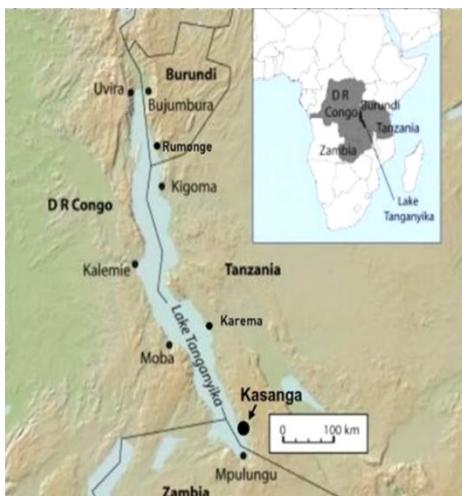


Project Implementation Memorandum: Mpulungu Harbour

Project Map and Pictures



Project Background

The Harbour is primarily used to move cargoes into DR Congo and Burundi across Lake Tanganyika. Kalemie in DR Congo and Bujumbura in Burundi are the main points of delivery.

Mpulungu Harbour is managed by Mpulungu Harbour Corporation Limited (MHCL), a parastatal company wholly owned by the Industrial Development Corporation (IDC) and has its own Board of Directors. IDC is a holding company for state owned enterprises and has the mandate to strengthen Zambia's industrial base and to spearhead the government's job creation agenda.

Mpulungu Harbour has one main loading berth of 20 metres, secondary berths (west and east) of 5 metres and an oil jetty of 16 metres. It has storage capacity inside warehouses and outside.

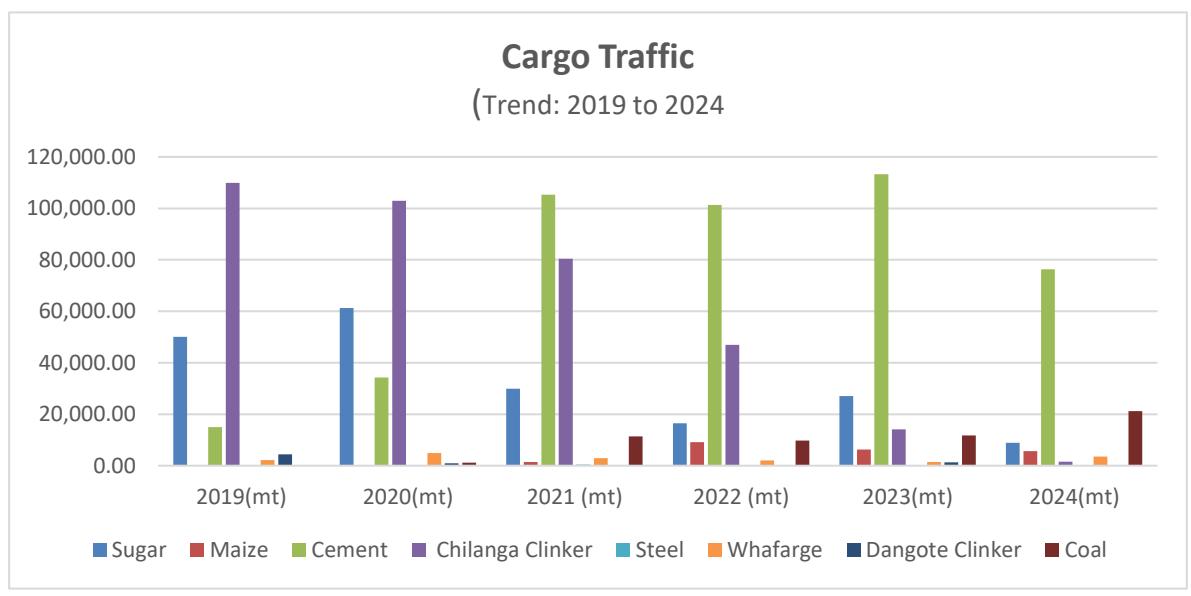
There are three cranes, one with a maximum lift of 300mt and two with maximum lifts of 20mt.

MHCL has 3 forklifts, each with a carrying capacity of 5mt and a forklift with a 45mt carrying capacity used for moving containers.

