment.

Ethiopia relies heavily on imports to meet its domestic healthcare demand, with China and India being the major supplying countries. Together, they account for the majority of medicine, supplies, and equipment imports at the national level. The remaining imports are mainly sourced from European countries such as Germany, France, and the United Kingdom (International Trade Administration, ITA).

Ethiopia imports medicine, including perishable and frozen items, through airfreight. While this mode of transportation is expensive, it is currently used because it allows for well-managed temperature control, and there is no alternative cool chain system available yet.

19.6.7 Import - Fruit and Vegetables

In addition to local horticultural production, Ethiopia also imports fresh produce, particularly fruits, to meet domestic demand. Import volumes of fresh fruits and vegetables have been fluctuating in recent years, with key import crops including apples, grapes, dates, and onions.

As the Ethiopian economy continues to develop, the demand for fresh fruits and vegetables is expected to increase, especially for crops that cannot be cultivated domestically or have low production capacity and self-sufficiency rates. Cold chain facilities are required to serve as a storage and deconsolidation hub for the distribution of imported fresh fruits and vegetables within the country. Additionally, the inward flow of cooled produce ensures the availability of reefer containers for cooled exports, helping to balance the import-export imbalance.

It is important to note that as local production capacity in Ethiopia increases, the import quantity for some products may decline.

19.6.8 Import - Frozen Foods

Frozen foods and frozen consumable products are imported to meet the domestic demand in Ethiopia, particularly in the hotel and retail sectors in the Addis Ababa region. Examples of these consumable products include frozen fruits, vegetables, fries, fish, and ice cream. Currently, a significant portion of these imported consumables are stored in small-scale cold storage facilities of hotels and supermarkets, which are inefficient and require high maintenance. However, the import volume of frozen consumables is expected to grow significantly in the future, as a result of rising income levels and the development of the hotel and retail sectors in Ethiopia.

19.7 Teff

Teff is a dietary staple food crop and the most important cereal in Ethiopia in terms of agricultural land use and total value. It is adapted to a wide range of environments and is presently cultivated under diverse agroclimatic conditions, but mainly in the central and northwestern highlands. The

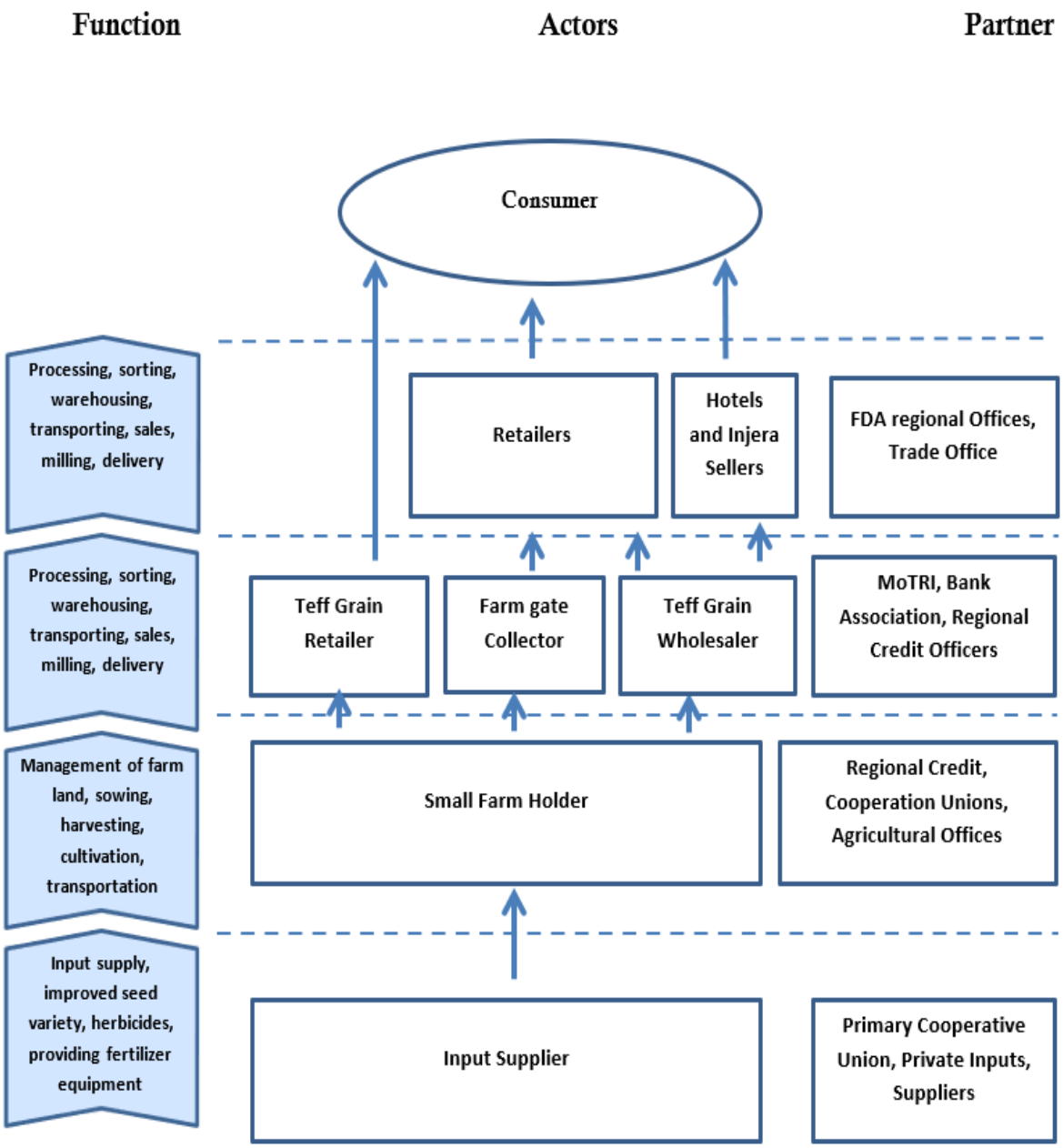
crop is critical for incomes and food and nutrition security and is grown by 6.5 million smallholder farmers who consume 70 to 80 per cent of their production and market the surplus to consumers.

Teff value chains are long and complex. The main actors in the teff value chain involve input suppliers, producers (small holder farmers), retailers, wholesalers, millers and injera processors.

19.7.1 Teff Value Chain

Figure 19.21 shows the Teff value chain from input supplier to consumer.

Figure 19. 21: Teff Value Chain

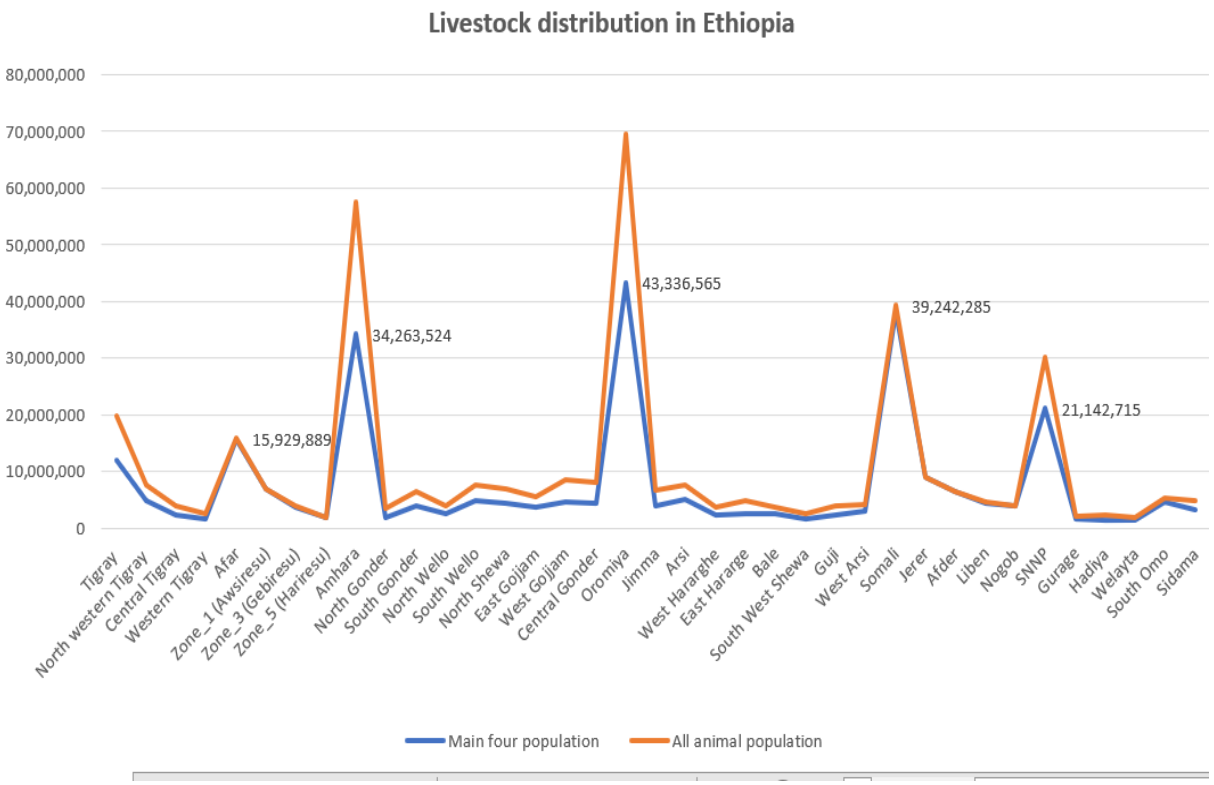


19.8 Livestock

Ethiopia has the largest livestock population of any African Country. According to Ethiopia's Central Statistical Agency (CSA, 2021) there are 70 million head of cattle, 42.9 million sheep, 52 million goats, 2.15 million horses, 10.8 million donkeys, 0.38 million mules, 8.1 million camels, 6.99 million beehives, and about 57 million chickens.

Livestock is a major source of animal protein; used for power for crop cultivation; as a means of transportation; as an export commodity; provides manure for farmland and household energy; provides food security in times of crop failure; and acts as a means of wealth accumulation.

Figure 19.22: Livestock Distribution in Ethiopia



The sector contributed up to 40 per cent of agricultural GDP, nearly 20 per cent of total GDP, and 20 per cent of national foreign exchange earnings in 2017 (World Bank, 2017). The export of live animals from Ethiopia plays a significant role in the country's economy, contributing to foreign exchange earnings and providing employment opportunities.

Ethiopia exports a wide variety of live animals, including cattle, sheep, goats, camels, horses, poultry, and bees. Cattle are one of the most commonly exported animals, with breeds such as Boran, Arsi, and Horro being popular choices. Sheep and goats are also exported in large numbers, with breeds like Afar and Somali being favoured for their adaptability to harsh environments.

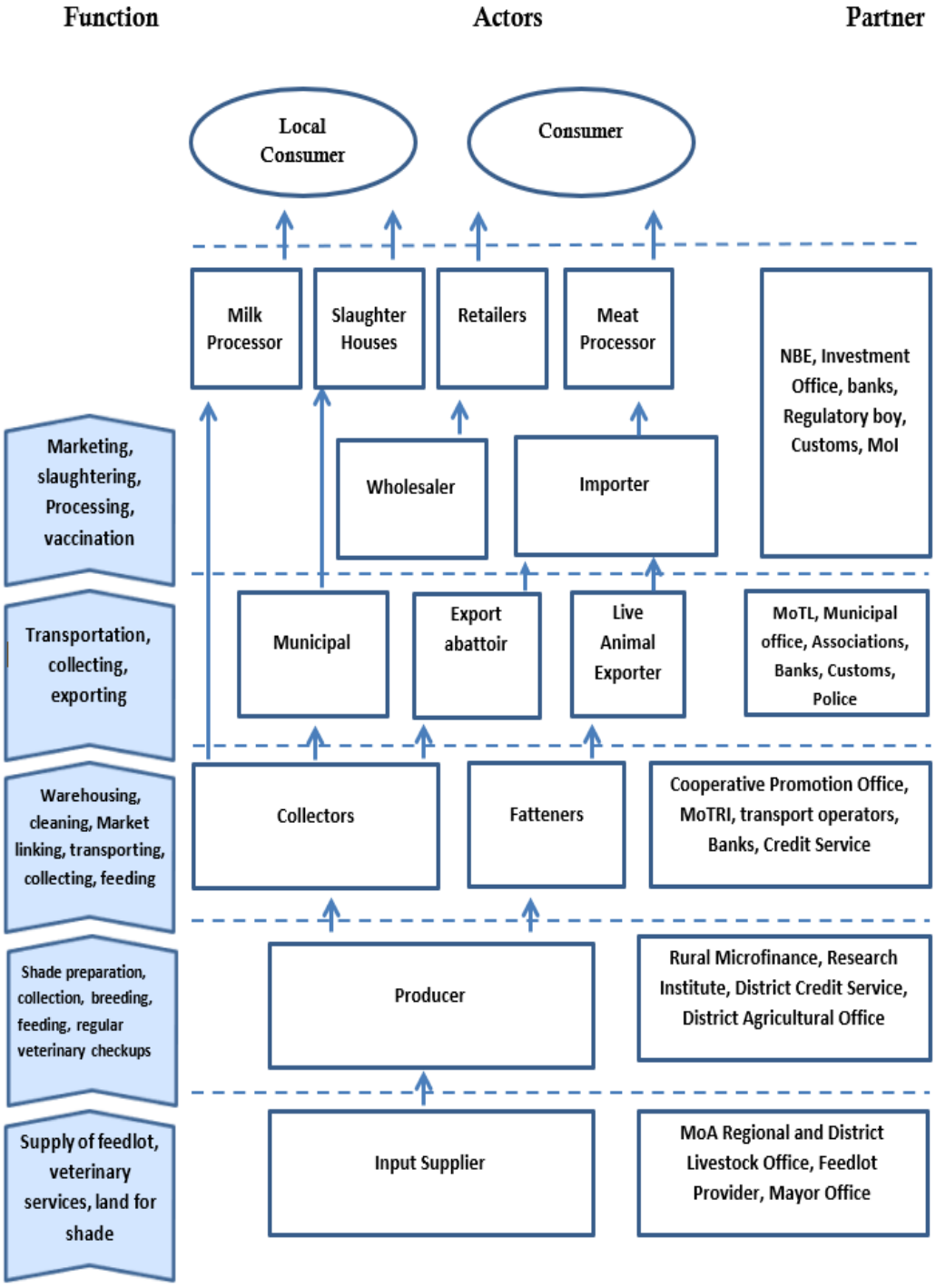
Ethiopia exports live animals to various countries around the world. The Middle East, particularly Saudi Arabia, Yemen, and the United Arab Emirates, is a major market for Ethiopian livestock. These countries have a high demand for meat and rely on imports to meet their domestic needs. Other destination markets for Ethiopian live animals include Qatar, Oman, Vietnam, Hong Kong, Nigeria, and the neighbouring Sudan, Djibouti, Somalia, and Kenya.

The total volume of meat production in the country reached 1.9 million metric tons in 2019/2020, according to CSA data. Cattle are the primary source of meat in Ethiopia although poultry meat production has seen substantial growth, with an annual output of around 70 thousand metric tons.

According to data from the Ethiopian Meat and Dairy Industry Development Institute (EMDIDI), Ethiopia earned approximately USD93 million from meat exports in the fiscal year 2019/2020. In 2018/2019 fiscal year, Ethiopia earned approximately USD360 million from live animal exports.

19.8.1 Livestock Value Chain

Figure 19.23: Livestock Value Chain

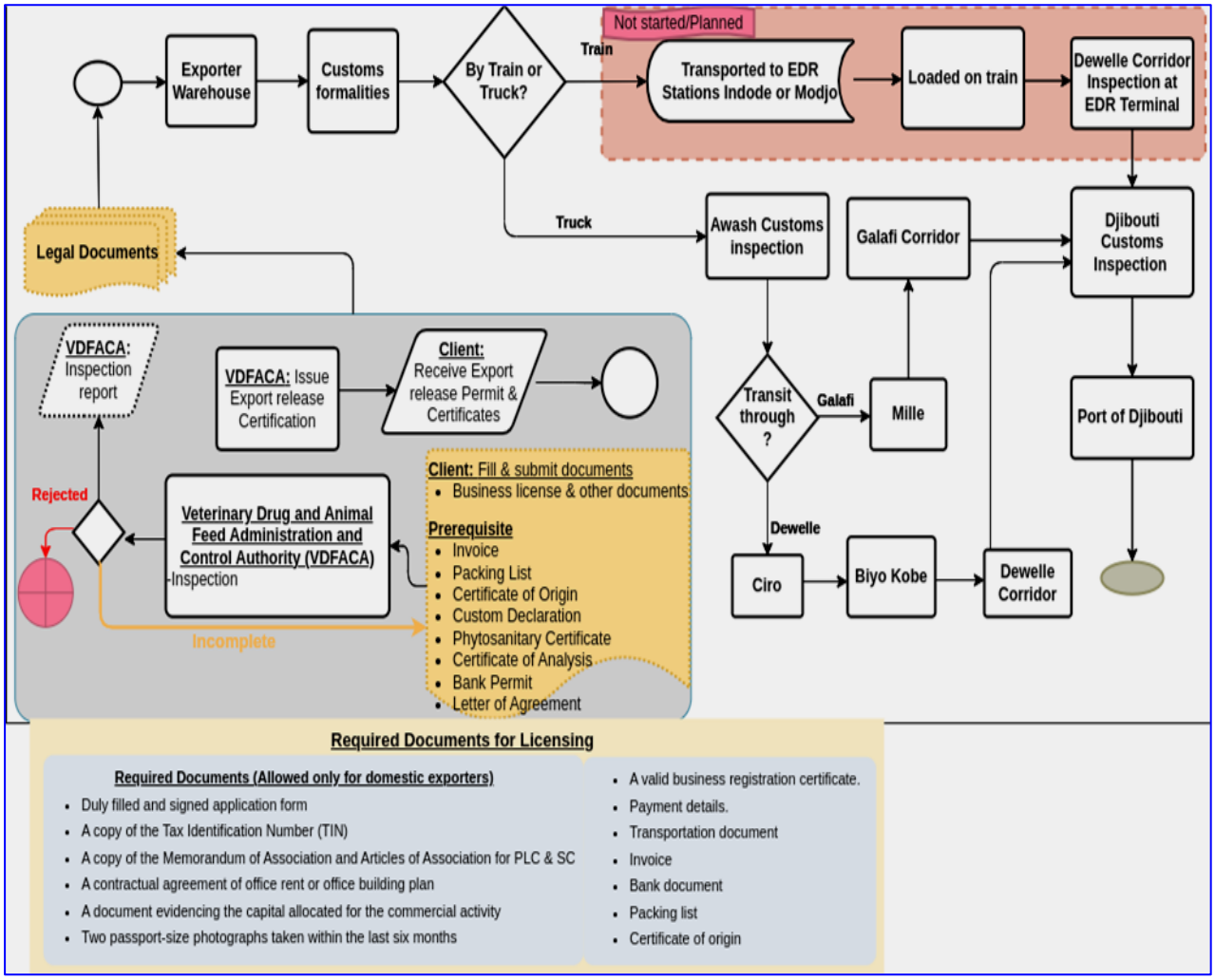


19.8.2 Business Process for the Export of Live Animals

Figure 19.24 shows the

Business Process for the export of live animals from Ethiopia.

