



Project Information Document/ Integrated Safeguards Data Sheet (PID/ISDS)

Concept Stage | Date Prepared/Updated: 07-Mar-2018 | Report No: PIDISDSC23776

**BASIC INFORMATION****A. Basic Project Data**

Country Africa	Project ID P165113	Parent Project ID (if any)	Project Name Lake Tanganyika Transport Program - SOP1 Tanzania Phase (P165113)
Region AFRICA	Estimated Appraisal Date Apr 01, 2019	Estimated Board Date May 30, 2019	Practice Area (Lead) Transport & Digital Development
Financing Instrument Investment Project Financing	Borrower(s) Ministry of Finance	Implementing Agency TANROADS, Tanzania Port Authority, Central Corridor Transit Transport Facilitation Agency, East Africa Community	

Proposed Development Objective(s)

The program development objective for the Lake Tanganyika Transport Program has been identified as the following: to facilitate the sustainable movement of goods and people to and across Lake Tanganyika, whilst strengthening the institutional framework for navigation and maritime safety.

Financing (in USD Million)**SUMMARY**

Total Project Cost	203.00
Total Financing	203.00
Financing Gap	0.00

DETAILS

Total World Bank Group Financing	203.00
World Bank Lending	203.00



Environmental Assessment Category

A-Full Assessment

Concept Review Decision

Track II-The review did authorize the preparation to continue

Other Decision (as needed)

B. Introduction and Context

Regional Context

1. The economic performance of the East African Community (EAC) member countries—Burundi, Kenya, Rwanda, Tanzania and Uganda—has been impressive over the last decade. The service sector in the region has been performing well, and growth in non-manufacturing industries, such as mining and construction, has also been strong. The EAC region has an abundance of natural and human resources. The region has a total population of approximately 150 million, a sizable internal market, and has an estimated agricultural potential of US\$950 billion under the current high commodity prices. The region is also endowed with about US\$200 billion of mineral resources in terms of confirmed deposits.
2. However, the countries of the region face a number of common problems: the region is geographically remote from both the more mature markets of Europe, America and Japan, and the emerging markets of China, India, Indonesia and Brazil; a number of countries are landlocked, and have high rates of unemployment and poverty, increasingly predominately in rural areas, particularly among the low-skilled, a large informal sector, and an overreliance on primary commodities. From a global perspective, the region represents a number of disparate and relatively small markets, whose aggregation is complicated by physical and institutional barriers, such as distance, the poor quality of the infrastructure, and continued intra-regional policy and regulatory discrepancies.
3. In the region, poor infrastructure and trade facilitation costs are often identified as a critical constraint by firms. For the landlocked countries, high transport costs are particularly crucial. About 60 percent of the firms in Rwanda relied on imports for inputs and/or supplies. And manufacturing firms in Burundi waited, on average, for 32 days for their imports to be cleared at customs, and 79 percent of firms relied on imports for their business (BEEPS 2014). Firms may miss business opportunities because of unanticipated shipment delays. Firms may also have to bear extra inventory costs. In Burundi, the firms held on average 29 days of inventory of main inputs, which are unfavorably compared with non-landlocked neighboring countries (i.e., 17 and 18 days for Kenya and Tanzania, respectively).
4. Improving the regional transport network is a necessary condition for competitiveness and improved integration into the regional and global market. High transport prices/costs, including time, are a major obstacle to increasing trade and economic growth: One study reports¹ an inverse correlation between inland travel time and export performance, with a one day decline in the former leading to a seven percent increase in the latter. Transport costs to the maritime ports are high at US\$150-US\$210 per ton for inland areas and land-locked countries. Recent research points to

¹ Freund, C., & N. Rocha (2011).



predictability as being, at times, even more important. In addition, over 110 million people or about 75 percent of the total population in the region do not have access to the road network within 2 km of their place of residence.

5. An integrated approach, involving both investment in the primary infrastructure on the key regional corridors, but also in the secondary and tertiary infrastructure along the corridors to realize the full wider economic and poverty impacts, has the potential to dramatically change the economic structure of the region. Hence in 2014, the East African Community in collaboration with the World Bank commissioned a series of studies to inform an Integrated Corridor Development Strategy in the EAC Countries.² The Pillar 1 report was endorsed for implementation during the Heads of State Retreat on Infrastructure Development and Financing held in Nairobi on 29th November 2014. The Strategy identified a mix of physical and institutional interventions to facilitate the implementation of an efficient and cost effective inter-modal transport system along the East African corridors. The interventions have been packaged into a series of programs comprising: (i) the Lake Victoria Transport Program (where SoP1 in Rwanda was approved in June 2017, and SoP2 Uganda and SoP3 in Tanzania are under preparation), partnering the ongoing Lake Victoria Environmental Management Program; (ii) the Lake Tanganyika Transport Program, in partnership with a pipeline Lake Tanganyika Environmental Management Program; and (iii) Improving the maritime gateways, and key access infrastructure (such as the ongoing Dar es Salaam Maritime Gateway Program, Tanzania Intermodal and Rail Development Project³ (TIRP); and the pipeline Tanzania Development Corridors Project). Implementation of the LVTP under this program has already commenced and the 2nd phase of the integrated corridor initiative will involve implementation of projects under the Lake Tanganyika Transport Program. This PID/ISDS relates to the Lake Tanganyika Transport Program - SOP1 Tanzania Phase (P165113), with a parallel PID/ISDS for the second phase (SoP2) in Burundi (P165119).

Country Context

6. Tanzania is a strategically located, resource rich, politically stable, low income country that has achieved relatively high growth and declining poverty rates over the last decade. It has a population of about 52 million people and covers a total area of about 947,000 sq. km. As a coastal country bordering eight countries, six of which are completely or nearly land-locked, Tanzania is well-situated to exploit its geographical position and develop as a regional hub. Tanzania is endowed with internationally renowned tourist attractions, fertile lands, and has rich deposits of minerals and significant deposit of gas which has the potential to drive its growth for the foreseeable future. Tanzania's political stability forms a solid base for its sustained economic performance.