MHCL provides port services, and receives an income for the provision of these port services, which include:

- A port levy on trucks entering and leaving the port;
- Anchorage charge on vessels entering the port;
- Vessel exit fees;
- Stevedoring for loading and unloading vessels;
- Warehousing - storing transit cargo within the port bonded warehousing facilities;
- Hire of MCLH equipment;
- Charge on outbound and inbound passengers; and
- Charge for cargo handling of transiting (exports and imports) classified under personal groceries.

The table and figure below show declining volumes and a change in the composition of cargo going out of Mpulungu. Up until 2020, sugar was a major commodity being exported out of Mpulungu but its importance as a cargo has steadily declined since then. This does not reflect a lack of demand for sugar from Zambia but a change in market access conditions in that Zambia's sugar producers now find the domestic market more attractive than the regional export market.



Products	2019 (mt)	2020 (mt)	2021 (mt)	2022 (mt)	2023 (mt)	2024 (mt)
Sugar	50,050.00	61,285.00	29,980.00	16,450	27,001.70	8,878.90
Maize	0	0	1376.89	9198.8	6,285.35	5,628.65
Cement	15,005.40	34,304.15	105,373.00	101,275.50	113,286.00	76,274.25
Chilanga Clinker	109,870	102,949.00	80,482	46,910	14,150.00	1611.1
Steel	187.8	65	414	90	109.25	186.57
Wharfage	2,193.80	4,895.85	2,924.11	2,097.00	1,449.00	3,523.96
Dangote Clinker	4,440.00	890	0	0	1,290	
Coal	0	1,200.00	11,330.00	9,780.00	11,790.51	21,200.22
Total	181,747.00	205,589.00	231,880.00	185,801.30	175,361.81	117,303.65

The three main activities that generate revenue for Mpulungu are:

- 1) Stevedoring: Loading and unloading (mechanised and manual) of cargo from trucks delivering cargo into the port, loading the goods into ships for further transportation to destined markets.
- 2) Anchorage: Service offered to shipping companies as way of preventing unintended shifting of ship position once docked in the port; and
- 3) Storage services provided to mainly cross-border shippers, buyers and sellers.

Lake Tanganyika Ports and Shipping

There are six major ports around Lake Tanganyika and several dozen smaller landing sites. Apart from Mpulungu Harbour, these are:

- a) **Kigoma:** Kigoma Port, at the northern end of the lake, is owned and managed by Tanzania Ports Authority and is about 1,200 km from Dar-es-Salaam and connected to Dar-es-Salaam port by road and rail. The railway line is currently being upgraded to a standard gauge by a Turkish construction company and will operate using rolling stock and locomotives from South Korea. On the western side, the port has a harbour basin, which is used for ship repair. On the eastern side of the port is a long quay, with cranes, warehousing facilities and the railway yard. In 2022 Kigoma received a grant of 2.726 billion Yen (approximately USD18m) from the Japanese (JICA) to finance the rehabilitation of the port.
- b) **Kasanga:** Kasanga, at the southern end of the lake in Tanzania, is a much smaller port than Kigoma and is mainly used by Mbeya Cement, which has been exporting about 42,000mt of cement per year to DR Congo and Zambia. The port has been undergoing a USD1.92m upgrade to raise its berths because of rising water levels in Lake Tanganyika since April 2019.
- c) **Bujumbura:** The port of Bujumbura is the only port in Burundi. It serves destinations in Burundi and eastern DR Congo. Previously, when the border to Rwanda was still open for trade, the Port of Bujumbura also served destinations in Rwanda. The port is state-owned and managed by the private company Global Port Services Burundi (GPSB), under a concession agreement with the Burundi Maritime, Port and Railway Authority. The port is relatively well-developed, with a main quay of about 360m in length, several secondary berths, four rail-mounted gantry cranes and warehousing space. The port has several forklifts. An oil jetty and oil storage facilities are located to the north of the port.
- d) **Kalemie:** The Port of Kalemie, in DR Congo, is managed by the National Railway Company of the Congo (SNCC) and serves the largest city and capital of Tanganyika province. Kalemie and the port are connected by road and railway, which is running but is in poor condition, to Lubumbashi and by road to Bukavu in the North. The port has one long quay, with one new jib crane and five older, almost non-functional jib cranes. Sedimentation is an issue, limiting the accessibility of the port to vessels. The port also features a shipyard and a dry dock. Warehousing space is dilapidated and requires rehabilitation.
- e) **Kalundu:** The Port of Kalundu, in DR Congo, is managed by SNCC and is close to Bujumbura and competes with the Port of Bujumbura for traffic destined for South and North Kivu, and beyond. The port has two quays, warehousing space and a mobile container crane.