Figure 19.24: BPA Diagrams for export of live animals from Ethiopia



19.9 Fertiliser

In the past three years from 2020 to 2022, Ethiopia has distributed on average 1.4 million tons of fertiliser across Oromia (658,000 tons), Amhara (615,000 million tons), and (the previous) SNNP (110 million tons) regions. The country has distributed an annual average of 1.49 million tons of fertiliser in the three years. This is shown in **Figure 19.25** and **Figure 19.26**.

An Agricultural sample survey conducted by Central Statistical Authority (CSA, 2021) revealed that 36.58 per cent of the framers sampled claimed that they did not buy chemical fertiliser whereas the remaining portion has used it. Those who purchased chemical fertiliser got it from government organisations (22.35 per cent), private organisations (1.42 per cent), Merchants (32.83 per cent) and 0.5 per cent from other sources. From this one can understand that government and unions are the dominant suppliers of chemical fertilisers in Ethiopia (See **Table 19.2**).

Figure 19.25: Annual distribution of Fertiliser in 2020, 2021 and 2022

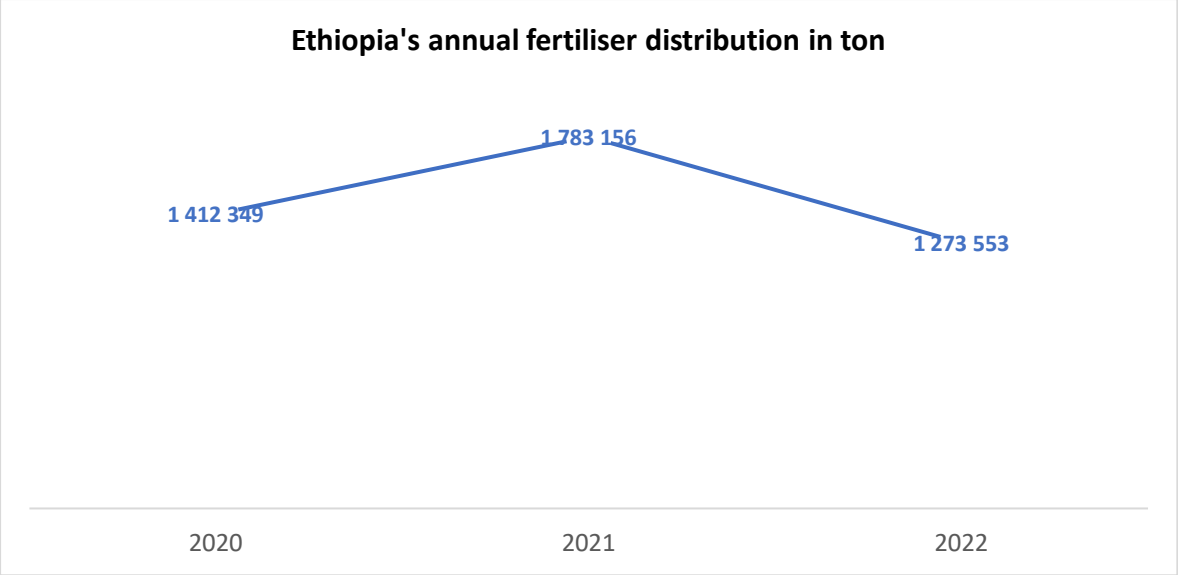


Figure 19.26: Annual distribution of Fertiliser in 2020, 2021 and 2022

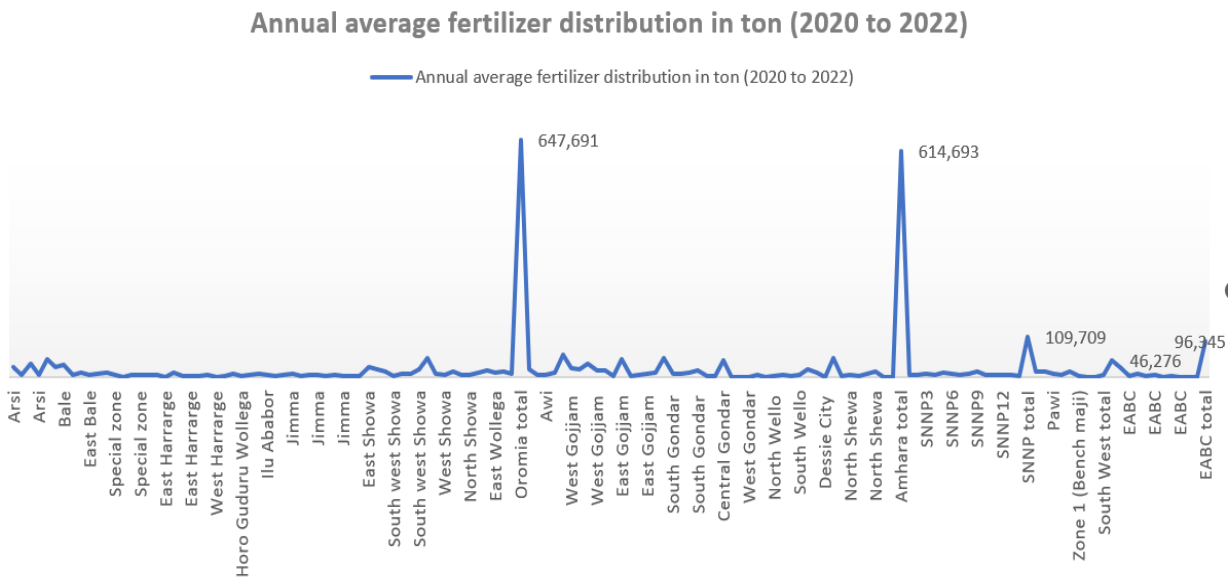


Table 19.2: Sources of Chemical Fertiliser in Ethiopia

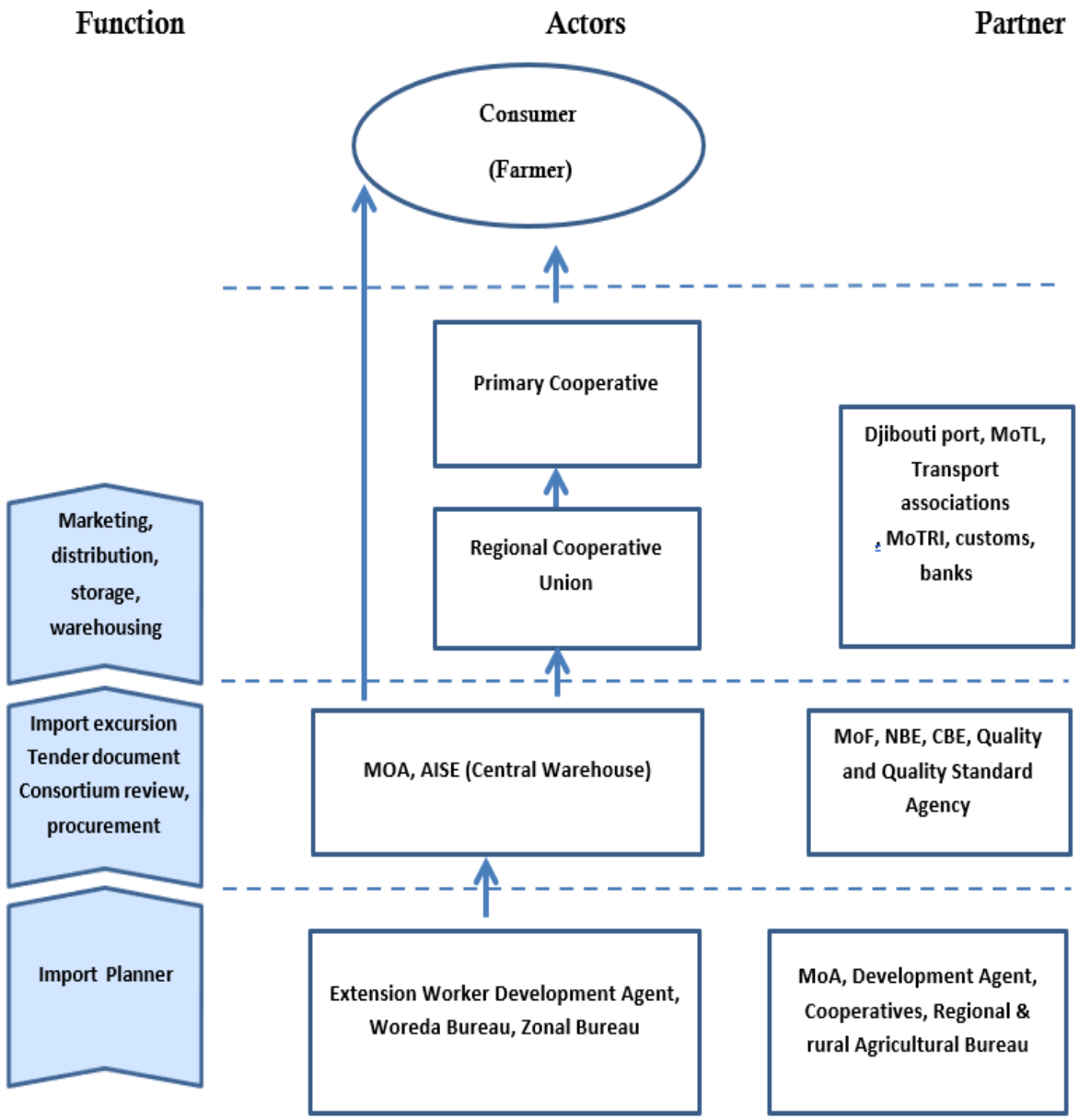
Source of Chemical Fertiliser	No. of respondents	Percentage	Cumulative percentage
Government organisations	4 912 617	22.35%	22.35%
Private organisations	312 942	1.42%	23.78%
Merchants	1 387 507	6.31%	30.09%
Unions	7 214 902	32.83%	62.92%
Others	108 934	0.50%	63.42%
Didn't buy	8 039 359	36.58%	100.00%
Total	21 976 262	100.00%	100.00%

Source: CSA

19.9.1 Fertiliser Value Chain

Figure 19.27 shows the Fertiliser Value Chain

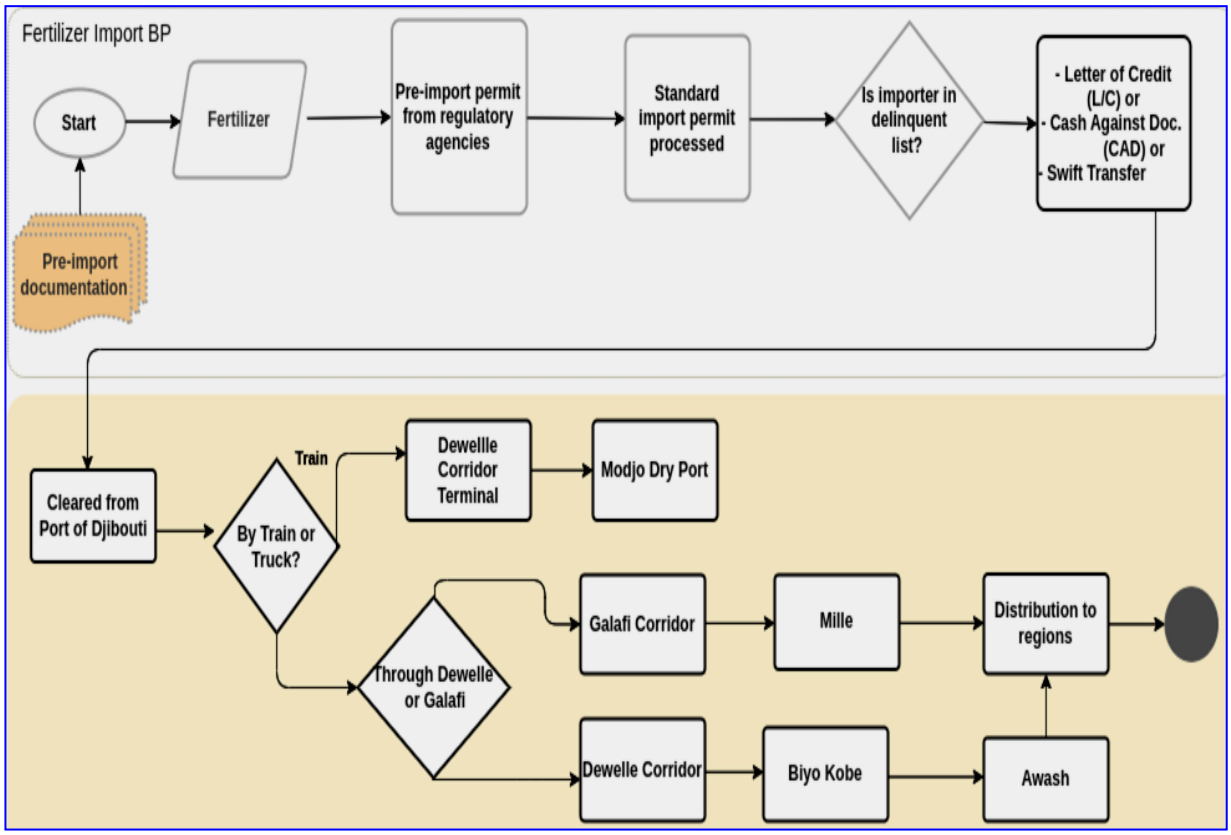
Figure 19.27: Fertiliser Value Chain



19.9.2 Business Process for the Import of Fertiliser

Figure 19.28 shows the Business Process involved in importing fertiliser.

Figure 19.28: Import of Fertiliser Business Process



The fertiliser importation process is as follows:

- Pre-import documentation and physical transport. Pre-import documentation involves obtaining the necessary import permits and licenses, as well as completing the required customs paperwork;
- Physical transport. The physical transport starts from port clearance at Djibouti port to either Modjo dry port for temporary storage or directly to importer warehouses particularity cooperative union warehouses scattered across the country.

The main challenges are securing foreign currency for the first process and a lack of national central warehouses and fleet management for the second process.

As shown in the Figure 4.27, the amount of fertiliser imported, by value, increased in 2020-21 from 2019-20 and then decreased from 2020-21 to 2021-22. Price spikes, the security situation, the bureaucracy involved in the procurement process (which, at the very least, slows the process) and poor awareness of farmers on how to best utilise fertiliser may be the key challenges facing the use of fertiliser in the country. Ethiopia imports Fertilisers primarily from: Egypt, Morocco, United Arab Emirates, Saudi Arabia, and China.

19.10 Minerals, Gemstones and Construction Materials

According to a policy brief prepared by the International Growth Centre in March 2021 entitled "Artisanal and small-scale mining in Ethiopia[43]":

- The mineral sector remains underdeveloped in Ethiopia.
- The share of this industry in GDP has been less than 1per cent in recent years.
- The sector is dominated by artisanal and small-scale mining (ASM), which employs more than 1.2 million people from rural communities and urban youth.
- The use of rudimentary tools is pervasive, and mining and processing recoveries will remain low unless improved equipment and technologies are used.
- Laws related to the sector are inadequate and inappropriate in most cases.
- Illegality is rife in the sector and mining cooperatives are largely ineffective.
- There is potential for ASM to contribute significantly to the national economy.
- Issues of smuggling, limited access to markets and financial services, inadequate mineral value-addition and lack of livelihoods diversification have significantly hindered the growth of this sector.

Additionally, the Ethiopian mining sector generated annual average revenue of ETB389 million and USD131 million from 2018 to 2020. Mineral investment brought annual average revenue of about ETB2m as indicated in **Table 19.3**.

The country has reportedly produced, on average, 2,259 kg of gold, 7.5 million tons of lime, and 139 thousand tons of gypsum.