7. Tanzania's 2015 GDP was US\$44 billion and has grown at an average rate of 6.5 percent since 2002. Tanzania's per capita income is about US\$900.00, while its poverty rate has declined from 34 percent in 2007 to 28 percent in 2012 and extreme poverty has dropped from 11.7 percent to 9.7 percent in the same period. Signs are emerging that growth has been pro-poor, with the incomes of poorer households rising faster than those of richer households. Driving this reduction in poverty have been engagement in commercial agriculture and nonfarm activities, ownership of communication and transport equipment and rural access to roads and markets.

8. However, there is significant spatial variation in poverty reduction (Figure 1). Geographic disparities and the concentration of economic activities may undermine pro-poor growth prospects. The steepest decline in poverty occurred in Dar es Salaam (by over 70 percent), where most of the flourishing sectors—such as telecommunications and finance—

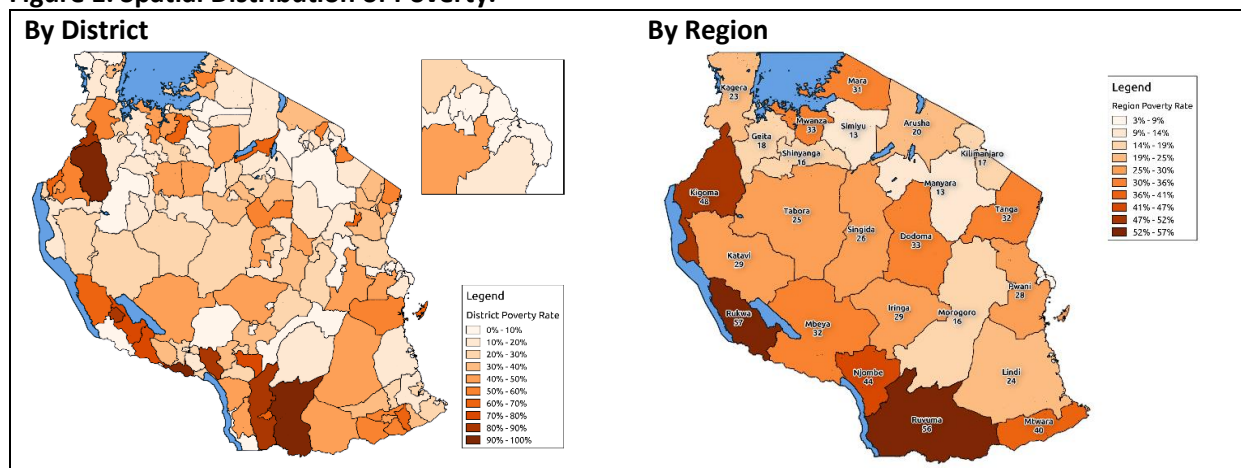
² Including *inter alia* EAC/World Bank (2015) Building a Reform Consensus for Integrated Corridor Development in the East African Community: Pillar 1 - A Strategy and Action Plan for Intermodal Development, Arusha/Washington D.C.; and EAC/World Bank (2015) Building a Reform Consensus for Integrated Corridor Development in the East African Community: Pillar 2 – The Assessment of Wider Economic Benefits.

³ IDA Credit 54140.



are concentrated. By contrast, rural poverty declined by just 15 percent in 2007-12. In particular, some of the regions where poverty is the highest are located close to Lake Tanganyika.

Figure 1. Spatial Distribution of Poverty.



Source: Tanzania SCD (2017) See footnote 4.

9. As the riparian country with the second largest shoreline (41%) bordering Lake Tanganyika, improving connectivity to and across the lake is of particular importance to Tanzania. As identified by the World Bank’s most recent Systematic Country Diagnostic⁴, transport connectivity is a key binding constraint to support future economic growth, poverty reduction and shared prosperity. The SCD highlights, in particular, the need to revive inland waterway transport on the three major African Great Lakes (Victoria, Tanganyika and Nyasa in Malawi) to enhance cross-border trade between Tanzania and its neighbors, and improve accessibility to the communities along the lake side.

10. Tanzania under Vision 2025⁵ plans to attain middle-income country status⁶ through attaining sustained growth of 8 percent. Its current focus under Second Five Year Plan, (FYDP II), (2016/17 to 2021/22) is on “Nurturing industrialization for Economic Transformation and Human Development”. The Government of Tanzania (GoT) recognizes that extensive and efficient infrastructure is critical to facilitate economic activity and realize its industrialization objectives. The GoT made significant investments in infrastructure under the First Five Development Plan (FYDP I), including connecting most regional capital with paved roads, and *inter alia* upgrading regional airports. However, Tanzania’s infrastructure development still lags compared to similar countries⁷, and requires more investment to close current gaps and improve connectivity within the country and with neighboring countries.

11. The FYDP II interventions outlined in the Plan are packaged and aligned along development corridors (DCs), zones and clusters to provide investors with economies of conglomeration. The coordination and sequencing of their implementation is done strategically to spur synergies, complementarities, and high impact. The FYDP II also recognized that most shippers switched from railways to road transportation due to the deterioration of railways operation, causing additional damage to the road network, raising road maintenance costs, and inflating the social and environmental costs

⁴ World Bank Group (2017) United Republic of Tanzania Systematic Country Diagnostic, Washington D.C.

⁵ The Tanzania Vision 2025 aims at achieving a high-quality livelihood for its people attain good governance through the rule of law and develop a strong and competitive economy.

⁶ GNI per capita between \$1,026 and \$4,035, World Bank 2017.