Vessels operating on Lake Tanganyika can be categorised into wooden boats, bulk carriers, barges, oil tankers and non-commercial fishing vessels.

It is not useful to try to categorise between formal and informal transport systems because, in practice, traders and passengers, and formal and informal trade use formal ports and informal landing sites and types of vessels interchangeably.

Small wooden boats are the most numerous on the Lake and operate mostly from informal landing sites such as Kibirizi near Kigoma or Ngwenya market in Mpulungu. They have a limited range, and, from Mpulungu, wooden boats go as far as Moba. Wooden boats vary in capacity, from about five to ten tons and transport passengers and cargo, and traders travelling with their merchandise.

Bulk carriers, barges and oil tankers operate from the main ports and vary in capacity between 300 and 1,500 tons. These vessels mainly transport bulk goods, such as cement, sugar and maize, but also passengers.

Commercial vessels are operated by a small number of shipping companies, most of which are public sector companies, predominantly from Burundi and the D.R. Congo and, to a lesser extent, Tanzania, but none from Zambia. Perhaps because most commercial vessels are owned by shipping companies that are government controlled and operated, vessels do not always operate freely and can be diverted, or trips cancelled, for reasons that are not free market related.

The three Burundi shipping companies dominate shipping on Lake Tanganyika are

- **Arnolac Cargo Shipping** operates seven barges and four tugboats and two oil tankers, able to carry about 5,000 tons respectively, 535 cubic meters in total.
- **Batralac** operates three cargo vessels, the Rwegura with 500 tons, the Tora with 1,100 tons, and the Teza with 1,500 tons of capacity.
- **Rad Marines** operates two vessels, MV Bihanga with a capacity of 560 tons, and MV Byamwezi with a capacity of 1,500 tons.

The largest Congolese shipping company is the national railway company, the **Société Nationale des Chemins de Fer du Congo (SNCC)**. At some point it operated three vessels, ten barges, and two tugboats. However, most of these are no longer operational. About twenty other vessels of varying size are operated by smaller Congolese operators.

The dominant operator on the Tanzanian side is **Marine Services Company Limited (MSCL)** which operates vessels on Lake Victoria, Lake Nyasa, and Lake Tanganyika. On Lake Tanganyika MSCL operates seven vessels, including an oil tanker and the newest ship on the Lake, MV Mwanza, that can carry 1,200 passengers and 400 tonnes of cargo, but sailing has been delayed by the lack of deep harbour services on the Lake. MSCL used to operate two combined passenger/cargo ships, the MV Liemba (formally Graf von Goetzen, built in Germany in 1913) and the MV Mwongozo, but these are now out of service.

Shipping on Lake Tanganyika is unregulated and there are no navigational aids to assist ships' captains to navigate Lake Tanganyika, so captains rely on their general experience and local knowledge.

Market Opportunities

The ECORYS/PMTG study, *Maritime Trade on Lake Tanganyika Trade Opportunities for Zambia*, which also draws heavily on a 2018 report by Hamburg Port Consultants, estimates that the value of trade between Mpulungu (including the Ngwenya landing site) and Bujumbura was between USD37m and USD45m per annum. Formal trade has been mainly one-way – from Zambia to Bujumbura – and is dominated by cement, clinker and sugar.