Table 19.3: Mineral Production for Gold, Limestone and Gypsum

Item	2017/18	2018/19	2019/20	Average
Annual mineral revenue (in million birr)	435	324	408	389
Number of investors licensed	18	24	34	25
Revenue generated from mineral investment (Birr million)	--	3	1	2
Export earnings generated from gold, tantalum, and other gemstones (USD million) (ASM and Companies)	134	49	210	131
Gold production (kg)	2,925	853	3,299	2,359
Limestone (tons)	10,896,332	6,755,309	4,904,155	7,518,599
Gypsum (tons)	253,165	56,313	107,070	138,849

Source: Ministry of Mines

19.10.1 Gold

Asosa zone, Metekel zone, and Kamashi zone are the major gold producing regions and are part of the "Gold Belt" stretching from Sudan and into the north-western part of Ethiopia.

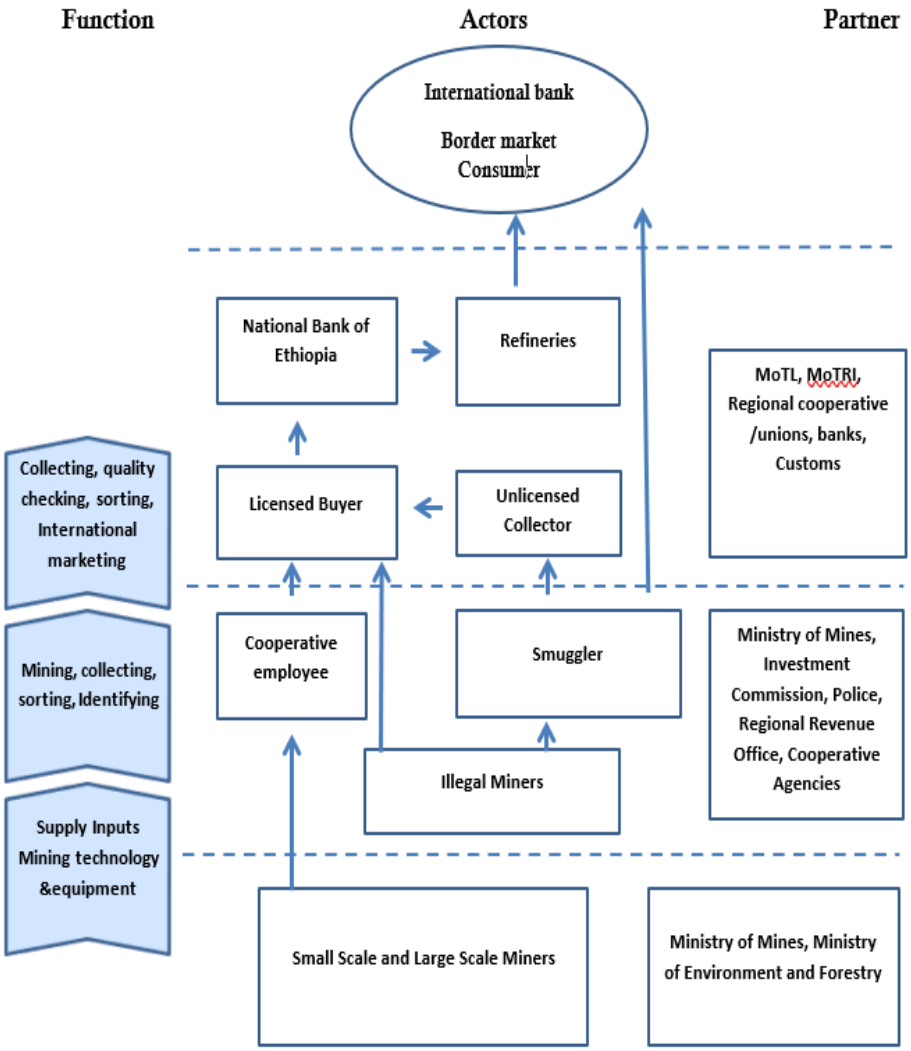
The major producers of gold in Ethiopia are artisanal miners, who account for about 48 per cent of the gold produced.

The main commercial gold mine in Ethiopia is the Lega Dembi Mine located in Oromia, which is owned by Midroc and which produced about 168,280 ounces in 2021 and accounted for about 38 per cent of the gold produced.

[43] https://www.theigc.org/sites/default/files/2021/04/Keili-et-al-March-2021-Policy-brief.pdf

Small scale miners can legally be registered as Small and Medium Enterprises, Cooperatives, or development groups and all gold produced in Ethiopia is supposed to be sold to the National Bank of Ethiopia but there is a reported presence of illegal miners and gold buyers that avoid the formal system and smuggling out of the country.

Figure 19.29: Gold Value Chain



19.10.2 Gemstones

Ethiopia has a large variety of high-quality precious gemstones, including opals, emeralds, sapphires, amazonite, amber, rubies, tourmaline, aquamarine, chrysoprase, period, and semi-precious gemstones including quartz, agate, jasper and there have been new discoveries of colour-change Chrome Grossular Garnets

Of the gems, opal production and exports have been increasing in recent years due to international demand. Precious, fire, and black opals are now being mined in Ethiopia, mainly in Wollo, Lalibella, Shewa around Mezezo, and Afar regions, offering the country four distinct opal types.

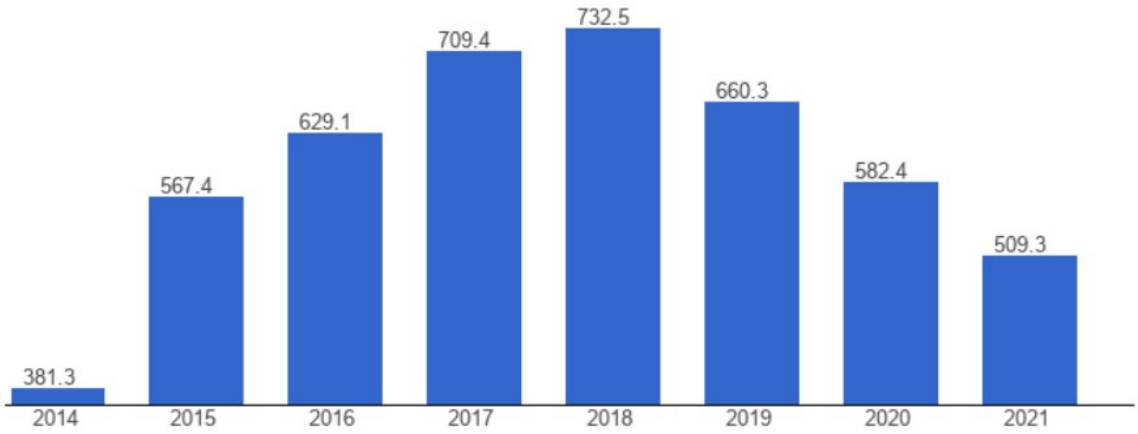
19.10.3 Coal

Ethiopia has an estimated 430 million metric tons of coal, and the government continues to encourage utilisation of this resource by encouraging small- and large-scale coal producers as well as trying to attract investors into this sector.

The largest deposit, with an estimated 200 million metric tons, is located in the Yayu basin in the Ilu Ababa Bora Zone of the Oromia Regional State. In addition, a series of geological investigations conducted by the Geological Survey of Ethiopia reveal that the Delbi, Moye, and Yayu coal deposits are very promising and the Chilga and Mush Valley coal deposits are considered to be potentially significant and require further investigation. Other coal occurrences such as Gojeb, Chinda, Kindo, Halul, and Wake in the Southern People, Nation, Nationalities, and Wuchale in the Amhara, and Arjo, Nejo, and Mendi in the Oromia National Regional States are also potential deposits with a commercial value.

The volume of coal that is imported rose steadily from 381,300 short tons[44] in 2014 to a high value of 732,500 short tons and then steadily declined to 509,300 short tons in 2021, as is shown in **Figure 19.30.**

Figure 19.30: Coal imports into Ethiopia by year (in short tons)



Source: https://www.theglobaleconomy.com/Ethiopia/coal_imports/

Although local production of coal is increasing there are challenges facing the sector such as:

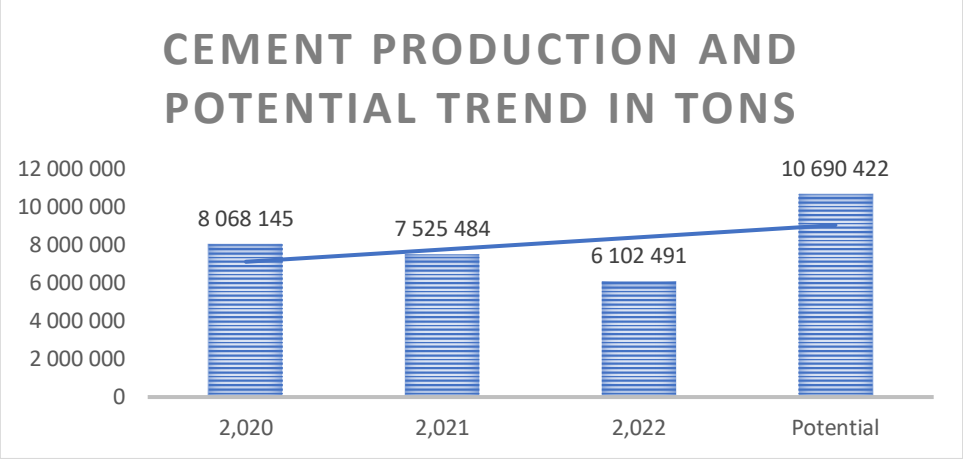
- The environmental impact of both mining and burning coal which is posing an impact to local coffee production and threatens biodiversity of the forest areas where coffee is grown and coal is mined;
- The security situation, an example being the security situation in Kamashi, a major coal mining belt in Benishangul Gumuz regional state where the security situation has affected access to the mines by workers and so production and distribution of coal; and
- The quality of the coal, which is usually of lower quality than imported coal (mostly from South Africa) which adds to the costs of using coal by Ethiopian industries.

[44] A "short ton" is an Imperial unit of mass. It is equal to 2,000 pounds or 907.17kgs. This is less than a metric ton (which is equal to 1,000 kilograms) or a long ton.

19.10.4 Cement and Construction Materials

As shown in **Figure 19.31**, in 2022, the cement industry had an installed capacity of 10.9 million tons per annum, but actual production was 6.1 million tons, so operating at about 56 per cent installed capacity.

Figure 19.31: Cement production by year.



Ethiopia is the 7th largest producer of cement in Africa. There are 13 companies operating 23 plants owned by a mix of international and local investors, with Derba Midroc Cement, Dangote, Mugher Cement, Messebo Cement, Habesha Cement and National Cement (parent company East African Holding), being the largest producers.

Figure 19.32 shows the average annual production of cement between 2020 and 2023 by company, with Dangote being the largest cement producer, with National Cement being the second largest and Debra Cement the third largest. These three companies account for about 60 per cent of Ethiopia's cement production.

Figure 19.32: Ethiopian cement industry average production by Company

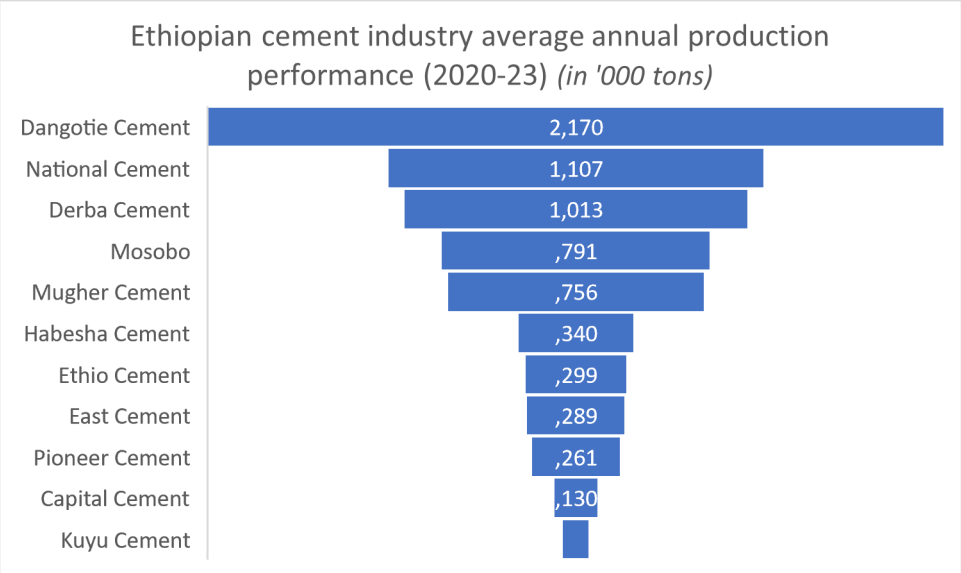
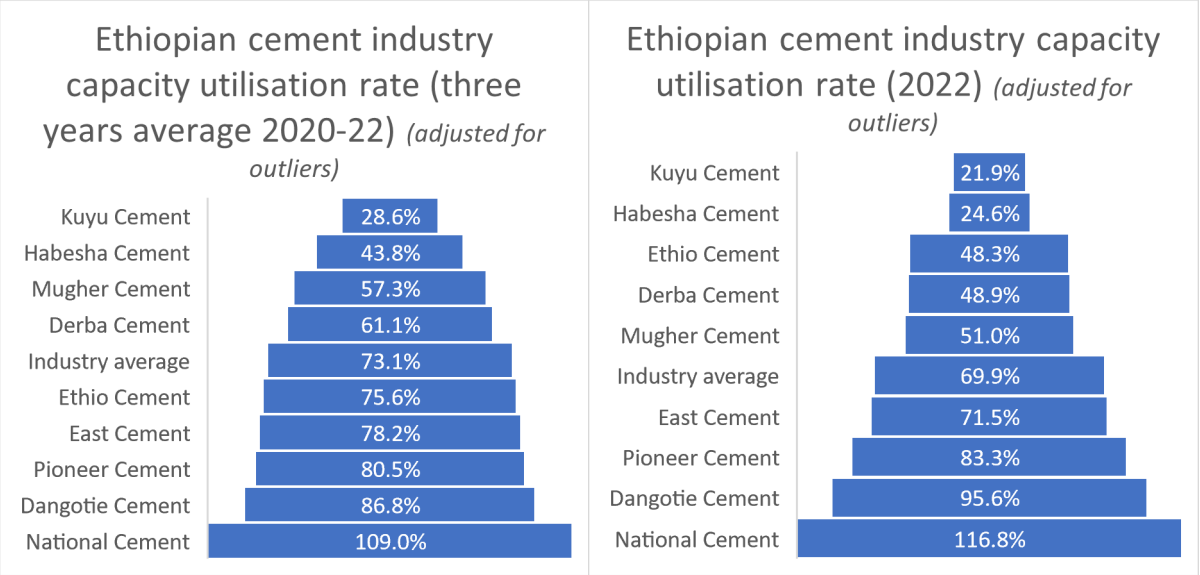


Figure 19.33 shows capacity utilisation by company for 2022 and as an average for 2020 to 2022. The results of two companies have been excluded – Capital Cement that is reporting 200 per cent

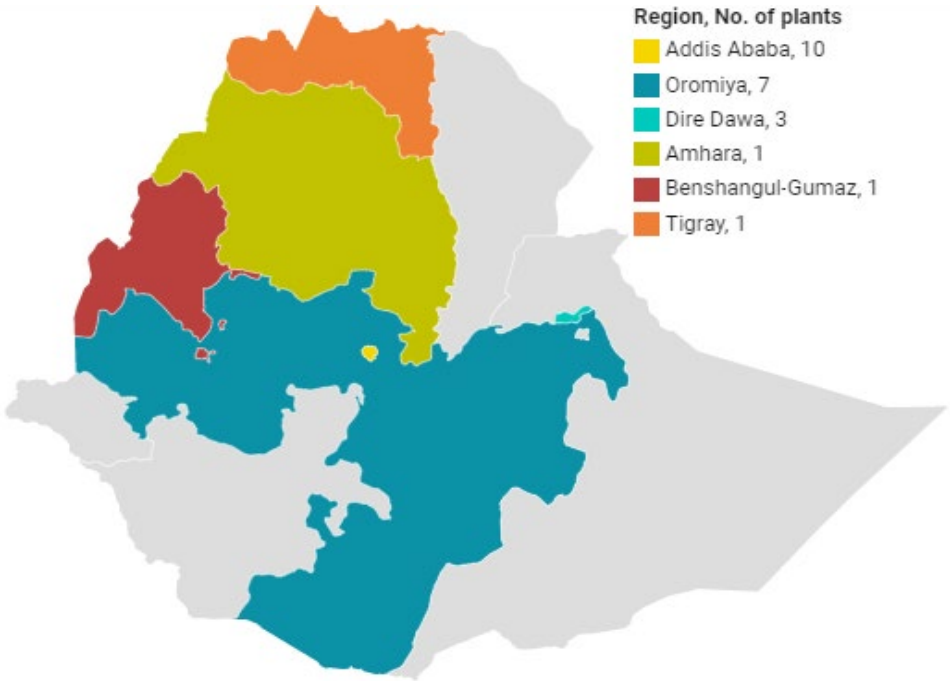
capacity utilisation and Mesobo, which was not in production in 2022. Excluding these two cement plants, the three-year capacity utilisation rate was 73 per cent. National Cement produced at 109 per cent of installed capacity and Dangote had an average capacity utilisation rate of 86.6 per cent.

Figure 19.33: Ethiopian cement industry capacity utilization rate



Production is concentrated in and around Addis Ababa, which is home to over 40 per cent of the nation's cement plants, with the remainder in five of Ethiopia's eleven regions, as shown in **Figure 19.34.** Ten cement plants are located in Addis Ababa, seven in Oromia Regional State, three in Dire Dawa, one in Amhara Regional State, one in Benshangul-Gumaz and the remaining in Tigray.