⁷World Economic Reform: The Global Competitiveness Report 2014–2015 assessed that Tanzania is ranked 121 out of 144 countries on infrastructure compared to 90th for Kenya and 111th for Ghana.



of road transport. It provides close attention to efficient multi-modal transport development alongside road infrastructure improvement addressing traffic congestion and regional disparities in the distribution of goods.

Sectoral and Institutional Context

12. Lake Tanganyika lies at an elevation of about 772 m above mean sea level in the Western part of the Great Rift Valley. With a length of 673km, it represents the longest lake in the world. It averages 50km in width (at its widest it is 72km), has a surface area of 32,900 square kilometers (km²), and a shoreline length of 1,828km. It is, after Lake Victoria, Africa's second largest lake and the world's second deepest (1,471m). The lake is divided between four countries – Burundi, Democratic Republic of the Congo (DRC), Tanzania and Zambia, with the DRC (45 percent) and Tanzania (41 percent) with the largest shoreline. Excepting a part of the eastern and northern coast, the lake is confined by the steep sides of the rift valley, most prominent on its western edge which reaches 2,000 meters above the shoreline. This limits the lake's catchment area to approximately 231,000 km². A map of the lake, and the main ports, is provided in Annex 1.

13. Transport on the lake is currently challenging, with no up-to-date navigational charts, no functioning aids to navigation, or landing lights, no search and rescue services, limited information on current and forecast weather conditions, and no modern efficient vessels. In addition, the ports on Lake Tanganyika have dilapidated superstructure and sub-structure, and face access issues both on the land side and the lake side. The latter due to draught limitations from accumulated sedimentation in all the ports. There are also localized pollution hotspots, e.g. around the dense populated north of the Lake (which receives run-off from Bujumbura and the Rusizi Plain) and in Kigoma bay.

14. However, there is considerable potential: (i) the immediate catchment area of the lake contains a growing population of 12 million people; (ii) a number of towns and villages around the lake, particularly on the western shore, have little or road access; (iii) for many locations, the lake offers either the most direct route, or the only route, to markets, assuming a safe, efficient and reliable passenger and light cargo ferry service; and (iv) the rehabilitation of the railway infrastructure and railway services on the central railway line offers the landlocked countries the potential of a secure, cheaper, intermodal service to and from the maritime gateway. The cost of moving a container from Dar es Salaam to Bujumbura, using the rail-lake intermodal route, is estimated at approximately half the cost of road alone.⁸ In addition to the cost advantage, the diversion of traffic to rail will reduce the externalities of road transport, in the former of congestion, air quality, safety, and realize maintenance cost savings on the parallel road network.

The Lake Ports

15. The main Tanzanian port on Lake Tanganyika is Kigoma, which is located on the eastern shore in the southern part of a shallow bay, protected by a range of hills, affording the port some protection. Port facilities are grouped on a narrow area of land with a main quay 300 meters in length. This is a sheet-piled wall construction with a reinforced concrete deck. The available water depth along the quay is, depending on lake level, between 3-4 meters in depth although siltation is causing significant problems. The western part of the quay was modified in 1992 to accommodate a rail mounted gantry (RMG) crane of 35 ton capacity to lift containers. The remaining part of the quay apron, the general cargo berth, is of an unusual two tier design, the width of the lower level adjacent to the cope edge being some 6 meters. This section is provided with three rail mounted dockside cranes, manufactured in 1960 of about 3 ton capacity. There is an addition dilapidated crane mounted on the eastern edge of the berth. A single transit shed 85 meters long by 25 meters wide (constructed on two levels) fronts the general cargo berth, while a shed of 55 meters by 35 meters is provided in the back-port area. Rail access to the main quay is made through the eastern end of the port, adjacent to which are Kigoma's rail

⁸ Despite the difficulties, in 2016, approximately 10,000 TEUS moved to and from Burundi, 40,000 TEUs to and from DRC, 35,000 to and from Rwanda, and 40,000 TEUs to and from Zambia, of which 129 TEUs went by rail in total.



sidings. The passenger pier backs onto the slipway and dockyard area, which was constructed in 1912. At the head of the bay, 1.5 km north of the cargo/passenger port is a bulk oil jetty, constructed in 1960.

16. A number of development partners have expressed interest in supporting the development of Kigoma port: JICA have expressed interest in financing a new passenger terminal; TMEA have expressed interest in supporting the development of a new container terminal in the port; and the World Bank through the Great Lakes Trade Facilitation Program – SOP2, are proposing to finance the construction of a new jetty to serve the fishing boats at Kibirizi. However, TPA are currently rethinking the proposed developments, and are planning a more comprehensive development, with separate terminals for each commodity group. The new proposal suggests a general cargo berth for Kibirizi, which would be brought within the secure boundary of the port. This will require a new location for the fishing jetty.

17. Karema is located on the south-western shore of the lake, south of Kigoma, opposite Moba port in the DRC. The ships calling at Karema are wooden made and they are coming from the opposite shore of the lake in DRC and from villages situated on the lake shore in Tanzania. At present, there is no quay or jetty, so any boats are required to pull up directly on the beach to be loaded/unloaded, or unload in deeper water, with cargo carried by hand to the beach. TPA believe the site has potential as it provides a short-cut from the copper district near Lubumbashi, to Dar es Salaam port, saving a considerable diversion north via Kalemie and Kigoma ports. TPA has plans to construct a short quay for general cargo at the location. Karema is connected to the trunk road network at Kagwila, via the R563 regional road, which is currently an unpaved road of 110km.