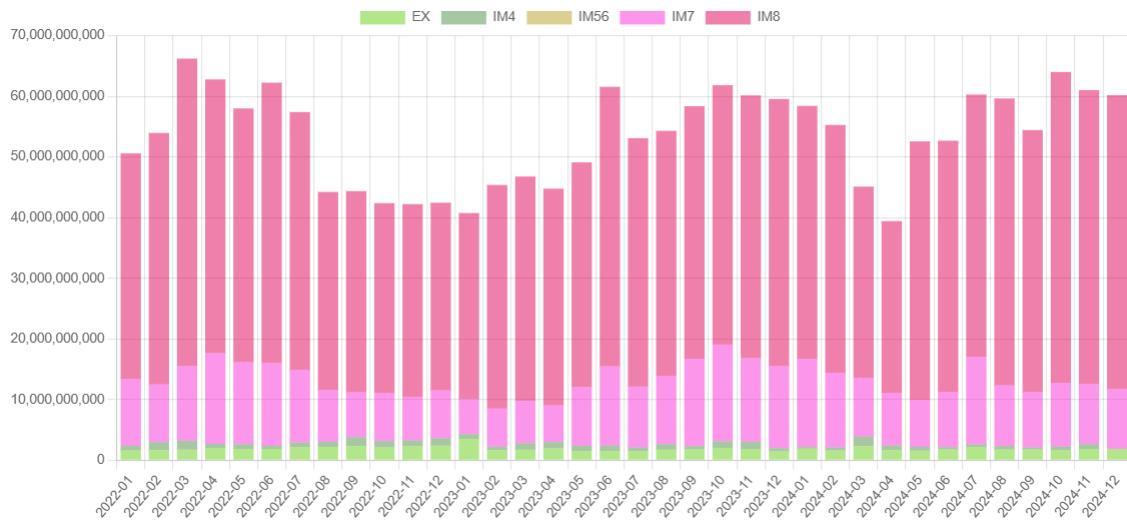
As has been seen, the amount of sugar, clinker and cement being exported out of Mpulungu Harbour has been declining and, even if it reaches the previous levels, this volume of cargo is not enough to base a modernisation programme of Mpulungu Harbour on. If Mpulungu is to expand in terms of cargo it handles, which is an important pre-requisite for the modernisation programme to take place, it will need to secure additional cargo and will also need to reassess where its main destination markets are.

In the past, the main destination market has been Bujumbura and Burundi has imported the cement, sugar and clinker it requires through Mpulungu. However, in the future, it will be difficult to maintain this market because:

- There are large producers of cement and clinker setting up in DR Congo near Uvira, which is almost next door to Bujumbura, and it will be difficult for both Chilanga Cement and Dangote in Zambia to compete against this new company.
- Kigoma port, in Tanzania, is much closer to Bujumbura than Mpulungu is (about 180km as compared to 650km) and it will be considerably less expensive for Burundian vessels to collect cargo from Kigoma than it will be for them to collect cargo from Mpulungu.
- Kigoma port has recently undergone a modernisation programme and should be more efficient operationally than Mpulungu.
- Kigoma port is connected to Dar-es-Salaam by road and rail, with the railway being upgraded to a standard gauge railway (SGR) so the railway itself should be more efficient than the multimodal solution of TAZARA and trucking.

Currently, almost all trade between Zambia and the southern provinces of DR Congo goes through the Kasumbalesa Border Post. The south of DR Congo (meaning the Provinces of Haut Katanga, Lualaba, Haut Lomami and Tanganyika) has a population of over 15 million people who depend almost exclusively on imports of food and fast-moving consumer goods (FMCGs) coming through the border of Kasumbalesa. The value of all trade (imports, exports and transit trade) going through Kasumbalesa averages about ZMW60 billion (about USD2 billion) a month, with about 70 per cent of this trade being transit trade (referred to as IM8 in the figure below).

Value of trade going through Kasumbalesa Border Post by month (2023 and 2024)



Source: Derived from data from Zambia Revenue Authority

However, this is only the record of the formal trade taking place at Kasumbalesa. It is estimated that the value of the informal trade, or unrecorded trade, taking place between Zambia and DR Congo, which is mainly trade from Zambia to DR Congo and mainly food and FMCGs, is around USD2 million a day.