Figure 19.34: Geographic distribution of cement plants in Ethiopia



https://www.asokoinsight.com/content/market-insights/ethiopia-cement-market on 14 August 2023

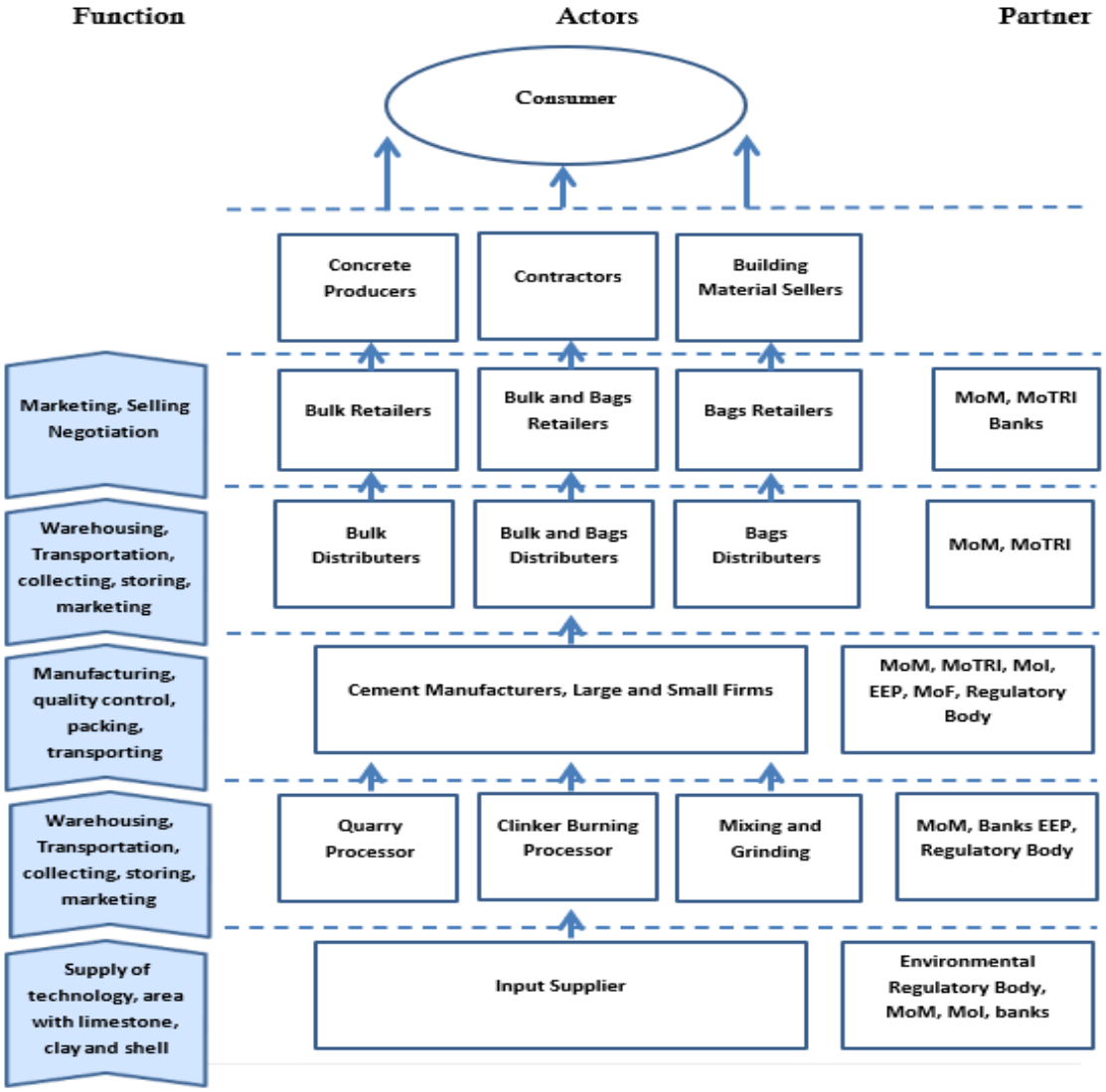
Plans to increase production include the following:

- Plans to build a USD2.5 billion plant by National Cement in Amhara state;
- Plans for by Worku Ayetenew to build a USD1 billion cement plant in Amhara;
- Sinoma announced in June 2023 that it had won the contract to build a USD290 million clinker plant for Derba Midroc in the Oromia region.
- Togoga Cement is planning a 5,000 tonnes per day cement plant in the Tigray region, initially proposed before the COVID-19 pandemic and Dangote, East African Holding (National cement), and West China Cement in Lemi Amhara region, and Mugher Cement are aiming to increase their market share by boosting production.

19.10.5 Cement Value Chain

Figure 19.35 gives the Cement Value Chain.

Figure 19.35: Cement Value Chain

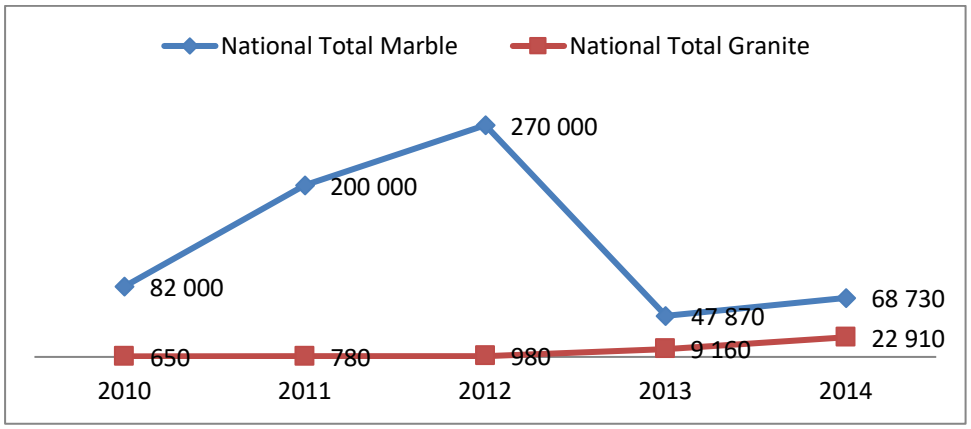


19.10.6 Dimension Stone

Ethiopia has untapped potential in marble production. The marble deposits are mostly located in the Northern and Western part of Ethiopia. In the exploitation of dimensional stone, large, commercial blocks are extracted in the quarry and transported to a processing plant for final shaping and finishing into slabs and tiles. Those that are homogenous and attractive types of rocks are potentially exported to other countries as rough blocks. Interesting deposits of marble are found in the western part of Wellega (Daleti) and Gojam (Mora, Bulen, Mankush and Baruda). The area is quite remote, and distances to Addis Ababa vary between 550 and 800 km, for the most part along non-paved roads. The cost of transportation and the security situation in the area are posing serious challenge for the production and smooth marketability of the product.

Figure 19.36 shows the production of dimension stone in Ethiopia.

Figure 19.36: Production of Dimension stone by year



19.10.7 Oil and Gas

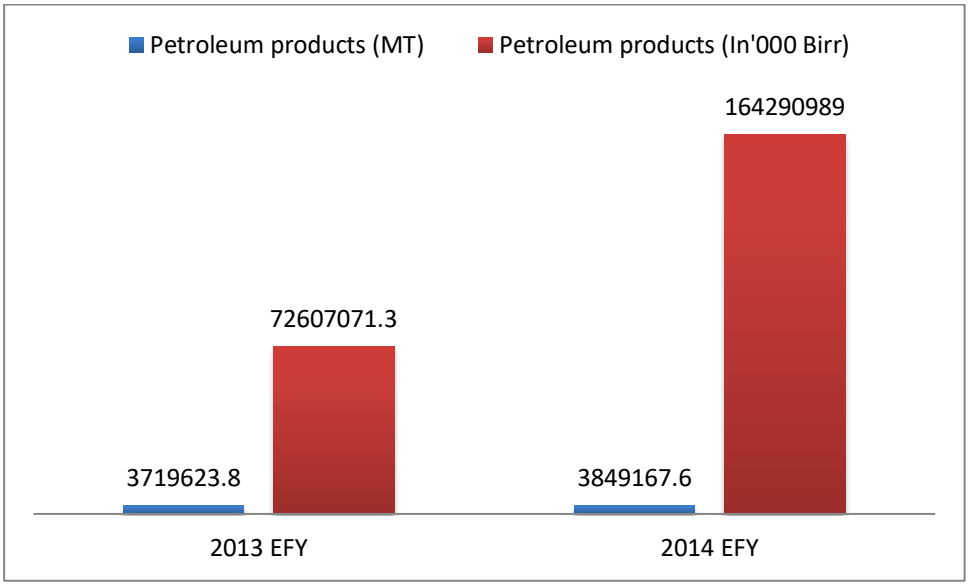
Ethiopia has the potential to be an oil exporter with oil deposits having been located in the northeast, southeast, and southwest of the country. International oil exploration companies have been given oil concessions and, in 2018, Poly GCL struck oil at their oil field of Hilala at the Hamanlei formation, where they had drilled three exploration wells. All of the three wells have shown gas reserves with 2 of them having oil flows. The test production phase of Hilala will see Poly GCL producing 450 barrels of oil per day.

In an area with a proven six to eight trillion cubic meters of crude oil, the Chinese company plans to construct a gas pipeline to Djibouti, where they will build a gas treatment plant, which will convert the gas into liquefied natural gas. The converted gas will then be loaded on special ships specifically built to transport this gas, which will be exported directly to China.

The data obtained from the National Bank of Ethiopia revealed that Ethiopia has imported about 3.8 million metric tons of petroleum products worth Birr 164.3 billion by the Ethiopian Petroleum Enterprise during the 2021/22 fiscal year. This value of petroleum import showed a 126.3 per cent annual surge mainly due to an increase in import of jet fuel (140 per cent), gas oil (127.5 per cent), regular gasoline (120.4 per cent) and fuel oil (65.3per cent).

Similarly, the total volume of petroleum imports increased by 3.5 percent owing to higher volume of jet fuel (11.9 percent), regular gasoline (3.2 percent) and gas oil (2.4 percent), despite the decline in import volume of fuel oil (6.9 percent), as shown in Figure **19.37**.

Figure 19.37: Volume and Value of Petroleum Import in Ethiopia (In MT and '000 Birr)



Source: Ethiopian Petroleum Enterprise, NBE

Consumption of petroleum products has also been rising rapidly and annual oil consumption tripled from 1.2 million metric tons in EFY 1995 to 3.9 million metric tons in EFY 2012 (2019-2020) as shown in **Table 19.4.**

Table 19.4: Annual fuel consumption per metric ton

EFY	ADO (white Diesel)	MR (Benzene)	JET Fuel	KEROSENE (Lamba)	LFO (light black Diesel)	HFO (heavy black Diesel)	Total
1995	681,110	132,014	78,216	183,610	45,896	89,222	**1,210,068**
1996	701,237	141,608	87,697	208,994	45,014	90,497	**1,275,047**
1997	745,669	139,611	113,896	212,550	46,499	108,055	**1,366,280**
1998	851,381	147,514	145,775	229,898	42,318	119,623	**1,536,509**
1999	927,753	146,614	176,778	242,847	45,600	117,615	**1,657,207**
2000	1,107,193	143,025	218,850	265,664	45,861	130,066	**1,910,659**
2001	1,199,673	149,967	214,004	272,304	37,510	117,029	**1,990,486**
2002	1,250,641	162,070	248,386	257,022	10,544	106,910	**2,035,574**
2003	1,154,560	151,634	320,443	239,032	34,823	96,320	**1,996,812**
2004	1,231,815	154,206	319,870	237,399	37,126	110,740	**2,091,156**
2005	1,366,479	185,495	374,035	268,621	38,614	124,095	**2,357,339**
2006	1,514,664	208,082	*411,593*	256,759	37,319	118,940	**2,547,359**
2007	1,730,723	240,972	*460,504*	261,311	38,280	123,489	**2,855,279**
2008	1,919,150	309,973	*483,524*	260,524	39,529	66,947	**3,079,647**
2009	2,173,656	359,538	*589,993*	165,122	38,319	37,450	**3,364,078**
2010	2,477,968	432,556	696,268	76,048	33,100	43,706	**3,759,646**
2011	2,544,334	502,569	731,290	78,367	33,430	38,135	**3,928,125**
2012	2,568,588	528,409	565,984	69,817	35,594	46,440	**3,815,319**

As shown in **Table 19.5**, in EFY 2012 the Ethiopian Petroleum Supply Enterprise (EPSC) sold 3.8 million metric tons of various products worth 3.8 billion Birr to 31 oil companies. This is 2.9 percent lower than last year's 3.9 million metric tons, mainly because of a decrease in demand for jet fuel due to the COVID-19 pandemic.

Table 19.5: Comparison of performance of 2011 and 2012

No.	Fuel type	Volume (metric tons)				Growth (%)
		2011 Performance		2012 performance		
		Size/quantity	Share (%)	Size/quantity	Share (%)	
1	Diesel	2,544,334	64.8	2,568,588	67.3	0.95
2	Gasoline	502,569	12.8	528,409	13.8	5.1
3	Jet fuel	731,290	18.6	565,984	14.8	(22.6)
4	Kerosene	78,367	2.0	69,817	1.8	(10.9)
5	Heavy black diesel	38,135	1.0	46,440	1.2	21.8
6	Light black diesel	33,430	0.8	35,594	0.9	6.5
Total		3,928,125	100	3,815,319	100.00	(2.9)

The Ethiopian Petroleum Corporation (EPC) has 23 strategic depots built in 14 different cities to store 394 million metric tons of different types of fuel at a time as shown in **Table 19.6.** Out of these:

- 327 million litres of diesel can be stored in 15 depots in five different towns;
- 53.5 million litres of gasoline in 5 depots in five towns;
- 50,000 litres of kerosine in 1depot in Gondar; and
- 3 million litres of light black diesel in 2 depots, in Kombolcha and Shashemene.

Table 19.6: Storage depots capacity and quantity in litres

No.		*Petroleum products*				*Total*
	Deposits	*White diesel*	*Gasoline*	*Kerosene*	*Light black diesel*	
1	Adigrat	4,000,000				4,000,000
2	Agaro	3,000,000				3,000,000
3	Awash	100,000,000				100,000,000
4	Awash Operation	30,000,000				30,000,000
5	Bahir Dar	30,000,000				30,000,000
6	Kombolcha 1	4,000,000	1,000,000		1,000,000	6,000,000
7	Kombolcha 2	30,000,000				30,000,000
8	Gambella	3,000,000				3,000,000
9	Gondar 1	1,000,000	500,000	500,000		2,000,000
10	Gondar 2	30,000,000				30,000,000
11	Harar	20,000,000				20,000,000
12	Mekele	30,000,000				30,000,000
13	Nekemt	7,000,000	1,000,000			8,000,000
14	Shashemene	5,000,000	1,000,000		2,000,000	8,000,000
15	Sululta		60,000,000			60,000,000
16	Wolayita	30,000,000				30,000,000
Total		***327,000,000***	***63,500,000***	***500,000***	***3,000,000***	***394,000,000***

Fuel is distributed to just under 1,000 fuel stations throughout the country. Seven of the distribution companies are foreign owned and thirty-one are Ethiopian owned. In terms of market share, five companies have a market share of about 80 per cent as shown in **Table 19.7**.

Table 19.7: Market share of oil companies 2012

No.	Company name	Fuel volume (million tons)	Market Share (%)
1	National Oil Ethiopia	1,220,311.2	32.2
2	Oil Liberia	767,151.8	20.3
3	Total	582,841.7	15.2
4	United	270,011.9	7.0
5	Taf Oil	208,448.3	5.4
6	26 other companies	766,554.1	20.1
Total		3,815,319.0	100

Petroleum and petroleum products are regulated products in Ethiopia by the Ethiopian Petroleum and Petroleum Products Supply and Distribution Regulatory Agency (PPSDA), which was established in 2019. Under this regulatory agency, there are 27 oil depots with a capacity of 400,600,000 litres with different products, like benzene, kerosene, and Light Fuel Oil (LFO). Furthermore, these depots are found in all regional starts of the country as indicated in the following **Table 19.8**[45]

Table 19.8: Location of Liquid Bulk Deports by Name, Capacity, Region and Urban Area

Product	Capacity (m^3)	Region	Urban Area	Product	Capacity (m^3)	Region	Urban Area
Diesel	4,000	Tigray	Adigrat	LFO	1,000	Amhara	Combolcha 1
Diesel	3,000	Oromia	Agaro	LFO	2,000	Oromia	Shashemene
Diesel	100,000	Afar	Awash	**Sub Total**	**3,000**		
Diesel	33,600	Afar	Awash Operation	Kerosine	500	Amhara	Gonder 1
Diesel	30,000	Amhara	Bahirdar	Kerosine	1,000	Amhara	Combolcha 1
Diesel	3,000	Gambella	Gambella	Kerosine	1,000	Oromia	Nekemt
Diesel	1,000	Amhara	Gonder 1	**Sub Total**	**2,500**		
Diesel	30,000	Amhara	Gonder 2	Benzene	1,000	Gambella	Gambella
Diesel	20,000	Harar	Harar	Benzene	500	Amhara	Gonder 1
Diesel	4,000	Amhara	Combolcha 1	Benzene	1,000	Amhara	Combolcha 1
Diesel	30,000	Amhara	Combolcha 2	Benzene	1,000	Oromia	Nekemt
Diesel	30,000	Tigray	Mekele	Benzene	1,000	Oromia	Shashemene
Diesel	7,000	Oromia	Nekemt	Benzene	60,000	Oromia	Sululta
Diesel	5,000	Oromia	Shashemene	**Sub total**	**64,500**		
Diesel	30,000	Snnp	Wolyita	**Grand Total**	**400,600**		
Sub Total	**330,600**						

Independent oil companies are responsible for the distribution and operation of petroleum products, with the main oil companies being:

Oil Company	No of Outlets	Oil Company	No of Outlets	Oil Company	No of Outlets
NOC	215	TAF	68	Full	3
TOTAL	147	Yeshi Oil	14	ABAC	3
Oil Libya	165	Tebarek	8	Kumbi	5
Zagol	17	Bravo	14	Africa Oil	8

[45] Ethiopian petroleum and Petroleum products Supply and Distribution Regulatory Agency, 2021.