18. Mpulungu and Kasanga ports are located at the southern end of Lake Tanganyika, in Zambia and Tanzania respectively. While historically trade has existed between these ports for a considerable period of time, both locations are only provided with small piers, though construction of additional facilities has recently taken place at Mpulungu in Zambia, funded by the AfDB. The latter is situated on a headland to the east of Mbete (Hore) Bay and fronted by Kumbulu Island. The pier is of a sheet-wall construction with a concrete deck, 20 meters in length and 8 meters wide and backed with a paved hard-standing area of approximately 2,000 square meters. The port area, which includes a fishing port on the far side of the headland, has a cargo shed of 80 by 30 meters in the backport area – approximately 330 meters from the pier. Kasanga pier is an open piled construction with a suspended concrete deck of similar dimensions. The pier is located at the base of the hill and through provided with a small shed, most goods are loaded by ship's gear directly from waiting trucks.

19. All maritime and inland ports in Tanzania are currently the responsibility of the Tanzania port authority (TPA). TPA's responsibilities include all sea ports on the mainland coast of Tanzania, as well as all the ports within Tanzania's inland waters [Lakes Victoria, Tanganyika and Nyasa]. Tanzania commenced the reform of the maritime sector, with the passage of the Port Act No. 17 of 2004, and the establishment of the TPA Under the law, TPA was established as a Parastatal, operating under a Board of Directors, reporting to the then Ministry of Transport, with the mandate to act as the 'landlord' and the service provider in the ports under its control. Currently private sector involvement is limited to the container terminal in Dar es Salaam port. Tanzania International Container Terminal Services (TICTS) operates a dedicated container terminal on Berths 8-11. TPA is one of the most profitable parastatals in Tanzania.

20. In Burundi, the main ports are Bujumbura and Rumonge. The port of Bujumbura is situated at the north-eastern tip of the lake. The port is operated by a private company (Global Port Services Burundi), and can handle containers and general cargo. The Japanese International Co-operation Agency (JICA) have committed the sum of US\$28 million to support developments in the port of Bujumbura. The Port of Rumonge caters primarily to informal trade across the lake. Upgrading of the port is an important part of Burundi's Port Development Master Plan. The Great Lakes Trade Facilitation Program – SOP2, which is under preparation and supported by the World Bank, is proposing to finance the construction



of a jetty, office facilities and other related infrastructure within the port area.

21. In DRC, the main ports are Kalemie and Kalundu. Kalemie port is situated on the western shore of Lake Tanganyika, 3 km south of the Lukula River. Artificial breakwaters have been constructed to protect the harbour basin from the open waters of the lake. The eastern breakwater is a rubble mound design approximately 400 meters length and 85 meters width. Berthing facilities are provided on the inner part of this breakwater, and the main quay, which is provided with four rail mounted portal cranes, is some 280 meters in length. The berth is constructed on a suspended concrete deck approximately 6 meters in width, behind which there is a raised apron (of about 8 meters width) and a general cargo shed with a dimension of 80 by 15 meters. A second quay of approximately 75 meters in length supports a fixed lattice crane manufactured in 1959 with a 30 ton capacity (at 16.8 meters), and used for the discharge of containers and other cargo. A dry dock, with an overall length of about 120 meters (effective length is 95 meters) and a width of about 16 meters (at the entrance), is located at the head of the harbor, adjacent to land developed for rail-way workshops. Generally all the equipment and superstructure is in poor condition, with insufficient storage space and handling equipment. The dry dock does not function due to the lack of sufficient draught in the approaches. The entrance to the port is also heavily silted from the small river which discharges into the lake immediately south of the port.

22. Kalundu Port is located in the north-western part of the lake about 4.5km south of Uvira. By ship it is 25km from Bujumbura (by road 35km). The port, constructed in the late 1950's, links Lake Tanganyika with Bakavu (94km) on Lake Kivu by an unpaved road, being partially upgraded now with support from TMEA, running almost parallel to the Ruzizi River along the base of the Mitumba Mountains. The port has been developed on a narrow stretch of land approximately 60 meters wide and 300 meters long. It is protected on its eastern side by a rubble mounded breakwater of 200 meters in length. The main quay is approximately 156 meters in length, with an apron width of 10 meters through-out, backed by two sheds. The inner part of the breakwater is also used for berthing purposes and is provided with a fixed lattice dock crane similar to those in Kalemie and Bujumbura – again in poor condition. The breakwater quay is 155 meters in length and 17 meters wide.

The transport services on Lake Tanganyika

23. In terms of cargo volume lifted on the lake, two limited liability private companies dominate, Arnolac and Batraluc. These two shipping companies operate out of Bujumbura dominate and use a combination of container and general cargo carriers. Other operators on the lake include Marine Service Company Limited (MSCL) in Tanzania and Société Nationale des Chemins de Fer du Congo (SNCC), both parastatals. In terms of tonnage and fleet size, SNCC is the largest of all the shipping companies with 16 vessels and 29 hatch type barges. Of these however, only three vessels and five barges are reportedly operational. These are mainly engaged between Kigoma and Kalemie/Uvira carrying World Food Program (WFP) and/or other aid shipments. AMPF in Burundi have commissioned a design for a new ro-ro ferry to provide capacity between Bujumbura and Kigoma, but lacks the capital to procure the vessels.

24. MSCL used to operate three vessels, one cargo and two passenger vessels, M.V. Liemba, which was constructed in 1913 and needs major refurbishment, and MV Mwongozo, constructed in 1979 and currently laid up. MSCL ships are mainly engaged in the combined passenger/general cargo trade, operating in the Tanzania/Zambia portion of the lake between Kigoma and Kasanga/Mpulungu. They sail on a weekly schedule, stopping at small villages en-route including from north to south: Kirando; Siguna; Halembie; Logosa; Mugambo; Ikola; Karema; Kabwe and Kala. None of these villages are provided with port facilities of any kind, and the MSCL ships used to anchor close to the shoreline from which passengers join or embark using wooden boats and/or canoes. Of the 16 vessels currently operating on the lake, 11 are over 30 years old, 9 are over 50 years old, and 1 over 100 years old. There are private operators of vessels on the lake, but there appears to be insufficient capacity. One of the main impediments to capacity enhancement for investors/operators is obtaining finance at terms that make such investments viable.