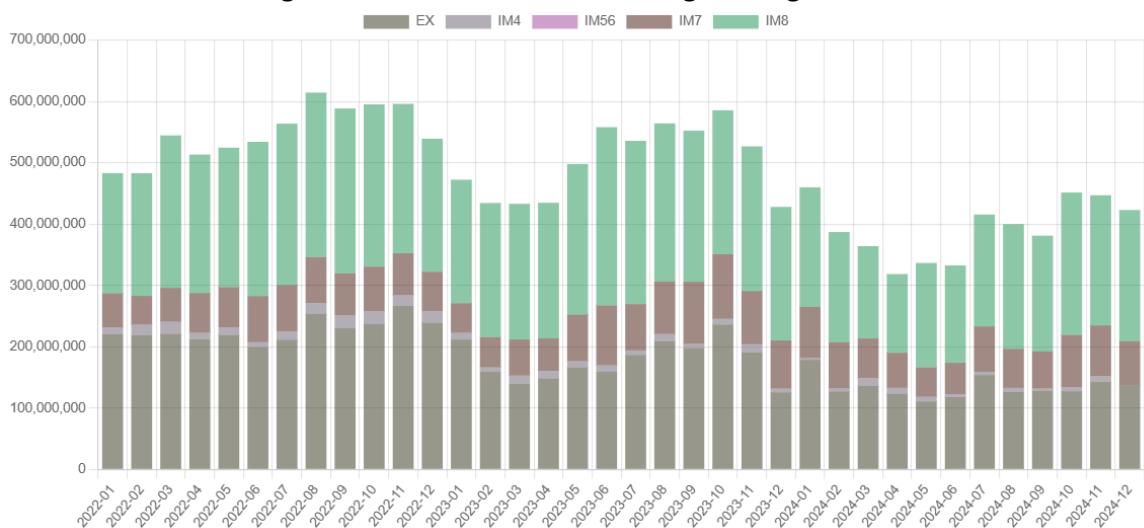
The governments of Zambia and DR Congo are opening new border posts (including Sakania, Mokambo and Kipushi) to take the pressure off Kasumbalesa and there are numerous projects ongoing to make informal cross-border trade easier in all ways, and Mpulungu can play a significant part in improving the efficiency of trade from Zambia to DR Congo, especially in FMCGs and food which is coming from Zambia, other regional countries, such as Tanzania and Zimbabwe, and from overseas through the ports of Durban and Dar es Salaam. Mpulungu harbour would need to be

modernised to allow it to handle containerised traffic, including refrigerated containers (reefers) so that it can play its part in reducing the congestion at Kasumbalesa and improving the efficiency of trade, especially in perishable foods and FMCGs, between Zambia and DR Congo.

It is also reported¹ that Zijin Mining Group Co. aims to start producing lithium from the Manono project in DR Congo, which is about 400km southwest of the port of Kalemie, in early 2026 and that the company expects to ramp up exports to about one million tons of lithium concentrate per year. It is understood that this Lithium concentrate is to be exported to China through the port of Dar es Salaam and that the most likely route from Manono to Dar es Salaam is via road to Kalemie, ship to Kigoma and rail to Dar es Salaam. The challenge with this route is that the Standard Gauge Railway (SGR) is only completed from Dar es Salaam to Morogoro and the remaining 1,000km of railway line is yet to be built. Mpulungu could offer a competitive option from Kalemie to Mpulungu by ship, road to Kasama and rail from Kasama (via the TAZARA railway line, which is already being upgraded and modernised by the new concessionaire, CCECC). This will need investments in dry bulk handling equipment and storage at Mpulungu.

A third market opportunity for Mpulungu Harbour is the supply of fuel to southern DR Congo and Burundi. As can be seen from the figure below, about 500,000 tonnes of fuel passes through the land border post of Kasumbalesa from Zambia to DR Congo. A cheaper and more efficient option would be to either off-take this fuel at Mpika from the TAZAMA pipeline and truck it to Mpulungu; or rail it from Dar es Salaam to Kasama on TAZARA and truck it to Mpulungu; or truck it from Dar es Salaam or Beira (in Mozambique) to Mpulungu. The fuel could then be stored in a tank farm at Mpulungu and loaded onto tanker ships via oil jetty at Mpulungu and then be transported by ship to Kalemie and Bujumbura and transported onwards from there.

Fuel movements in kilogrammes from Zambia to DR Congo through Kasumbalesa



Source: Derived from data from Zambia Revenue Authority

Project Description

In 2018, the then Ministry of Transport and Communication (MTC), with support from the African Development Bank (AfDB), published a *Feasibility Study and Detailed Engineering design for Mpulungu Port Development*. The Report was done by Artelia and Axelcium and is referred to as the Artelia Report.

The Artelia Report presented a few options for the infrastructural development of Mpulungu Harbour and the selected option, following a prioritisation workshop held in April 2016, included:

¹ <https://www.mining.com/web/zijin-expects-drc-lithium-project-to-start-production-in-first-quarter-of-2026/>

- a commercial harbour for cargo and container traffic;
- a passenger harbour;
- a roll-on/roll-off ramp;
- a slipway and a ship repair yard;
- a railway platform; and
- a recreational area (i.e. selected small-scale project).