Oil Company	No of Outlets	Oil Company	No of Outlets	Oil Company	No of Outlets
NOC	215	TAF	68	Full	3
Kobil	36	NAYK	14	JFM	2
WAS	19	Gomeju	46	Olway	4
Yetebaberut (YBP)	130	Halefay	11	Kernel	8
Zemen	11	Dalol	30	Felegion	2
Habesha	21	Worku	3	Sidiafage	2
Sky	23	Green	21	Ella Trading	2
ODDA	15	Delta	22	Mesh	2
JR	33	Dire	3	Abyssinia	2

All the petroleum oils consumed in Ethiopia, including crude oil and refined petroleum, are imported. Ethiopian Airlines directly imports its own fuels, while Ethiopian Petroleum Supply Enterprise (EPSE) imports the rest. These petroleum oils arrive through the Port of Djibouti, at the Horizon Terminal.

Ethiopia and Djibouti signed a MOU in May 2022 to explore opportunities to develop a new oil terminal in Damerjog Industrial Park in Djibouti to provide storage for oil and petroleum products destined for markets in both countries, as well as for transshipment. It is reported[46] that Ethiopia Investment Holdings (EIH), Ethiopia's sovereign wealth fund has, through EPSE, which is a parastatal, has acquired a 30 per cent equity stake in Damerjog Liquid Bulk Port (DLBP), which is part of the USD 4 billion project of Djibouti Damerjog Industrial Park (DDIP).

19.10.7.1 Fuel Supply Chain

In Ethiopia, fuel marketing and supply is a limited trading system so that the import and export of fuel, quality control, wholesale and retail distribution, transportation and storage of fuel and profit margins, tariffs and pricing licenses are all controlled by government.

The wholesale distribution of oil is open to foreign and local private investors who are able to meet the sector entry requirements.

Fuel is transported from Horizon Oil terminal in Djibouti to local warehouses and fuel stations by the owners of the tanker trucks, all of whom are local investors. Petroleum companies are not involved in oil transportation and oil retail.

Oil is sold to companies on credit with a 30-day settlement period.

On import, all vessels undergo port clearance procedures and customs officials inspect them and their cargo, verify the imported petroleum oils against shipping documents, and collect samples for quality analysis if necessary. Customs duties, taxes, and other import fees are assessed and settled. The petroleum oils are unloaded from the vessel into storage facilities at the Horizon Terminal.

After storage at the terminal, petroleum oils are transported to Ethiopia. The distribution is carried out using tanker trucks because the Ethio-Djibouti Railway is not connected with the Horizon Terminal.

Ethiopian Airlines transports its petroleum oils using its own fleet.

EPSE sells a part of its petroleum oils to retailers directly in Djibouti and transports the rest to Ethiopia. Once in Ethiopia, the petroleum oils are stored at the EPSE's network of tanks. EPSE is

[46] https://tankterminals.com/news/eih-invests-big-in-djiboutis-new-mega-oil-terminal/

constructing its largest oil and gas storage terminal at Dukem, in Oromia, with a storage capacity of 240,000 cubic metres. It is expected to start operations in 2024.

Finally, petroleum oils are distributed to the points of sale (such as distribution centres or fuel stations), and they are sold to end consumers, including individuals, businesses, industries, and transportation companies.

Figure 19.38: Supply Chain for Petroleum Oils.

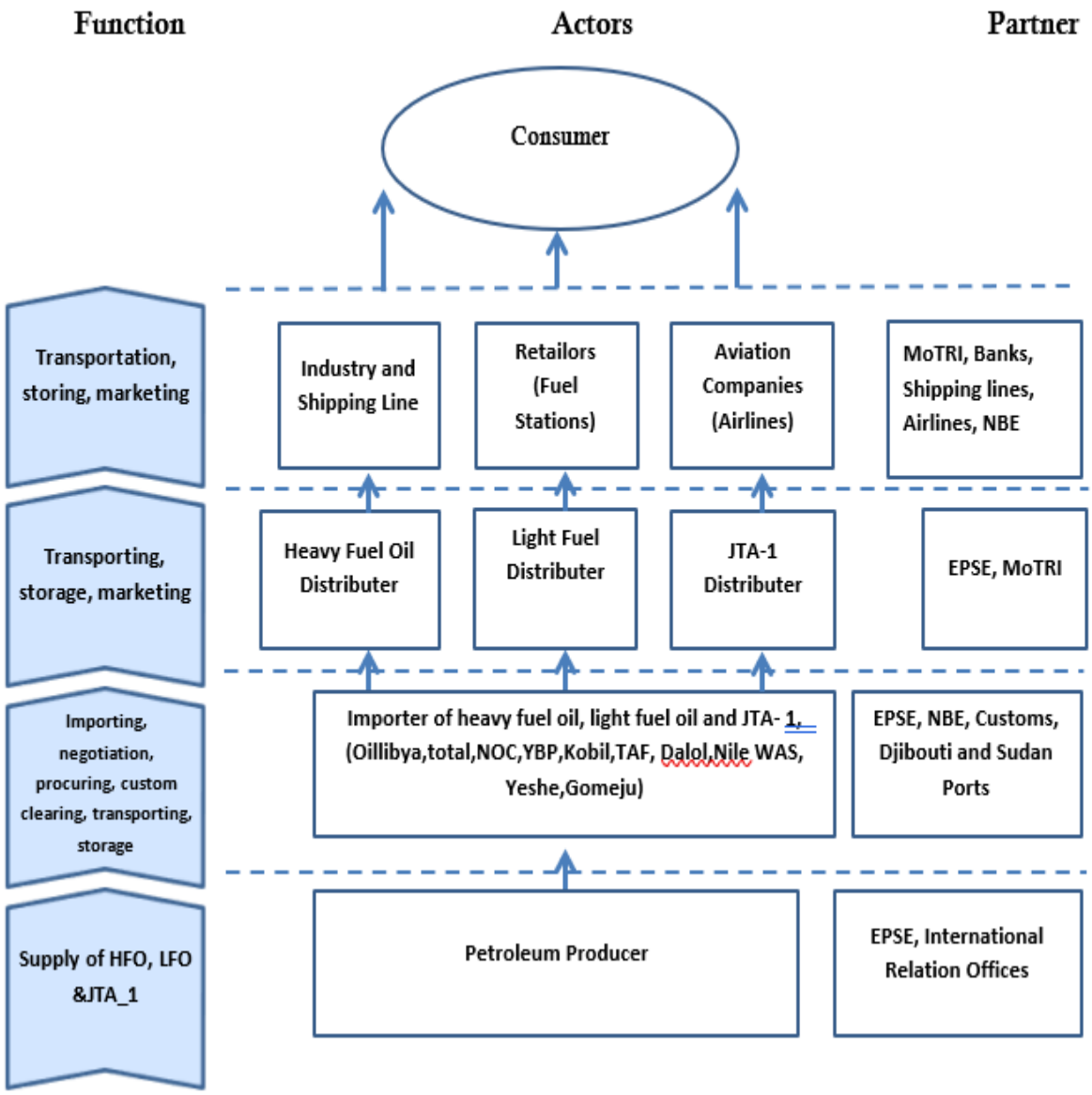
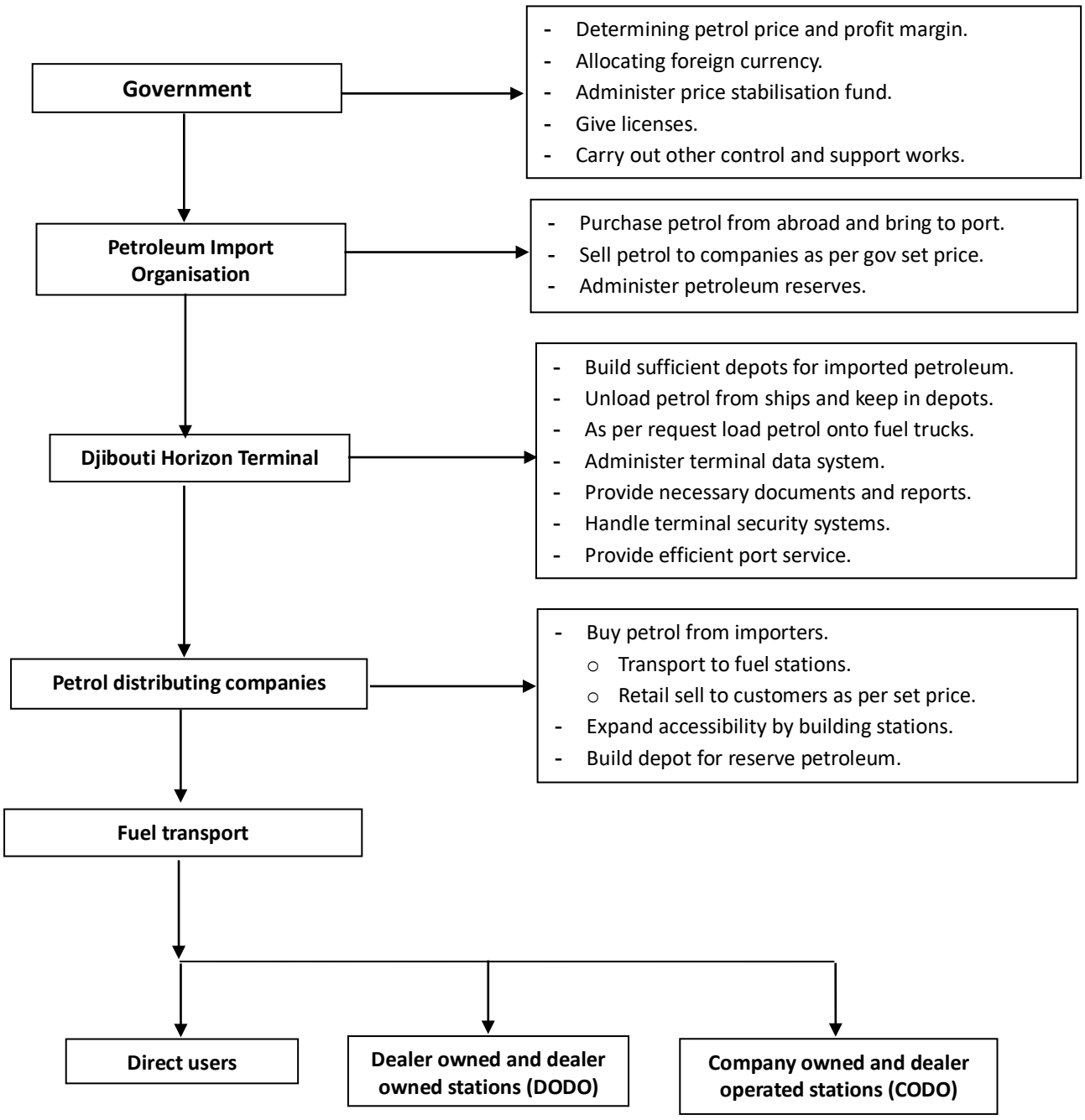


Figure 19.39: Fuel Supply Chain



Annex 1: Foreign Trade Processes and Procedures

The foreign trade processes and procedures vary depending on whether the goods are being exported or imported, whether the imported goods are being imported through the Multimodal or the Unimodal process and by type of goods. These can be summarised as:

- Type of cargoes/shipments (containerized, breakbulk, dry bulk, liquid, RO/RO, etc.);
- Type of transport system (Multimodal, unimodal); and
- Type of transport mode (Truck, Rail)

In the Ethiopian context there are about seventeen methods that a good can be traded and as follows:

Imports - Multimodal:

- Container import by truck from Djibouti;
- Container import by train from Djibouti;
- Ro-Ro import by truck; and
- Ro-Ro import by train.

Imports – Unimodal:

- Container import by truck from Djibouti;
- Container import by train from Djibouti;
- Ro-Ro Import by truck car carrier;
- Ro-Ro self-drive;
- Break Bulk/Bagged import by truck;
- Break Bulk/Bagged import by train;
- Dry Bulk by truck; and
- Liquid bulk by truck.

Imports through Djibouti Free Zone:

- Import by truck; and
- Import by train.

Export:

- Export Containerised by train; and
- Export Bagged by truck.

These processes have been simplified into three processes and procedures as follows:

- Multimodal Container Import by Truck;
- Unimodal Container Import by Train; and
- Unimodal Break Bulk/ Bagged Import by Truck

A1.1 Process Flow for Multimodal Container Import by Truck

Actor		Activity	Documents	Location/place
1	Importer	Correspondence	Agreement/ Contract based on Incoterms, Performa Invoice	Ethiopia/ Importer's Office
2	Supplier	Correspondence	Agreement/ Contract, Performa Invoice	Abroad/Supplier's Office
3	Opening Bank	Opening of L/C and Notifying the Beneficiary Bank Modes of payment could be either L/C, CAD or TT type.	(L/C) Letter of Credit and Performa Invoice, License/Investment License, TIN, Insurance Policy, Approved Purchase Order	L/C Opening Bank Importer Premises
4	Beneficiary Bank	Receives L/C and notifies the Supplier	L/C	Supplier Bank
5	Supplier	Prepares items for shipment and requests for Empty Container	Shipping Instruction	Supplier's premises
6	Shipping Agent at Load Port	Sending Empty Container for Loading		Load Port
7	Supplier	Container stuffing and sending to Port		Supplier's Premises
8	Shipping Agent at Load Port	Loading the Container On-board Vessel/ Ship and sends the Manifest to Discharge Port Agent (in this case, the ESLSE Office HQ)	Issue Bill of Lading (B/L) based on Shipping Instruction and Loading Manifest	Load Port
9	Supplier	Collects the B/L and along with Commercial Invoice, Packing List and Certificate of Origin submits to his bank and collects his money.	B/L, Commercial Invoice, Packing List, Certificate of Origin	Supplier's Office
10	Beneficiary Bank	Send all the documents to the Opening Bank	B/L, Commercial Invoice, Packing List, Certificate of Origin	Exporter's Beneficiary Bank
11	Opening Bank	Notifies the Importer that the full set of Documents have arrived	B/L, Commercial Invoice, Packing List, Certificate of Origin	Importer's Bank premises
12	**Sea port Process** Discharge Port Agent (In this case, ESLSE Shipping Commercial Department) Other Multi Modal Operator	Receiving the Manifest and issues Cargo Release Order and send to Djibouti Agent (MTS) or other appointed Freight Forwarding Company at seaports	Manifest and Cargo Release Order	Addis Ababa – ESLSE Other Multi Modal Operator Head Office
13	MTS – Multimodal Department or other appointed Freight Forwarding Company at seaports	MTS or other appointed Freight Forwarding Company at seaports will generate Batch No and distribute Cargo Release Instructions to either RTA or ATD/local cargo clearing agents	Cargo Release Instructions/ Release Order	Djibouti/Other Seaports
14	RTA or ATD or other appointed local cargo clearing companies at seaports	Will appoint and distribute the Cargo Release /Clearing Instructions to the Transporters (from their members) and notify MTS or other appointed Freight Forwarding Company at seaports of the appointed Transporters	Cargo Release/ Clearing Instructions and Notification Document	Djibouti/Other Seaports
15	Transporters	Collect D/O, pay port dues, prepare the Customs Declaration, and finalize Clearance and inform MTS or other appointed Freight Forwarding company at seaport for Truck Assignment for Ready for Loading Operations.	D/O and shipping lines dues, Port payment receipts, Pre Gate pass, Customs Declaration Fees and Ready for Loading Operation Lists.	Djibouti or other seaports

Actor		Activity	Documents	Location/place
16	MTS or other appointed Freight Forwarding Company at seaports	Sends Truck List to individual Transiters	Truck List	Djibouti or other seaports
17	Transistors	Prepare Gate pass, Purchase Customs Seal and prepare T1, Waybill and IM8 and submit to MTS	Gate Pass, IM8 and Waybill, Pre-gate pass and T1,, Port Invoice, Djibouti Customs Declaration, Waybill and Customs Seal with Seal No).	Djibouti or other seaports
18	MTS or other appointed Freight Forwarding Company at seaports	After accepting the Freight Order from Transporter, Will hand over documents to the Transporter's representative	Freight Order, Gate Pass, Port Invoice, IM8, T1, Pre- gate Pass, Waybill and Customs Seal	Djibouti/ Other Seaports
19	Transporter's Representative	Handover the above documents and Seal to the Driver	Gate Pass, Port Invoice, IM8, T1, Waybill, Pre-gate Pass and Customs Seal	Djibouti/Other Seaports
20	Driver	Goes to the Port as per pre-arranged time and Loads Container and goes to the Exit gate where the Customs put the seal.	Gate Pass, Port Invoice, IM8, T1, Waybill, Pre-gate Pass and Customs Seal	Djibouti/Other Seaports
21	Port	Port hands over the full-out equipment interchange report to the driver at the gate who departs for Galafi/ Dewele/Other Sea Port Border post to Ethiopia	Full-out Interchange Report	Djibouti/Other Seaports
22	Inland Transport Djibouti Customs at Galafi or Dewele / Other Seaports Customs	Checks the IM8 and T1 and the Container Seal and allows the Truck to pass	Waybill, IM8 and T1	Galafi/ Dewele/Other Seaports Border Post to (Djibouti /Ethiopia)
23	Ethiopia Customs at Galafi or Dewele / other sea port border	Checks the IM8 in their system and the Container Seal and then issues a new T1 and the allows the Truck to pass	Waybill, IM8 and T1	Galafi/ Dewele/ other sea port Border Post to (Djibouti /Ethiopia)
24	Modjo or other Dry Port Gate Official	He verifies the documents with the Container and allows the truck to enter the Dry Port	Waybill, IM8 and T1	Modjo or other Dry Ports
25	ESLSE Official/Multimodal operator	Informs the Importer of his Container Arrival		ESLSE/Multimodal Office in the Dry Port
26	Inland Dry Ports/ Clearing Points Process Importer	Collects the documents from the Bank and after making agreement hands over the documents to his clearing agent after settlement of advance payment or sign contract agreement	Original B/L, Commercial Invoice, Certificate of Origin, Packing List	Importer's Bank
27	Clearing Agent	Prepare the Customs Declaration, makes payment of Customs Duties and Dry Port and Service Charges and all ESLSE dues. If required based on the nature of cargo, the OGA's permits may be needed.	Original bank endorsed B/L, Commercial Invoice, Certificate of Origin, Packing List, Forwarding Instructions, Agreement, Customs Declaration, Customs Duties Receipt, Ocean/ Sea Freight invoice and receipt, Inland Freight, Terminal Expense receipt, and Service Charges,	Dry Port