Safety on Lake Tanganyika

25. There are many hazards to safe operation of vessels on Lake Tanganyika. Navigational charts are unavailable⁹, there are no functional aids to navigation (such as landfall lights, beacons, buoys, jetty-end lights, leading marks, etc.) and no record of the location of the defunct navigational aids. Navigation is primarily by local knowledge, and restricted to daylight. There is little or no effective dissemination of information in respect of safe navigation and environmental protection, and no effective ship-to-shore communication system. There is currently no reliable safety statistics. While the registered ships on Lake Tanganyika have radio communication systems, none of the lake ports is provided with formally structured maritime assistance services of any kind. This means that there is no general weather synopsis, storm or other navigational warnings given to ships departing from any of the lake ports. Though the ports of Bujumbura and Kigoma are provided with jetty-end lights and beacons, these are currently not working or are very weak, and cannot therefore be relied upon. Similarly, there are no landfall lights, beacons, buoys, leading lines or other facilities to mark headlands, ship routes, known dangers (including wrecks), or the fairways and approaches to ports. There is currently no Lake Tanganyika Transport Act, or inland waterway protocol, similar to the ones developed for Lake Victoria. The provision of the IDA Grant, in parallel with SoP1, to the EAC/CCTTFA will support the regional co-operation to develop these key pieces of the institutional framework.

26. Tanzania has established a multi-sector economic and safety regulator with responsibility for regulating competition and promoting safety. SUMATRA was established by Act of Parliament (No. 9 of 2001), which came into force in 2004. The main role of SUMATRA is to regulate road, rail and marine transport services. For maritime transport, SUMATRA provides guidelines on the requirements for licensing and registration of regulated service providers, in particular, shipping lines and freight forwarders. Whilst SUMATRA was established formally in 2003, it did not become operationally established until 2007-08. As a result, it has not performed effectively in many of the above roles to date. In addition, as the organization is also responsible for rail and road transport regulation, its capacity constraints are acute. In addition, as port volumes grow and more private sector organizations operate there, its work load will progressively increase, placing further pressure on the nascent organization. The recent Big Results Now Program recognized these shortcomings, and listed a number of actions to enhance its professionalism, improve transparency of information, and strengthen its human resources. These recommendations will be discussed for potential support under SoP1.

The access infrastructure

27. All the ports on Lake Tanganyika also face a problem of access on the land side. Kigoma is connected to the Central Railway line, which is meter gauge. Due to the poor performance of the railway operator, now the Tanzanian Railway Corporation (TRC), insufficient investment in the infrastructure, and increased competition from road transport, cargo volumes have decreased to a little over 130,000 tons in 2016, down from 2.5 million tons in 2003. Furthermore, the rail infrastructure within the port area itself has also deteriorated, and the short loops (maximum 298 meters in the yard and 231 meters in the port) cannot accommodate longer trains. The GoT is now prioritizing the revitalization of the Central Corridor railway, and has invested in new locomotives and rolling stock for TRC. The GoT have also started the development of a new Standard Gauge Railway (SGR) in parallel with the longer term aim to connect the SGR to the Lake ports.

28. Over the short to medium term, the rehabilitation of the Central Line between Dar es Salaam and Isaka (970 km) is ongoing under the TiRP, with additional potential support in the pipeline from JICA and the European Investment Bank (EIB). The JICA and EIB/EU teams are considering support to the improvement of Kilosa – Gulwe flood prone section and the Tabora – Isaka section, respectively. The rehabilitation of the rail infrastructure between Tabora and Kigoma (414km, which is currently in poor condition) is essential to provide a reliable and frequent rail connection between Kigoma and Dar es Salaam to promote diversion of freight and passenger traffic from road to rail but also revitalize marine traffic on

⁹ A chart was prepared in 1941, carrying limited data, but no copies are in circulation.



Lake Tanganyika between Kigoma and the lake ports in Burundi and DRC. The GoT have recently requested the World Bank consider the provision of additional support for this section.

29. Road transport is the major mode of transport carrying over 90 percent of passengers and over 75 percent of the freight traffic in Tanzania. The road network remains the main in-country transport connectivity between the urban centers of the country as well as Tanzania with its landlocked neighboring countries. The Tanzania National Roads Agency (TANROADS), under the Ministry of Works, Transport and Communication (MoWTC), is responsible for managing the trunks and regional road networks of 35,000 km, including 12,786 km trunk roads of which 43 percent are paved; and 22,214 km regional roads of which 4 percent are paved roads. There are about 52,241 km of feeder, district and urban roads which are now the responsibility of the recently established, but not yet fully operational, Tanzania Rural and Urban Roads Agency (TARURA). The balance between expanding the paved network and providing sufficient resources to maintain the existing network in a sustainable state remains a concern. The road section between Tabora and Kigoma is being upgraded to paved standard by TANROADS and expected to be completed in 2018/19.

Environmental Issues on Lake Tanganyika

30. Lake Tanganyika represents a unique and extremely valuable natural resource for riparian countries. In addition to containing almost 17 per cent of available surface freshwater supplies globally and some of the largest freshwater fisheries on the African continent, Lake Tanganyika is endowed with exceptionally large and highly diverse flora and fauna. The lake is among the richest freshwater ecosystems in the world and is described as a 'biodiversity hotspot', because of its critical contribution to global biodiversity. It represents a major source of drinking and domestic water, and serves to supply water to over half a million people in Bujumbura and Kigoma alone, and reportedly serves as a major source of protein in the diets of the inhabitants of the hinterland of the lake.