The proposed infrastructure was designed to accommodate annual traffic foreseen by 2030 of 260,000mt of general cargo; 16,000 TEU of container traffic; and 236,000 passengers. It was considered necessary to extend the port boundaries towards the adjacent areas to the east and south.

The main attempt to raise the USD60m needed to pay for this proposed infrastructure plan was made through a RVO matching grant scheme, which involved RVO providing USD30m in grant funds and AfDB/DBSA providing a loan of USD30m. However, although a transaction advisor was appointed to assist with the transaction, realistically, there was no USD60m bankable project to transact and financing for a USD60m project remains elusive.

Instead, the following phased approach is proposed:

Phase 1:

	Description of Activity	USD
1	Construct a new berth of 70m long that will allow linear vessel un/loading activities, while retaining primary and secondary berth use.	20,000,000
2	Pave the port operations area and level so that forklifts, reach stackers, mobile cranes and tractors have full access.	
3	Create a hardstand for a container yard and equip with plug-ins for reefers	
4	Install generators and solar so that lighting can be installed to allow 24-hour operations and 24-hour reefer plug-ins.	
5	Rehabilitate the oil jetty as necessary and put in a tank farm onshore and adjacent to the jetty, replacing the existing coal shed.	
6	Purchase new forklifts, reach stackers, mobile cranes and tractors as required	

Phase 2:

	Description of Activity	USD
1	Construct 2 new berth of 70m long so that the total berth length is 140 metres, enough to cater for 2 ships at a time on the piers	20,000,000
2	Reposition the port entrance and exit equipped with electronic gates	
3	Demolish the workshops and put 4 new warehouses in their place	
4	Build a 3-story administration building in the southwest corner, with offices for MHDC management, ZRA, Immigration, other border agencies and clearing agents/freight forwarders, with the ground floor being a maintenance workshop.	
5	Build an Multifacility Economic Zone (MFEZ) on the eastern side of the harbour area and establish the whole port facility and MFEZ as a customs control zone.	

Project Status	Financial Needs
<p>The project is bankable but the following needs to be done:</p> <ul style="list-style-type: none"> - Finalise the ESIA and get ZEMA approval. - Detailed market assessment study. - Last search for grant funds and/or concessionary finance. - Develop the PIM into a financial proposal 	<ul style="list-style-type: none"> - Phase 1: USD20 million (estimate) - Phase 2: USD20 million (estimate)

Project Developers/Partners	Private Sector Opportunities
To be determined.	<ul style="list-style-type: none"> - Joint Venture opportunities - Equity partner opportunities - Loan opportunities
Implementation Timing	
<ul style="list-style-type: none"> - Immediately 	
Unsolicited Bids	
<p>The Ministry of Transport and Logistics has received unsolicited proposals in relation to the modernisation of Mpulungu Port, as follows:</p>	
<ul style="list-style-type: none"> - Poly Changda Overseas Engineering Co. Ltd. The Mpulungu Port Redevelopment Project in Zambia May 2023. Estimated cost of redevelopment USD123 million. - China Harbour Engineering Company – in September 2023, an expression of interest letter was received in which China Harbour expressed interest in developing the facility. The letter had no attached proposal on the redevelopment of Mpulungu Harbor. - Toucan Holdings Limited – on 16th August 2021 the Ministry received a letter from Toucan Holdings Limited requesting for the Permanent Secretary's signature appended on the Project Inquiry Form. - President Hakainde Hichilema recently went on a state visit to the People's Republic of China and, during this state visit, among other things, support for the development and modernisation of Mpulungu Port was discussed. As a follow-up, a meeting was held with Anhui Shuian Construction Group (ASCG), and another, separate, meeting was held with officials from the Chinese Embassy, both in December 2023. Areas of cooperation were discussed at both meetings and the Ministry was requested to submit a concept note to the Embassy of the People's Republic of China. The Ministry submitted a proposal on 11th January 2024. 	
References	
<ul style="list-style-type: none"> - The Artilia Report - MHCL Annual Reports - https://www.mining.com/web/zijin-expects-drc-lithium-project-to-start-production-in-first-quarter-of-2026/ 	