Actor		Activity	Documents	Location/place
			and OGA charge, if applicable.	
28	Importer	Receives the cargo at his premises	Original bank endorsed B/L, Commercial Invoice, Certificate of Origin, Packing List, Forwarding Instructions, Agreement, Customs Declaration, Customs Duties Receipt, Ocean/ Sea Freight invoice and receipt, Inland Freight, Terminal Expense receipt, and Service Charges, and OGA charge, if applicable.	Importer's Premises
29	Driver	To exit with full-out container and return back with empty container to Modjo/ Dry ports	While going out he collects the "Full-Out Equipment Interchange Report" and while returning back he collects the Empty-in Equipment Interchange Report" from the Dry Port.	Dry Port/ Importer's premises
30	ESLSE Official/Multimodal Operator	To return the Empty Container either to Djibouti by Train or Truck or deliver the Empty Container to the Shipping Lines Depot for Export Purpose.	Empty-Out Equipment Interchange Report. For Djibouti delivery, Endorsed Customs Container Return Form.	Dry Port/ Container Depot
31	Djibouti Port	Receiving the empty Container	Empty-in Equipment Interchange Report	
32	Driver	Delivers the container to the Port and collects document and hands over to the transporter	Empty-in Equipment Interchange Report	

A1.2 Process Flow for Multimodal Container Import by Train

Actor		Activity	Documents in Use	Place
1.	Importer	Correspondence	Agreement/ Contract, based on Incoterms Performa Invoice	Importer's Office
2.	Supplier	Correspondence	Agreement/ Contract, Performa Invoice	Supplier's Office
3.	Opening Bank	Opening of L/C and Notifying the Beneficiary Bank Modes of payment could be either L/C, CAD or TT type. Approved Purchase Order, Performa Invoice ,Franco Valuta	L/C (Letter of Credit) and Performa Invoice, License/Investment License, TIN, Insurance Policy, Approved Purchase Order, Performa Invoice, Franco Valuta	L/C Opening Bank Premises
4.	Beneficiary Bank	Receives L/C and notifies the Supplier	L/C	Supplier Bank
5.	Supplier	Prepares items for shipment and requests for Empty Container	Shipping Instruction	Supplier's premises
6.	Shipping Agent at Load Port	Sending Empty Container for Loading		Load Port
7.	Supplier	Container stuffing and sending to Port		Supplier's Premises
8.	Shipping Agent at Load Port	Loading the Container On-board Vessel/ Ship and sends the Manifest to Discharge Port Agent (in this case, the ESLSE or other Multimodal Operator Office HQ)	Issue Bill of Lading (B/L) based on Shipping Instruction and Loading Manifest	Load Port
9.	Supplier	Collects the B/L and along with Commercial Invoice, Packing List and Certificate of Origin submits to his bank and collects his money.	B/L, Commercial Invoice, Packing List, Certificate of Origin	Supplier's Office
10.	Beneficiary Bank	Send all the documents to the Opening Bank	B/L, Commercial Invoice, Packing List, Certificate of Origin	Exporter's Beneficiary Bank
11.	Opening Bank	Notifies the Importer that the full set of Documents have arrived	B/L, Commercial Invoice, Packing List, Certificate of Origin	Importer's Bank premises
12.	Discharge Port Agent (In this case, ESLSE Shipping Commercial Department) or Other Multimodal Operator	Receiving the Manifest and issues Cargo Release Order and send to Djibouti Agent (MTS) or other appointed Freight Forwarding Company	Manifest and Cargo Release Order	Addis Ababa – ESLSE or other Multimodal Operator Head Office
13.	MTS – Multimodal Department or other appointed Freight	MTS or other appointed Freight Forwarding Company will generate Batch No and distribute Cargo Release Instructions to either RTA or	Cargo Release Instructions/ Release Order	Djibouti

Actor		Activity	Documents in Use	Place
	Forwarding Company	ATD or local clearing agents		
14.	RTA or ATD/ or local clearing agents.	Will appoint and distribute the Cargo Release /Clearing Instructions to the Transiters (from their members) and notify MTS or other appointed Freight Forwarding Company of the appointed Transiters	Cargo Release/ Clearing Instructions and Notification Document	Djibouti
15.	Transiters	Collect D/O, pay port dues, prepare the Customs Declaration, and finalize Clearance and inform MTS or other appointed Freight Forwarding Company at seaports for Rail Assignment for Ready for Loading Operations.	D/O and shipping lines dues, Port payment receipts, Cydonia, Customs Declaration Fees and Ready for Loading Operation Lists.	Djibouti
16.	MTS	Sends /Wagon list individual Transiters	Train Wagon List	Djibouti
17.	Transiters	Prepare Gate pass, Purchase Customs Seal and prepare T1, Waybill and IM8 and submit to MTS or other appointed Freight Forwarding Company	Gate Pass, IM8 and Waybill , Pre-gate Pass and T1	Djibouti
18.	MTS or other appointed Freight Forwarding Company	Will hand over documents to the Nagad Freight Yard	Gate Pass, Port Invoice, IM8, T1, Pre-gate Pass, Waybill and Customs Seal	Djibouti
19.	EDR Representative	Handover the above documents and Seal to the Port –SGTD	Gate Pass, Port Invoice, IM8, T1, Waybill, Pre-gate Pass and Customs Seal	Djibouti
20.	Train	Goes to the Port as per pre-arranged time and Loads Container and the Customs put the seal.	Gate Pass, Port Invoice, IM8, T1, Waybill, Pre-gate Pass and Customs Seal	Djibouti
21.	Port	Port hands over the full-out equipment interchange report to the EDR Representative at the load Port and the train heads to the Nagad Freight Yard.	Full-out Interchange Report	Djibouti
22.	Nagad Freight Yard	MTS or other appointed Freight Forwarding Company signs and collects Container Carriage Acceptance Receipt form the EDR and the Train proceeds to Dewele.	Container Carriage Acceptance Receipt	Djibouti
23.	Djibouti Customs at Dewele	Checks the IM8 and T1 and the Container Seal and allows the Train to pass to the other side.	Waybill, IM8 and T1	Dewele Border Post (Djibouti)
24.	Ethiopia Customs	Checks the IM8 in their system	Waybill, IM8 and T1	Dewele Border

Actor		Activity	Documents in Use	Place
	at Dewele	and the Container Seal and then allows the Train to pass and the train heads for its destination in Ethiopia.		Post (Ethiopia)
25.	Modjo or other Dry Port Gate Official	He verifies the documents with the Container and allows the train to enter the Dry Port	Waybill, IM8 and T1	Modjo or other Dry Ports
26.	ESLSE Official or other Multimodal Operator	Informs the Importer of his Container Arrival		ESLSE or other Multimodal Operator Office in the Dry Port
27.	Importer	Collects the documents from the Bank and after making agreement hands over the documents to his clearing agent	Original B/L, Commercial Invoice, Certificate of Origin, Packing List	Importer's Bank
28.	Clearing Agent	Prepare the Customs Declaration, makes payment of Customs Duties and Dry Port and Service Charges and all ESLSE dues. If required based on the nature of cargo, the OGA's permits may be needed.	Original bank endorsed B/L, Commercial Invoice, Certificate of Origin, Packing List, Forwarding Instructions, Agreement, Customs Declaration, Customs Duties Receipt, Ocean/ Sea Freight invoice and receipt, Inland Freight, Terminal Expense receipt, and Service Charges, and OGA charge, if applicable.	Dry Port
29.	Importer	Receives the cargo at his premises	Original bank endorsed B/L, Commercial Invoice, Certificate of Origin, Packing List, Forwarding Instructions, Agreement, Customs Declaration, Customs Duties Receipt, Ocean/ Sea Freight invoice and receipt, Inland Freight, Terminal Expense receipt, and Service Charges, and OGA charge, if applicable.	Importer's Premises
30.	ESLSE Official or Multimodal Operator	To return the Empty Container either to Djibouti by Train or by Truck to Djibouti or other seaports or deliver the Empty Container to the Shipping Lines Depot for Export Purpose.	Empty-Out Equipment Interchange Report. For Djibouti or other sea port delivery, Endorsed Customs Container Return Form.	Dry Port/ Container Depot
31.	Djibouti Port or other seaports	Receiving the empty Container	Empty-in Equipment Interchange Report	Djibouti or other seaports
32.	EDR	Delivers the container to the Port and collects document and hands over to the EDR Head Office for invoicing to ESLSE or other Multimodal Operator	Empty-in Equipment Interchange Report and Invoice	Djibouti and Addis Ababa
33.	Clearing Agent	Hands over all the documents including Final Declaration and collects his fees.	Submits all clearing documents and Invoice for the consignment that he cleared and collects his fees. From the Importer.	Addis Ababa

A1.3 Process Flow for Unimodal Break Bulk/Bagged Import by Truck

Actor		Activity	Documents in Use	Place
1.	Importer	Correspondence	Agreement/ Contract, based on Incoterms. Performa Invoice	Importer's Office
2.	Supplier	Correspondence	Agreement/ Contract, Performa Invoice	Supplier's Office
3.	Opening Bank	Opening of L/C and Notifying the Beneficiary Bank Modes of payment could be either L/C, CAD or TT type.	L/C, Letter of Credit and Performa Invoice, License/Investment License, TIN, Insurance Policy Approved Purchase Order, Performa Invoice, Franco Valuta	L/C Opening Bank Premises
4.	Beneficiary Bank	Receives L/C and notifies the Supplier	L/C	Supplier Bank
5.	Supplier	Prepares items for shipment and requests for Trucks/wagons Empty Container	Shipping Instruction	Supplier's premises
6.	Shipping Agent at Load Port Freight transport agents	Sending Empty Trucks Container for Loading		Load Port Supplier's premises
7.	Supplier	Container load trucks stuffing and sending to Port		Supplier's Premises
8.	Shipping Agent at Load Port	Loading the Container On-board Vessel/ Ship and sends the Manifest to Discharge Port Agent (in this case, the ESLSE or other Freight Forwarding Companies Office HQ)	Issue Bill of Lading (B/L) based on Shipping Instruction and Loading Manifest	Load Port
9.	Supplier	Collects the B/L and along with Commercial Invoice, Packing List and Certificate of Origin submits to his bank and collects his money.	B/L, Commercial Invoice, Packing List, Certificate of Origin	Supplier's Office
10.	Beneficiary Bank	Send all the documents to the Opening Bank	B/L, Commercial Invoice, Packing List, Certificate of Origin	Exporter's Beneficiary Bank
11.	Opening Bank	Notifies the Importer that the full set of Documents have arrived	B/L, Commercial Invoice, Packing List, Certificate of Origin	Importer's Bank premises
12.	Discharge Port Agent (In this case, ESLSE Shipping Commercial Department or other Shipping Agent)	Receiving the Manifest and issues Cargo Release Order and send to Djibouti Agent (MTS or other Shipping Agents)	Manifest and Cargo Release Order	Addis Ababa – ESLSE Head Office or other Shipping Agents Office
13.	Clearing Agent in Addis Ababa	After making agreement on payment terms with the importer, Clearing Agent in Addis Ababa will send by courier the Original Documents to his counterpart Clearing Agent in Djibouti	B/L, Commercial Invoice, Packing List, Certificate of Origin, Ocean Freight Invoice and Receipt).	Addis Ababa and Djibouti or other seaports
14.	Clearing Agent in Addis Ababa	Pays the Customs Duty and sends the approved Declaration to Djibouti or other seaports Agent	Approved Customs Declaration	Addis Ababa
15.	Clearing Agent in Djibouti	The Clearing Agent in Djibouti or other seaports will process	D/O and shipping lines dues, Port payment	Djibouti/ Tadjoura or other seaports

Actor		Activity	Documents in Use	Place
		the documents in the Djibouti Customs System and obtain the IM8(Djibouti or respective Customs Declaration). Collect D/O, pay port dues, prepare the Customs Declaration, and finalize Clearance and inform the Truck Agent for placement of trucks, request labour and equipment to the Port.	receipts, Pre entry gate pass, Customs Declaration Fees, B/L, Commercial Invoice, Packing List, Certificate of Origin, IM8 (Djibouti or other seaports Customs Declaration), endorsed Ethiopian Customs Declaration	
16.	Clearing Agent in Djibouti/other seaports	Prepare Gate pass and IM8	Gate Pass and IM8	Djibouti / Tadjoura or other seaports
17.	Transporter Agent	Sends Truck to the allocated Port for loading	Pre-entry Gate Pass, IM8, and Ticket	Djibouti / Tadjoura or other seaports
18.	Clearing Agent in Djibouti or other seaports	Will collect loading report from Tally Man and process the goods removal request with the Ethiopian Customs Coordination Office and get T1 while the truck goes to PK12/ truck parking area	Djibouti or other seaports Customs Declaration (T1), IM8	Djibouti / Tadjoura or other seaports
19.	Transporter's Representative	Collects all the documents and Handover to the Driver at PK12 / truck paring area	Ethiopian Customs T1 and Waybill, IM8	Djibouti / Tadjoura or other seaports
21.	Djibouti Customs at Galafi, Dewele or Lay or other seaports border crossing	Checks the IM8 and T1 with the Cargo and allows to cross	Waybill, IM8 and T1	Galafi, Dewele or Lay Border Post (Djibouti/Ethiopia or other seaports border
22.	Ethiopia Customs at Galafi or Dewele or other borders	Checks the IM8 in their system and then allows the Truck to pass	Waybill, IM8 and T1	Galafi/ Dewele or other Border Post (Djibouti or other seaports /Ethiopia)
23.	Kallity or other Ports Customs	Verifies the documents with the Cargo and allows the truck to unload after Customs Inspection and OGA clearance, if any.	Waybill, IM8 and T1 and Release order from the Customs.	Modjo or other Dry Ports
24.	Importer	Receives the cargo at his premises and stamps on Waybill or issues GRN (Goods Receiving Note) and hands it over to the Driver.		Importer's Premises
26.	The Transporter	Will prepare Transport Invoice and collect payment.	GRN (Goods Receiving Note) and Invoice, Waybill.	Addis Ababa
27.	The Clearing Agent	Will collect all the documents including Final Ethiopian Customs Declaration, prepares his invoice and hands over and collects payment from the Importer	All documents and Invoice.	Addis Ababa

A1.4 Process Flow for Unimodal Containerised Import by Truck

Actor		Activity	Documents in Use	Place
1.	Seller/ Exporter	Correspondence between Seller from Ethiopia and Buyer to finalize Sales Agreement/ Contract.	Sales Contract	Addis Ababa
2.	Seller/ Exporter	Register the Sales Contract with National Bank.	Sales Contract	Addis Ababa
3.	Seller / Exporter	Pre-sample couriered to the Buyer (500 gms) called PSS – Pre-Sample Shipment only for coffee export.	Courier Receipt	Addis Ababa
4.	Buyer	After confirmation, the Buyer nominates the Shipping Lines and sends instructions to the Seller and the Shipping Lines for placement of Container	Shipping Instructions	Buyer's place
5.	Seller/ Exporter	Confirmation of Order and Supplier sends Performa Invoice to the Buyer (Document: Performa Invoice).	Performa Invoice	Addis Ababa or other inland locations
6.	Opening Bank	L/C Opened and sent to the Supplier. (Document: L/C).	L/C	Buyer's place
7.	Seller/ Exporter	Supplier prepares the commodity – ready for Shipment and submits the Shipping Instructions to the Local Shipping Agent for Container placement and Cargo booking.	Shipping Instructions	Addis Ababa or other inland locations
8.	Forwarder /Clearing Agent	The exporter pays in advance or sign contract agreement with local freight forwarding company for local and Djibouti port clearance services		Forwarder /Clearing Agent
9.	Exporter / Transporter	Empty Container transported to the Seller's warehouse/ Factory.		Addis Ababa or other inland locations
10.	Customs, Coffee and Tea Authority, Depending the type of export OGAs like MOTRI, MOA,MOH, MOME ,EMA ,Ethiopian Chamber of Commerce issue export certificate	Container arrives at the Seller's warehouse/ Factory and after quality control approval by the Coffee & Tea Authority /for coffee/, cargo stuffed into the Container and sealed by the Customs, by the Coffee Tea Authority and the Shipping Agent Container Seal is put.	Quality Approval Certificate, VGM, Certificate of Origin	Seller's premises
11.	Forwarder/ Clearing Agent	The EX1 and EX8, the VGM, the Quality Certificate, Packing List, Commercial Invoice and the Waybill is handed over to the Driver.	EX1 and EX8, VGM, Quality Certificate, Packing List, Commercial Invoice and Waybill	
12.	Transporter/ Driver	Container transported from the Seller's premises/ Customs authorized place to the loading Port in Djibouti via Galafi or Dewale	EX1 and EX8, VGM, Quality Certificate, Packing List, Commercial Invoice and Waybill and Shipping Instructions	
13.	Customs at Galafi / Dewele	At Galafi/ Dewele or other seaports border post, the Ethiopian Customs checks the truck with the documents and allows the Truck to cross over to the Djibouti or other seaports side. Similarly, the Djibouti or other seaports Customs checks the Truck with the Documents and allows the		Galafi/ Dewele or other seaports border post