31. But overfishing, pollution and rising water temperatures have led to a drastic decline in the fish stocks of the commercial fisheries in the pelagic zones of the lake. And subsistence fishing is exerting increasing pressure in the littoral fishing grounds adjacent to the main population zones in the north of the lake. The lake is also the main receptacle for effluents and industrial, municipal, and residential wastewaters from around the coast. These effluents are typically not treated before being discharged into the lake. As the region's population continues to grow, this industrial, municipal and domestic pollution is expected to grow accordingly. Run-off into the lake containing agricultural pesticides and fertilizers also represent a significant source of pollution, as is pollution from the lake's vessels and ports. Wastewater discharge and solid waste disposal from vessels are a common form of pollution, worsened by the lack of waste management facilities at ports, while pollution from fuel leaks and oil residues are worsened by old and poorly maintained vessels characterizing much of the lake's fleet. Bujumbura port is reportedly contaminated with heavy metals in some specific locations, which will need careful handling and confined disposal on shore.

32. Lake pollution impacts human health directly because of the damaging effects on drinking water quality but also indirectly through eutrophication of the aquatic ecosystem, which can reduce water oxygenation and fish quantity, quality and safety. Signs of eutrophication are already reportedly evident in Kigoma bay where water circulation is very restricted, vessel traffic is high, and there are discharges from municipal institutions and from the town's power station. The authorities in Burundi are cognizant of the need to improve waste water treatment from Bujumbura. Sedimentation due to soil erosion is an escalating problem across the lake. This is most evident in the far northern area where 100 per cent of adjacent lands have been cleared of native vegetation and urbanization and farming are most intensive. Limited flat lands in the catchment, compound the problem by dictating that farming occurs on steep slopes or narrow strips between the rift escarpment and the lake.



33. The Lake Tanganyika Authority (LTA) was established by the Governments of Burundi, Democratic Republic of Congo, Tanzania, and Zambia by the signing of the convention on Lake Tanganyika in 2003, and launched in December 2008. The LTA, based in Bujumbura, is intended to promote regional cooperation required for socio-economic development and sustainable management of the natural resources in the Lake Tanganyika basin.

Relationship to CPF

34. The WBG's Regional Integration program for FY18 – FY23¹⁰ (also the IDA18 and IDA19 periods) explicitly notes that infrastructure deficits continue to cripple long-term competitiveness of African economies. About one-third of African countries are either land-locked or sea-locked, making them more distant from global and regional markets. Additionally, resource endowments vary widely across countries. The small size of domestic economies (one-half of countries have a GDP of less than \$10bn) entails higher costs in accessing regional and global markets. Although Intra-African trade continues to be small, but with significant economic potential. About 16 percent of total trade in 2013, and only 12 percent of Africa's imported intermediates is sourced from the region.

35. Despite progress in provision of regional infrastructure, critical gaps remain and progress has been uneven across sub-regions. Even when there have been improvements in regional road infrastructure, the impact on greater regional trade has not been realized due to a variety of non-tariff barriers and other market failure which exist in those corridors. This points to the need for paying greater attention to 'soft' policy reform issues alongside filling gaps in 'hard' infrastructure. The WBG's Regional Integration program proposes four strategic priorities for FY18 – FY23 (also the IDA18 and IDA19 periods): i. Generate economic dynamism along regional economic corridors; ii. Develop functioning regional markets in four priority sectors; iii. Scale-up access to quality public services and entrepreneurship through complementary regional solutions; iv. Promote collective action. The LTTP is consistent with priorities i. and iv. and places regional policy harmonization at the apex of the program.

36. The LTTP-SoP1 supports the Bank's twin goals of reducing extreme poverty and enhancing shared prosperity, as it facilitates economic growth, trade facilitation and access to jobs, in the hinterland of Lake Tanganyika. The revitalization of inland water transport on Lake Tanganyika in a sustainable manner will help to reduce transport costs and improve access, both for the communities living around the Lake, and for the Landlocked Developing Countries (LLDC) of the region and the key maritime gateways. The provision of the second access to the sea for many of these countries will not only lead to lower costs, but also improve the resilience of the transport system. In addition, inland water transport is a safer and more environmentally benign mode, depending on the volume carried, and the nature and length of trip.

37. The most recent Systematic Country Diagnostic for Tanzania¹¹ identifies transport connectivity as a key binding constraint to support future economic growth, poverty reduction and shared prosperity. The SCD highlights the particular need to revive inland waterway transport on the three major African Great Lakes in or bordering Tanzania (Victoria, Tanganyika and Nyasa) to enhance cross-border trade between Tanzania and its neighbors.

38. The LTTP-SPO1 is fully aligned with the draft Country Partnership Framework (CPF) for Tanzania¹²: Objective 1.6 – Improve Connectivity and Services to Rural Areas. The road component of the project will improve connectivity between rural areas around Lake Tanganyika and the ports of Kigoma and Karema, giving people living in these areas increased access to economic opportunity; and Objective 1.7 – Capture Tanzania's Potential as a Maritime Gateway and Regional Trade Hub. The LTTP is included in paragraph 97 of the CPF – Strengthen Tanzania's key trade corridors and connections

¹⁰ The World Bank Group (2017) Supporting Africa's Transformation: Regional Integration and Cooperation Assistance Strategy for the period FY18-FY23, Washington D.C.

¹¹ World Bank Group (2017) *Op cit.*

¹² World Bank Group (2017) Country Partnership Strategy for the United Republic of Tanzania FY18-22 DRAFT dated November 29, 2017.



with neighbors. The LTTP-SOP1 will help boost Tanzanian exports and link to global value chains; and expand Tanzania's role as a regional logistics gateway for landlocked neighboring countries.

C. Proposed Development Objective(s)

39. The proposed program development objective has been identified as the following: to contribute to the efficient and safe movement of goods and people to and on Lake Tanganyika, whilst strengthening the institutional framework for navigation and maritime safety.

40. The proposed project development objective for LTTP-SoP1 in Tanzania has been identified as the following: to contribute to the efficient and safe movement of goods and people to and on Lake Tanganyika in Tanzania, whilst strengthening the institutional framework for navigation and maritime safety.

Key Results (From PCN)

41. The progress towards the attainment of the Project Development Objective will be assessed through the following outcome and intermediate output indicators (which are provisional at this Project Concept Note stage):

Outcome Indicators

- Reduction of unit cost of transport (cost per ton-km);
- Effective search and rescue service established in Tanzania (y/n);
- Increases in throughput volumes ('000 tons per annum) at participating ports;
- Number of individuals benefitting from the use of a new/improved port, ferry or road (number), of which proportion that are female (percentage); and
- Number of rural inhabitants located within 2 km (number), of which proportion that are female (percentage) of an all-season road/new ferry service.

Intermediate Output Indicators

- Length of road rehabilitated/upgraded under the project (km);
- Length of rail loops in ports rehabilitated under the project (km);
- Dredging of ports and access channels in participating ports (m³);
- Refurbishment of quay, fenders, and paving of port area in participating ports (y/n)
- Provision of aids to navigation in port and port entrances (number); and
- Increases in throughput capacity ('000 tons per annum) at participating ports.



D. Concept Description

42. The project development objective in Tanzania is to be realized through the following components: (i) Improving the physical infrastructure; and (ii) Improving the institutional framework, and implementation assistance. A provisional outline of proposed components and the constituent activities and provisional costs is outlined below:

43. **Component 1: Improving the physical infrastructure (Estimated cost US\$187 million).** The first component comprises the necessary civil works and dredging in and around the ports:

- (i) The improvement of the port infrastructure at Kigoma and Karema (tbc)
 - a. The establishment of discharge facilities from vessels;
 - b. The dredging of the port area and access channel;
 - c. The rehabilitation and leveling of the current quay;
 - d. The rehabilitation/upgrade of fenders;
 - e. The establishment of a Search and Rescue Control Centre and Vessels;
 - f. The paving of access road, repair of rail loops, and paving of port area; and
 - g. Aids to navigation.

- (ii) The improvement of key access infrastructure
 - a. The rehabilitation of key sections of primary and secondary road; and
 - b. Key feeder roads to the ports and jetties.

44. **Component 2: Improving the institutional infrastructure and implementation assistance (Estimated cost US\$13 million).** The second component comprises four sub-components:

- a. Technical Assistance, as required, to TANROADS/TPA Project Implementation Teams to implement the project;
- b. Training for TPA/TANROADS Staff;
- c. Supervision of civil works in port; and
- d. Supervision of civil works on road.

45. **Component 3: Strengthening the Regional Policy Framework (Estimated cost US\$3 million IDA Grant).** The final component will be funded from the US\$3.0 million IDA grant to be provided in parallel to the East Africa Community (EAC) and the Central Corridor for Trade and Transport Facilitation Agency (CCTTFA) to support the provision of:

- a) Technical assistance to support the development and adoption of a Lake Tanganyika Transport Act and an Integrated Transport Policy for Lake Tanganyika;
- b) Technical assistance to strengthen the regulatory framework for vessel operation, vessel safety, ship design, operation and manning on the lake, and develop a common approach to port state inspection across the countries, to move the ports towards compliance with the International Ship and Port Facility Security ISPS initiative; and
- c) Technical assistance to support the development of a harmonized oil spill contingency plan in the partner states.



SAFEGUARDS

A. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

The proposed project will potentially finance the upgrading and rehabilitation of elements of the infrastructure in several ports, including Kasanga, Kigoma and Karema, and the dredging of the entrance channel, turning basin and quays in these ports. The project also proposes to support the upgrading and /or rehabilitation of a number of priority road sections, to improve access to the ports and communities living alongside the lake. A number of road sections have been proposed for consideration (see Annex A of the Concept Note), and TANROADS is currently deciding its priorities.

In terms of the ports, the interventions are all expected to take place on land owned and managed by TPA. However, the upgrading of some of the roads may be expected to have moderate land acquisition implications due to the required alignments and hence will require removal of encroachers (e.g. crops, some small businesses/kiosks etc.) in the right of way. In addition, there is potential for impacts related to disruption of livelihoods associated with dredging on / around ports and landing sites..

A Strategic ESIA will be undertaken for the project to examine the transboundary and cumulative impacts, consulted upon, approved and disclosed. Site specific RAPs, ESIA's and ESMPs will be prepared for the physical works interventions, consulted upon, approved and publicly disclosed ahead of appraisal. All the civil works contracts for road rehabilitation, construction/rehabilitation of jetties, and specific port rehabilitation investments will include provisions on how to address environmental and social mitigation and monitoring aspects during works. For those components, where the location may not be known at the time of project Appraisal an ESMF and RPF will be prepared and disclosed prior to appraisal. These frameworks will guide the preparation, approval and implementation of further site specific plans during project implementation. The project ESMPs and other relevant management plans will include but not limited to influx of persons/ project induced in-migration, project staff – project host community relations, HIV/AIDs, child labor and abuse, gender based violence and sexual exploitation and abuse, concerns and grievances redressal mechanisms and stakeholder engagement and management. Further, other prevention measures for countering specific GBV and SEA related risks will be addressed in the contractors' plans.

B. Borrower's Institutional Capacity for Safeguard Policies

TPA's capacity to manage social risks related to the implementation of the project is low due to lack of a social safeguards / development staff in the Environmental Management Section (EMS) which has one (1) Environmental specialist based at the headquarters. In order to strengthen the capacity for environmental and social management, the Dar es Salaam Maritime Gateway Project is supporting the implementation of the Environmental and Social Strengthening Plan (ESSP), prepared by the EMS. A quick assessment indicates that additional support in terms of social staff as well as additional environment is urgently required to support the preparation and implementation of this project as well as other ongoing and upcoming projects under TPA.