Actor		Activity	Documents in Use	Place
		truck to proceed to the Port.		
14.	Djibouti Clearing Agent	The Djibouti or other seaports Clearing Agent receives the documents from initiating office by e-mail/ courier.	EX1 and EX8, VGM, Quality Certificate, Packing List, Commercial Invoice and Waybill and Shipping Instructions	Djibouti or other seaports
15.	Djibouti or other seaports Clearing Agent	The Djibouti Clearing Agent submits the Shipping Instructions to the Shipping Agent for Full-Container Discharge Authorization and pays dues of the Port.	Shipping Instructions and Discharge Authorization and Port Dues	Djibouti or other seaports
16.	Djibouti or other seaports Clearing Agent	On arrival of Export Container Truck, the Clearing Agent collects the Waybill and Ex1 and EX8 from the driver and verifies against the Shipping Instructions.	Waybill and Ex1 and EX8	Djibouti or other seaports
17.	Djibouti or other seaports Clearing Agent	Thereafter, the Clearing Agent declares export shipment with the Djibouti Customs Systems attaching all the documents, pays the Declaration fees and collects the Djibouti or other seaports Declaration.	EX1 and EX8, VGM, Quality Certificate, Packing List, Commercial Invoice and Waybill and Shipping Instructions and Djibouti or other seaports Declaration	Djibouti or other seaports
18.	Djibouti or other seaports Clearing Agent	Based on the declaration, the Clearing Agent prepares the Pre-Gate pass for the truck to enter the Port.	Pre-Gate Pass	Djibouti or other seaports
19.	Truck Driver	The trucks enters the Port and discharges the Container and gets the Full-In Interchange Report	Full-in Interchange Report	Djibouti or other sea Ports
20.	Driver	After discharge, the driver gets the GRN stamped by the Clearing Agent.	GRN: Goods Receiving Note	Port
21.	Djibouti Clearing Agent	The Clearing Agent pays the local charges to the Shipping Agent and forwards the same to the Export Initiating Office (the Forwarder) in Addis Ababa.	Local Charge Receipt	Djibouti
22.	Shipping Agent	The Container is loaded on-board, and the Shipping Agent in Addis issues the B/L that is collected by the Clearing Agent in Addis and handed over to the Exporter.	B/L	Djibouti Port or other seaports
23.	Seller/ Exporter	The Seller/ the Exporter submits all documents to the Bank and collects his payment	. B/L, Commercial Invoice, Packing List, Certificate of Origin, EX1 and EX8	Addis Ababa
24.	Forwarder/ Clearing Agent	At the end of this transaction, the Clearing Agent will finalize the complete Customs Declaration cycle, by getting a stamp from the Customs, and submits the Final Declaration to the Importer (Document: Final Declaration) and collects his payment.		Addis Ababa

A1.5 Process Flow for Unimodal Bagged Goods Exported by Truck

Actor		Activity	Documents in Use	Place
1.	Seller/ Exporter	Correspondence between Seller from Ethiopia and Buyer to finalise Sales Agreement/ Contract.	Sales Contract	Addis Ababa
2.	Seller/ Exporter	Register the Sales Contract with National Bank.	Document: Sales Contract	Addis Ababa
3.	Seller / Exporter	Pre-sample couriered to the Buyer (500 gms) called PSS – Pre Sample Shipment on for coffee export.	Courier Receipt	Addis Ababa
4.	Buyer	After confirmation, the Buyer nominates the Shipping Lines and sends instructions to the Seller and the Shipping Lines for placement of Container	Shipping Instructions	Buyer's place
5.	Seller/ Exporter	Confirmation of Order and Supplier sends Performa Invoice to the Buyer	Performa Invoice	Addis Ababa
6.	Opening Bank	L/C Opened and sent to the Supplier.	L/C	Buyer's place
7.	Seller/ Exporter	Supplier prepares the commodity – ready for Shipment and submits the Shipping Instructions to the Local Shipping Agent for Container placement and Cargo booking.	Shipping Instructions	Djibouti or other seaports
8.	Exporter/ Forwarder	After making agreement on payment terms between them, the Exporter/ Forwarder Arrange appropriate truck to load bagged cargo	Exporter/ Forwarder	After making agreement on payment terms the Exporter/Forwarder arranges truck to load bagged cargo
9.	Exporter/ Forwarder	Empty Truck arrives at the Seller's warehouse/ Factory. After the arrival of truck at the Seller's warehouse/ Factory and after quality control approval by the Coffee & Tea Authority, cargo loaded onto the Truck and sealed by both Customs and by the Coffee Tea Authority Seals	Quality Approval Certificate, VGM certificate	Addis Ababa
10.	Coffee/ Tea Authority Customs, and other OGAs	Empty Truck arrives at the Seller's warehouse/ Factory. After the arrival of truck at the Seller's warehouse/ Factory and after quality control approval by the Coffee & Tea Authority, and other OGAs cargo loaded onto the Truck and sealed by both Customs and by the Coffee Tea Authority and by concerned OGA.	Quality Approval Certificate, VGM Certificate	Addis Ababa
11.	Driver	The EX1 and EX8, the VGM, the Quality Certificate, Packing List, Commercial Invoice and the Waybill is handed over to the Driver.	EX1 and EX8, VGM, Quality Certificate, Packing List, Commercial Invoice and Waybill	Addis Ababa
12.	Driver	The truck leaves the Seller's premises/ Customs authorized place to the loading Port in Djibouti via Galafi or Dewele or other border posts	EX1 and EX8, VGM, Quality Certificate, Packing List, Commercial Invoice and Waybill and Shipping Instructions	Addis Ababa
13.	Customs at Galafi/ Dewele	At Galafi/ Dewele border post, the Ethiopian Customs checks the truck with the documents and allows the Truck to cross over to the Djibouti or other borders side. Similarly, the Djibouti or other seaports Customs checks the Truck with the Documents and allows the truck to proceed to the Port.	EX1 and EX8, VGM, Quality Certificate, Packing List, Commercial Invoice and Waybill and Shipping Instructions	Galafi/ Dewele or other borders

Actor		Activity	Documents in Use	Place
14.	Djibouti or other seaports Clearing Agent	The Djibouti Clearing Agent receives the documents from initiating office by e-mail/ courier.	EX1 and EX8, VGM, Quality Certificate, Packing List, Commercial Invoice and Waybill and Shipping Instructions	Djibouti or other seaports
15.	Djibouti or other seaports Clearing Agent	The Djibouti or other seaports Clearing Agent submits the Shipping Instructions to the Shipping Agent for Empty Container Release Authorization and pays dues of the Port.	Shipping Instructions and Discharge Authorization and Port Dues.	Djibouti or other seaports
16.	Djibouti or other seaports Clearing Agent	On arrival of Truck, the Clearing Agent collects the Waybill and Ex1 and EX8 from the driver and verifies against the Shipping Instructions.	Waybill and Ex1 and EX8 and the Shipping Instructions.	Djibouti or other seaports
17.	Djibouti or other seaports Clearing Agent	Thereafter, the Clearing Agent declares export shipment with the Djibouti or other seaports Customs Systems attaching all the documents, pays the Declaration fees and collects the Declaration.	EX1 and EX8, VGM, Quality Certificate, Packing List, Commercial Invoice and Waybill and Shipping Instructions and Djibouti or other seaports Declaration.	Djibouti or other seaports
18.	Djibouti or other seaports Clearing Agent	Based on the declaration, the Clearing Agent prepares the Pre-Gate pass for the truck to enter the Port for stuffing.	Pre-Gate Pass	Djibouti or other seaports
19.	Djibouti or other seaports Clearing Agent	The Clearing Agent request for labour and equipment, if necessary, to the Port.	Request Letter.	Djibouti or other seaports
20.	Djibouti or other seaports	The Port provides the Fit for Export Container for stuffing		Djibouti or other seaports
20.	Driver	The trucks enter the Port and the labour stuffs the Container and instruct the Port to shift to the loading Berth.		Djibouti or other ports
21.	Driver	After discharge, the driver gets the GRN stamped by the Clearing Agent. (Document: Goods Receiving Note)	GRN, Waybill	Djibouti or other seaports
22.	Djibouti or other seaports Clearing Agent	The Clearing Agent pays the local charges including labour charges and forwards the same to the Export Initiating Office (the Forwarder) in Addis Ababa.	Port Charges, Labour Charge and service invoices.	Djibouti or other seaports
23.	Shipping Agent in Addis Ababa	The Container is loaded on-board, and the Shipping Agent in Addis issues the B/L that is collected by the Clearing Agent in Addis Ababa and handed over to the Exporter.	B/L	Djibouti or other seaports
24.	Exporter and the Bank	The Seller/ the Exporter submits all documents to the Bank and collects his payment.	B/L, Commercial Invoice, Packing List, Certificate of Origin, EX1 and EX8.	Addis Ababa
25.	Forwarding or the Clearing Agent	27. At the end of this transaction, the Clearing Agent will finalize the complete Customs Declaration cycle, by getting a stamp from the Customs, and submits the Final Declaration to the Importer and collects his payment.	Final Declaration and Clearing Agent Invoice.	Addis Ababa

Annex 2: Directives and Proclamations Relevant to Logistics

The following Directives and Proclamations are considered relevant to the Logistics Sector, both directly and indirectly.

Commercial Registration and Business Licensing Proclamation No. 980/2016

The Commercial Registration and Business Licensing Proclamation came into force on 5th August 2016, repealing The Business Registration and Licensing Proclamation No. 686/2010, to put in place a fair, modern, fast and accessible system of commercial registration and business licensing services, to close loopholes in legislation and working procedures that help to meet business community's expectation from commercial services, to support commercial registration and licensing activities with modern technology to make them suitable for data management, to combat illegal actions and make data accessible to the concerned bodies, and to ensure that the commercial system maintains principles of transparency, accountability and good governance.

The proclamations set forth mandatory registration to obtain business license in Ethiopia along with subsequent requirements such as obtaining a Tax Identification Number. It sets generic directions for further directives and regulations regarding the mandatory need for permission to participate in international trade fairs, and the generic prohibition of services as sole importer and distributor with the possibility of sectoral permission, the registration of franchise, and registration of a foreign chamber of commerce. It sets mandatory requirements to keep minimum inventory of spare parts for importers of machinery, construction materials, and vehicles and guarantee lifetime maintenance services to buyers. It also offered the Ministry the power to deny importation and exportation of certain goods or permit import and export without business license.

Value Added Tax Proclamation No. 285/2002

Value Added Tax Proclamation No. 285/2002 was devised to replace sales tax, reduce tax evasion, improve saving and investment by taxing consumption, and improve Government revenue to GDP ratio. The proclamation excluded certain services such as transport services, and humanitarian aid, gold supply to National Bank of Ethiopia, import and export of foreign currency, certain prescription drugs, imports for organizations such as educational, religious, government, and specified institutions from VAT.

A Proclamation to Amend the Value Added Tax Proclamation No. 609/2008

Value Added Tax (Amendment) Proclamation No. 609/2008 offered amendments to Value Added Tax Proclamation No. 285/2002 with updated names of parties, definitions, new articles, and modified articles. The amendment detailed the use of cash register machines, VAT invoicing and reporting, and monitory and jail term penalties for offenses.

The Excise Tax Proclamation No. 1186/2020

The Excise Tax Proclamation No. 1186/2020 is issued in March 2020, repealing the Excise Tax Proclamation No.307/2002 (as amended). This proclamation is devised to review the type of luxury, hazardous, socially harmful goods requiring imposition, revise the previous tax basis on ex-factory price, and tackling excise tax collection problems of the past.

Excisable goods exported under customs control, including those stored in the approved warehouse excisable services exported from Ethiopia, excisable goods and services that are supplied to entities that are exempt from excise tax by law; goods and services exempted

from excise tax by the Minister due to economic, social and administrative reasons; excisable goods that have been lost or destroyed by accident or other unavoidable cause at manufacturer's site or on board before importation.

The proclamation defined excise tax value for import the sum of customs value and customs duty, for export ex-factory price, and for others fair market value. The proclamation offered the Minister to make yearly inflation adjustment not exceeding 10 per cent to the set excise tax rate that ranges between 5 per cent and 100 per cent. The proclamation delegated the council of Ministers to issue regulations and the Minister to issue directives involving the list of excisable goods. Currently, as indicated by Shemsu (2020) in "*Addis Fortune"*, about 19 categories of goods are included for excise tax and for vehicles of below to 1500 cc, 1501-2500 cc, and 2501-3000cc and above 3000cc, excise tax of 10 %, 20%, 30% and 60% are applicable, respectively. Electric cars are exempted not only from excise tax but also from VAT and surtax.

Ethiopian Revenues and Customs Authority Establishment Proclamation No. 587/2008

The proclamation established the Ethiopian Revenues and Customs Authority that is accountable to the Prime Minister effective on 14th July of 2008 by merging the previous Ministry of Revenue, the Ethiopian Customs Authority and the Federal Inland Revenue Authority. The authority is established with the view to instil modern systems, voluntary participation, effective tax collection, effective tax enforcement, and Federal and regional harmonisation.

Multimodal Transport Operators Commercial Licensing and Competency Certification. Directive no. 802/2021

Multimodal Transport Operators Commercial Licensing and Competency Certification. Directive no. 802/2021 is issued by Minister of Transport, Federal Democratic Republic of Ethiopia in June 2021. The directive has been issued to address the following issues:

- The necessity to enhancing the performance of the logistics sector, creating efficient and strong service providers and realising competition led sector requires opening up of the multimodal transport system;
- The country's import and export trade increased significantly from time to time by type and volume and consequently it is believed that realization of effective multimodal transport service by the sole operator is not possible;
- The necessity of opening multimodal transport service that has been restricted to public enterprise to private investors to ensure that customers and the public at large are benefited from the quality of service, competition, and accessibility to it; and
- Increasing the number of multimodal transport service providers is believed to have a significant contribution in reducing the country's foreign currency expenditure related to international import and export trade transport cost, dwell time, and storage at seaport.

Hence, the directive consists of general provision, scope of application, need for business license, certificate of competency and business license of multimodal transport operators for goods not covered under the fob directive, certificate of competency and business license of multimodal transport operators for goods covered under the fob directive, and the complaint handling and applicability of other laws on multimodal transport operators commercial licensing and competency certification directive.

A Proclamation to Promote Sustainable Development of Mineral Resources, Proclamation No. 678/2010

A Proclamation to Promote Sustainable Development of Mineral Resources, Proclamation No. 678/2010 has been issued by House of People Representative on 4th August 2010. The Mining Proclamation No. 52/1993 is repealed by this proclamation.

The Constitution provides that the right to ownership of all natural resources of Ethiopia is exclusively vested in the Government and in the peoples of Ethiopia and that the Government is the custodian. Minerals are non-renewable natural resources, and the Government shall ensure the conservation and development of these resources to the socio-economic progress of all Ethiopians.

Part one and two of the proclamation state the general, fundamental principles and general provisions of the proclamation. Part three to five of the proclamation declare the mining licenses, certificates and its administrative related clauses, respectively. Part six and seven stipulate the right of way compensation to be paid for the mining place property holders and the environmental management requirements in mining cites and its surrounding environment, respectively. Part eight and nine involve provisions related to royalty fees, income tax and other financial regime and miscellaneous provisions, respectively.

A Proclamation on Export Trade Duty Incentive Schemes, Proclamation No. 768/2012

A Proclamation on Export Trade Duty Incentive Schemes, Proclamation No. 768/2012, has been ratified by House of People Representative on 4th September 2012 and the Revised Duty Incentives Schemes Proclamation No.543/2007 is repealed by this proclamation. The proclamation is issued to address the following rationales:

- It is necessary to ensure economic development by accelerating industrial growth of the country and to improve the foreign exchange earning needed for development and investment;
- To achieve transformation into industry led economy, it is necessary to establish a system of reinforcing value creation in the process of production; and
- It is essential to create conducive environment for domestic products to become competitive in international commodity markets by rendering efficient the scheme of incentives available for export trade through rectification of deficiencies noticeable in the scheme and by introducing new incentives having direct or indirect impact of motivating investors engaged in export trade.

Part One of the proclamation introduces the short title of the proclamation, Terminology Definitions used in the proclamation. Part Two and Three stipulate the Duty Draw-Back Scheme and Voucher Scheme of export trade duty incentive schemes. On the other hand, Part Four, Five, Six and Seven of the proclamation explains Bonded Export Factory Scheme, the Industrial Zone Scheme, the Bonded Export Manufacturing Warehouse Scheme and the Bonded Input Supplies Warehouse Scheme. Miscellaneous Provisions are stated in the Part Eight.