TANROADS has a good track record of implementing Bank financed projects although its capacity to manage environmental and social risks is currently overstretched. It has an ever-increasing portfolio of projects financed by DPs and Government which has strained its ability to fully and efficiently handle environmental and social risk management for the LTTPs and that of other projects. Thus, an assessment of capacity to handle the current workload under this project as well as other Bank supported projects have shown that additional support is required. Measures will be put in place to strengthen the overall implementation capacity of TANROADS in general, and that of the Bank financed projects



in particular. Therefore, one of the areas where the project will provide for capacity building is in terms of both number of staff and knowledge and skills for environmental and social risk management.

The Lake Tanganyika Authority will be in charge of regional and transboundary environmental and social monitoring, and will conduct the SESIA.

C. Environmental and Social Safeguards Specialists on the Team

- Juan D. Quintero, Environmental Safeguards Specialist
- Mary C.K. Bitekerezo, Social Safeguards Specialist
- Jane A. N. Kibbassa, Environmental Safeguards Specialist
- Jacob Omondi Obongo, Social Safeguards Specialist

D. Policies that might apply

Safeguard Policies	Triggered?	Explanation (Optional)
Environmental Assessment OP/BP 4.01	Yes	<p>This safeguards umbrella policy will carefully assess the environmental and social impacts due to the infrastructure investments to be financed under SOP1 (Port and ancillary Infrastructures) which will include dredging works, rehabilitation /construction of roads, storage facilities and jetties and other navigation related infrastructures. At this point, the detailed designs are yet to be completed. An Environmental and Social Management Framework (ESMF) will provide guidance for preparation and implementation of the environmental and social screening process and the preparation of the specific Environmental and Social Impact Assessments (ESIAs) for sub-projects as they will be identified, including Environmental and social management plans (ESMPs). A grievance Redress Mechanism will also be developed and will be detailed in the ESMP and will be presented to stakeholders during the consultation process. The instruments (ESMF) will be consulted upon, and disclosed in the country and in the World Bank’s External website prior to appraisal.</p> <p>A Strategic ESIA for the whole program (all SOPs), including cumulative impacts of past, present and foreseeable future projects and programs in the lake, its riparian environment and catchments will be undertaken for the project to examine the transboundary and cumulative impacts, consulted upon, approved and disclosed prior to appraisal. Site specific ESIA and ESMP will be prepared for the</p>



		<p>physical works interventions, consulted upon, approved and disclosed ahead of appraisal. All the civil works contracts for road rehabilitation, construction/rehabilitation of jetties, and specific port rehabilitation investments will include provisions on how to address environmental and social mitigation and monitoring aspects during works. For those components, where the location may not be known at the time of Board Approval an ESMF and RPF will be prepared and disclosed prior to appraisal.</p> <p>The project ESIA will indicate the risks associated with labor influx in the project areas and put in place the relevant mitigation measures in the ESMP.</p>
Natural Habitats OP/BP 4.04	Yes	The dredging work could impact fish habitat both for pelagic and benthic species, whereas some of the roads may cross natural forests and grasslands and hence cause disturbance for wildlife.
Forests OP/BP 4.36	Yes	Subprojects that may be identified during project implementation may cross forests and hence the ESMF must include screening for impacts on forests and measures to mitigate them.
Pest Management OP 4.09	No	No use of pesticides or health-related concerns with respect to vector management are expected.
Physical Cultural Resources OP/BP 4.11	Yes	This policy is triggered as the proposed works will involve civil works in inhabited areas, which may result in chance finds of physical cultural resources. Thus, the Environmental and Social Impact Assessment, will investigate this issue. Besides, "chance finds" procedures should be part of every civil works contract, even where risks are deemed low.
Indigenous Peoples OP/BP 4.10	No	As part of the social due diligence, the Bank Social Specialists undertook the screening for IPs against the 4 criteria in the Tanzania project area and it was found that there are none in areas of Kigoma, Rukwa and Katavi regions.
Involuntary Resettlement OP/BP 4.12	Yes	Whilst there will be no new roads, some alignments of the existing roads, as well as some reclamation of the right of way may be required and therefore prompting land acquisition. Hence OP4.12 is triggered. The impacts of land acquisition will be addressed through both the RPF and site specific RAPs. The RPF will guide the development of site specific RAPs for project's components whose scope and other details will have not been identified before appraisal. These



instruments will be reviewed by the Bank and publicly disclosed prior to appraisal. The upgrading and rehabilitation of the ports, including Kasanga, Kigoma and Karema in Tanzania will be within the confirmed existing boundaries of the land owned by the Tanzania Ports Authority.

Safety of Dams OP/BP 4.37	No	No dam construction or rehabilitation is being contemplated
Projects on International Waterways OP/BP 7.50	Yes	This policy is triggered as Lake Tanganyika is an international waterway: Zambia and DRC, which are not party to the program at this stage, will need to be officially informed.
Projects in Disputed Areas OP/BP 7.60	No	There are no disputed areas anticipated in the project.

E. Safeguard Preparation Plan

Tentative target date for preparing the Appraisal Stage PID/ISDS

Jan 31, 2019

Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing should be specified in the Appraisal Stage PID/ISDS

Safeguards related studies to be launched by June 30, 2018 and completed by January 31, 2019. The instruments to be prepared before appraisal are : SESA, ESMF, RPF ,and ESIA's and RAPs (for activities whose designs , scope of work, etc., will be known prior to appraisal). Specific ESIA's and RAPs for activities whose designs , scope of work, etc., will not be known prior to appraisal will be prepared during project implementation.

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APPROVAL

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