A Proclamation on Investment, Proclamation No. 769/2012

A Proclamation on Investment, Proclamation No. 769/2012, is ratified by the House of People Representative on 17 September 2012 and the Investment Proclamation No. 280/2002 is repealed by this proclamation. The proclamation is intended to address the following issues:

- The encouragement and expansion of investment, especially in the manufacturing sector, has become necessary so as to strengthen the domestic production capacity and thereby

accelerate the economic development of the country and improve the living standards of its peoples;

- It has become necessary to further increase the inflow of capital and speed up the transfer of technology into the country;
- It has become necessary to enhance and promote the equitable distribution of investments among regions and benefit the society by ensuring competitiveness among investments made by investors;
- It has become essential to put in place a system of supervision to ensure that permits and incentives granted to investors are used for the intended purposes;
- The system of administration of investment needs to be transparent and efficient; and
- It has been considered that the establishment of industrial development zones helps, by creating enabling and competitive condition, to interrelate manufacturing sectors based on value creation as well as to attract and expand investment.

Hence, Part one of the proclamation introduces the short title of the proclamation, terminology definitions used in the proclamation, scope of application and jurisdiction of the Agency in the administration of investments. Part two and three provide the investment objectives and areas of investment, and the forms of investment and capital requirement for foreign investors. Part four and part five stipulate the investment permit registration of technology transfer and collaboration agreements with domestic investors respectively. Part six through nine declare the investment incentives, guarantees and protection, investment administration, and industrial development zones, and miscellaneous provisions, respectively.

Customs Proclamation No. 859/2014

The Customs Proclamation No. 859/2014 has been issued by House of People Representative on 9th day of December,2014 and the Customs Proclamation No. 622/2009 is repealed by this proclamation. The proclamation was ratified with the following intentions:

- It has become necessary to have an expedient and modern customs legal framework which encourages the development of manufacturing industries and investment compatible with the level of international trade practice;
- International, continental and regional trade agreements to which the country is a party require contemporary customs laws and procedures; and
- Strong system of law enforcement is required from time to time to prevent the increasing incidence of contraband and other commercial crimes which are resulting in negative impacts on legitimate trade, public security, government revenue and other social and economic development.

Accordingly, the proclamation contains introduction involving prohibited or restricted imports and exports goods list, and subsequent parts comprising of the principles of customs operations, customs procedure, customs duties and tax, obligations related to customs operations, customs control and law enforcement, and customs offences and penalties, and miscellaneous provisions.

Income Tax Proclamation No. 979/2016

The Federal Income Tax Proclamation No. 979/2016 has been ratified by House of People of Representative on 18th August 2016. The Income Tax Proclamation No 286/2002 and all amendments; The Mining Income Tax Proclamation No 53/1993 and all amendments and the Petroleum Operations Income Tax No 296/1986 and all amendments are repealed and inapplicable laws due to this proclamation.

The proclamation is ratified with the following intentions:

- It has become necessary to introduce modern and efficient tax system that supports the economic development, and which is in accord with the level of economic development achieved so far.
- It is found essential to make the tax system fair and bring income that are so far not subjected to tax into the tax net.

The proclamation contains introduction comprising of short title of the proclamation, terminology definitions used in the proclamation, categories of taxpayers, permanent establishment, residence, source of income, scope of application, schedule of income and obligation to pay income tax. Part two to five of the proclamation includes income from employment, income from rental of buildings, income from business and other income tax are stipulated in the proclamation. Part six to eleven incorporate exempted income and common provision, anti-tax avoidance, administrative and procedural rules, withholding tax, and miscellaneous provisions.

Tax Administration Proclamation No. 983/2016

The Federal Tax Administration Proclamation No. 983/2016 is issued by House of People Representative on 20th August 2016. The intention of the Tax Administration proclamation ratification is:

- It is necessary to enact a separate tax administration proclamation governing the administration of domestic taxes with a view to render the tax administration system more efficient, effective and measurable;
- It is believed that introducing the system of advance tax ruling helps to address the problem of prolonged dependency of taxpayers' cases resulting from divergent interpretation of tax laws within the tax administration;
- It is necessary to establish a system for review of taxpayers' complaints on tax decisions which is accessible, well organized and capable of efficient disposition of cases;

Accordingly, proclamation main sections cover fair market value determination, tax laws section; duty of the authority, obligations and responsibilities of tax officers, duty to co-operate and confidentiality of tax information, taxpayers registration, taxpayer identification numbers, tax representatives, documentation requirement, tax declarations, the tax assessments and collection and recovery of tax and other amounts processes, credit, refund, and release from tax liability, tax disputes resolution process, information collection and enforcement, advance rulings procedures, communications with the tax payer and different forms, and notices related to the tax administration, tax appeal commission duties and responsibilities and jurisdictions, licensing of tax agents; administrative, criminal penalties, and rewards and the miscellaneous provisions.

Customs Warehouse License Issuance Council of Ministers Regulations No. 24/1997

Council of Ministers Issued the Customs Warehouse License Issuance Council of Ministers Regulations No. 24/1997 on 20th December 1997. The Customs (warehouse) Regulations No. 47/44 is repealed by this Regulation. The Regulation are issued by the Council of Ministers pursuant to Article 5 of the Definition of powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation No. 4/1995 and Articles 40 (4) and 84 of the Re-Establishment and Modernization of Customs Authority Proclamation No. 60/1997.

The regulation defines the kinds of warehouse to be licensed; Determines the permissible and prohibited location for the establishment of customs warehouses; States the working days and hours of licensed warehouse; provides provisions for payment for the service rendered by the Authority, License issuing and renewal Fee; and stipulates the validity period of license shall be effective for one fiscal year unless it is revoked for the reasons prescribed under this Regulation. The regulation states that the Customs Warehouse license shall be renewed every year from July 1 to 30.

The Customs Tariff Regulations Amendment Council of Ministers Regulation No. 25/1997

The Council of Ministers Regulation issued The Customs Tariff Regulations Amendment in Pursuant to Article 5 of the Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation No 4/1995 and Article 4 of the International Convention on the Harmonized Commodity Description and Coding System Ratification Proclamation No. 67/1993.

The Customs Tariffs Classification System of Goods and Rites attached to the Customs Tariffs Regulations No. 122/1993 is further amended by the Schedule attached in this Council of Ministers Regulations No. 25/1997.

The Customs Tariff Regulations Amendment Council of Ministers Regulation No. 80/2002

Council of Ministers Customs Tariffs (Amendment) Regulations No. 80/2002 was issued by the Council of Ministers pursuant to Article 5 of the Definitions of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation No. 4/1995 and Article 4 of the International Convention on the Harmonized Commodity Description and Coding System Ratification Proclamation No. 67/1993.

The Customs Tariffs Classification System of Goods and Rates Schedule attached to the Customs Tariffs Regulations No. 122/1993 was further amended by the Schedule attached to this Regulation.

The Revised Regulation on the Importation of Goods on Franco- Valuta Basis Council of Ministers Regulation No. 88/2003

This revised Regulation is issued by the Council of Ministers pursuant to articles 5 of the Definition of powers and duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation No. 4/1995. In the revision goods that may be imported on Franco- Valuta basis is exhaustively stated and the importation of goods on franco-Valuta basis council of Ministers Regulation No.8/1996 is repealed by this Regulation.

The Customs Tariff Regulations Amendment Council of Ministers Regulation No. 89/2003

This revised regulation was issued by the Council of Ministers pursuant to Article 5 of the Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation No. 4/1995 and Article 4 of the International Convention on the Harmonized Commodity Description and coding system Ratification Proclamation No. 67/1993. The Second Schedule of the Customs Tariffs Classification System of goods and Rates attached to the Customs Tariffs Council of Ministers Regulation No. 122/1993 is further amended in this Regulation.

The amendment explicitly permits duty-free entrance of Capital Goods and machineries imported by Ethiopian government agencies and non-governmental agencies. Ministry of Revenue became responsible for facilitating this duty-free permit.

Customs Clearing Agents Council of Ministers Regulation No. 108/2004

This Regulation is issued by the Council of Ministers pursuant to article 5 of the Definition of powers and duties of the executive organs of the Federal Democratic Republic of Ethiopia Proclamation No. 4/1995 and Article 90(1) of establishment and modernization of customs Authority Proclamation No. 60/1997 (amended). The Customs Clearing Agency License Issuance Council of Ministers Regulation No. 155/1994 is repealed by this Regulation.

The regulation incorporated customs clearing agents training, issuance, suspension, and cancellation of certificate of qualification, competence and identification card, and criteria for issuing certificate of competence and responsibilities and obligations of customs clearing agent.

Import Surtax Council of Ministers Regulation No. 133/2007

This Regulation is issued by the Council of Ministers pursuant to Article 5 of the Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation No. 471/2005 and Article 4 of the International Convention on the Harmonized Commodity Description and Coding System Ratification Proclamation No. 67/1993. The basis of computation for the sur-tax levied under this Regulation become the Aggregate of Cost, insurance, Freight (CIF) value and Customs duty, value Added Tax and Excise Tax Payable on the good. The Regulation also provides goods exempted from this tax.

Investment Incentives and Investment Areas Reserved for Domestic Investors Council of Ministers Regulation No. 270/2012

This Regulation is issued by the Council of Ministers Pursuant to Article 5 of the Definition of Powers and Duties of the Executive Organs of the Federal Democratic Republic of Ethiopia Proclamation No. 691/2010 and Article 39 of the Investment Proclamation No. 769/2012. The Investment Incentives and Investment Areas Reserved for Domestic Investors Council of Ministers Regulation NO.84/2003 is repealed by this regulation.

The regulation identifies investment areas reserved for domestic investors. Packaging, forwarding and shipping agency services and air transport services using aircraft with a seating capacity up to 50 passengers are amongst the areas permissible only for domestic investors. The regulation also stipulates Tax- and Duty-free incentives entitlements to encourage investment.

Customs Warehouse Administrative Directive No. 40/2002 E.C

The Directive on Customs Warehouse Administration Implementation No. 40/200245 describes the particular requirements for the different kinds of warehouses as well as their grades.

In accordance with Article 175(1) of the Customs Proclamation, certain groups of persons can establish temporary customs storage and bonded customs warehouses for rental or private use upon obtaining the necessary permits issued by ERCA.

The groups of persons eligible to establish customs warehouses differ depending on the type of warehouse. Thus, public temporary customs storage or a public bonded customs warehouse may be established, for rental use, by:

- An enterprise engaged in freight transport;
- An enterprise established to operate warehouse service;
- An enterprise established to provide industrial zone services;
- An enterprise established to operate customs clearing services; or any other person specified by ERCA.

Temporary customs storage for private use may be established by:

- A contractor engaged in a government project; or
- Any other person exceptionally authorized by ERCA.

A bonded customs warehouse for private use may be established by:

- An enterprise engaged in the sale of duty-free goods;
- A charity or other non-profit making organization;
- An enterprise engaged in the manufacturing of goods using raw materials and accessories acquired without payment of duty and tax; or
- Any other person specified by ERCA.

Disposal of Abandoned Goods under Customs Control Procedure Directive 56/2003 EC

Goods are considered abandoned when they are not collected by their owners in time from the warehouse. If the owner notifies the abandonment in writing before the expiry of the period of storage in temporary and bonded warehouses, they will be put on sale and their proceeds go to Government. This will be managed by this Disposal of Abandoned Goods under Customs Control Procedure Directive 56/2003 EC. The same applies for forfeited goods. If there is no notification by the owner, the goods will be transferred to Government customs warehouse and will be disposed by sale in accordance of Directive 56/2003 EC.

The directive stipulates if the goods don't have market value, ERCA will decide on them. The owner of the goods may claim the proceeds from the sale of the goods after deduction for.

- Duties and taxes;
- Expenses incurred by ERCA in relation to the goods;
- The warehouse fee and transportation expenses; and
- Interest calculated at bank lending rate on the amounts referred to above

A directive to provide for the type and quantity of vehicles allowed to be imported duty free for development projects No. 942/2023

This directive enables to import duty free vehicles to investors setting up new project and upgrading the existing investments in the different sectors including logistic industry. Under logistic sector duty free trucks importing are granted for cooling warehouse services, silos warehouse service and dry port service.

Directive Providing for Simplified Customs Procedures for Authorized Economic Operators, Directive No. 65/2004 E.C

A "Simplified Procedure" for the release of goods for free circulation based on limited declaration information by using a simplified declaration produced for this purpose. The trader, subsequently, submits a detailed declaration within the time limit prescribed by the law. The Simplified Directive No 65/2004 is governed under the terms of Articles 84-88 of the Customs Proclamation.

The following requirements have to be fulfilled to use the procedure:

- An authorisation certificate issued by concerned authority;
- A security (General insurance bond); and
- A simplified declaration electronically completed and submitted.

The beneficiaries of the Simplified Procedure are:

- Authorised manufacturers producing for export markets;

- Authorised manufacturers producing for the local market;
- Direct exporters; and
- Authorised Economic Operators (AEOs).

Different types of simplified procedures exist such as declaration of goods, clearance of goods, and self-assessment of duty and tax liabilities.

Franco-Valuta Directive No. 66/2004 E.C

This directive Franco Valuta Directives 66-2004 Improved as 88-2006 aims to control issues such as:

- Importation of items of clothing which are not subjected to Franco valuta payment for personal and family use, as donations or gifts that create undue competition on the local textile industry;
- Setting a limit on amounts of goods imported as donations or gifts so as to elevate the problem of unfair competition for local merchants.

The directive outlined these issues to protect the interest of the local market. It has set additional requirements and guidelines of means of importation of goods to the country. Whereas the allowed items are overall cost of items imported less than USD1000 for the purpose of donation or gift. This does not include importation of used items of clothing. In addition, importation of items as donation or gift can only be applicable twice a year. Any more than that will be subjected Franco valuta payment.

Export Trade Duty Incentives Directive No. 86/2005 E.C

A Proclamation on Export Trade Duty Incentive Schemes Proclamation No. 768/2012 is ratified to encourage export trade and to create conducive environment for domestic products to become competitive in international commodity markets by rendering efficient the scheme of incentives available for export trade through rectification of deficiencies noticeable in the scheme and by introducing new incentives having direct or indirect impact of motivating investors engaged in export trade. With this intention of the proclamation Export Trade Duty Incentives Directive is in effect. The directive addresses:

- Fulfilment of conditions for refund of Duty paid on goods imported or purchased locally by beneficiaries;
- Specifying the conditions to be fulfilled to be eligible for the voucher scheme;
- Defining the standards to be met by the manufacturing plants owned by beneficiaries of the scheme;
- Prescribing additional conditions to be fulfilled to become beneficiary of the bonded export factory scheme, post-delivery audit of goods and guidelines for the application of the scheme;
- Stipulating the criteria to be fulfilled by industries to become beneficiary of the industrial zone scheme; and
- Defining the standards to be met by the manufacturing warehouses owned by beneficiaries of the scheme.

Second Schedule Tariff Application Directive No. 45/200 E.C

This Directive is issued for Items imported under the Second Schedule are goods that get import tax privileges as additional benefits because of their social, economic, or environmental contribution. Sectors that the government believes are of great national interest are given special tax benefits so to encourage investment in the sector. A typical example is the

manufacturing sector where local value addition by manufacturing or assembling imported industrial inputs into a complete product would create employment, result in technology transfer and speed up industrialisation.

Components that fall under this category are SKD components and other input materials that would be locally assembled into a final product.

Administrative Penalties for Customs Offences and Forfeiture of Goods Implementation Directive No. 112/2008 EC

According to the Administrative Penalties for Customs Offences and Forfeiture of Goods Implementation Directive No. 112/2008 EC, the responsible customs department will decide on administrative cases and appeals against them within seven (7) days after all relevant evidence and documents have been presented. Important customs offences and corresponding penalties are the following ones:

- Importing, exporting or trying to export restricted goods without approval;
- A traveller found in possession of goods that exceed, in quantity or value, the limits specified by law;
- Importing and exporting without paying duties/taxes, not correctly stating in a declaration, or paying understated duty or taxes;
- Removing or disconnecting customs seals or removing, defacing, cancelling or altering labels affixed on goods or their package and packages or breaking bundles of goods;
- Not returning samples or damaging them; and
- Failure to observe customs procedures applicable to the transit of goods.

Directive of Transit Procedures No. 117/2008 E.C.

Directive of Transit Procedures No. 117/2008 refers to customs procedures under which goods are transported under customs control from one customs office to the other. The Revised Kyoto Convention (RKC) provides standards for the application, formalities at the office of departure, customs seals, formalities enroute and termination of customs transit. In line with this, the Customs Proclamation contains provisions related to the application of customs transit operation in Ethiopia. This includes the basic transit terms and concepts such as goods declaration for customs transit, sealing and identification of consignments, customs seal, procedures enroute, termination of customs transit, etc.

Importantly, according to Article 16(2) of the Proclamation goods being carried under customs transit shall not be subject to the payment of duties and taxes, provided the conditions laid down by ERCA are complied with and a security has been furnished for this purpose.

Article 16 of the Proclamation prescribes that there are four types of customs transit operations allowed in Ethiopia:

- Inward transit: from a customs station of entry to an inland customs station;
- Outward transit: from an inland customs station to a customs station of exit;
- Through transit: from a customs station of entry to a customs station of exit; and
- Interior transit: from one inland customs station to another inland customs station.
- Directive of Transit Procedures No. 117/2008 E.C is issued to direct these custom transits practices.

Directive to Determine the Application of Customs Declaration, Directive No. 118/2008 E.C

The directive set the principle, all import, export, or transit goods need to be declared. Any goods in respect of which goods declaration is presented shall, in the declaration, be identified as any of the following:

- Dutiable or duty free (e.g., if imported for home use or under the duty draw back import regime);
- For outright export or temporary export;
- Exported for outward processing; or
- Imported for inward processing and whether it is duty free; or
- Imported temporarily without payment of duties and taxes.

Some goods are exempted from requiring a goods declaration depending on their nature or use according to the Directive to determine the application of customs declaration, Directive No. 118/2008 E.C.