THE UNITED REPUBLIC OF TANZANIA MINISTRY OF WORKS TANZANIA NATIONAL ROADS AGENCY

OSAKA EXPO 2025 JAPAN INVESTMENT OPPORTUNITIES UNDER PPP MODEL IN THE ROADS SUBSECTOR IN TANZANIA

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Table of Contents

1.0	Introduction		3
2.0	POTENTIAL PPP PROJECTS IN TANZANIA		<i>6</i>
	2.1	Kibaha - Chalinze - Morogoro Expressway (205 km)	6
	2.2	Morogoro – Dodoma (260 km)	8
	2.3	Dar es Salaam Outer Ring Road (78.61km) and Middle Ring Road (53.31km)	🤅
	2.3	Second Kigamboni Bridge at Magogoni	11
	2.4	Toll Road Tunnel Project through Kitonga Mountain Forest Reserve	12
	2.5	Nakonde-Tunduma Smart Transit Border and access road (21.3km)	13
3.0	conc	lussion	1∠

1.0 INTRODUCTION

Tanzania is located in East Africa and has a population of 61.7 million people. The country's economy is mainly driven by agriculture which contributes about 27% to its GDP, followed by mining, manufacturing and tourism. Tanzania borders the Indian Ocean (east), Kenya and Uganda (north). Rwanda, Burundi, DRC, Zambia, Malawi (west), and Mozambique (south). It has a tropical climate.

Tanzania's economy grew by 5.9% in the third quarter of 2024 compared to 5.6% recorded in the corresponding quarter in 2023. The Quarterly Growth Domestic Product (QGDP) rate for four years is shown in Fig1.

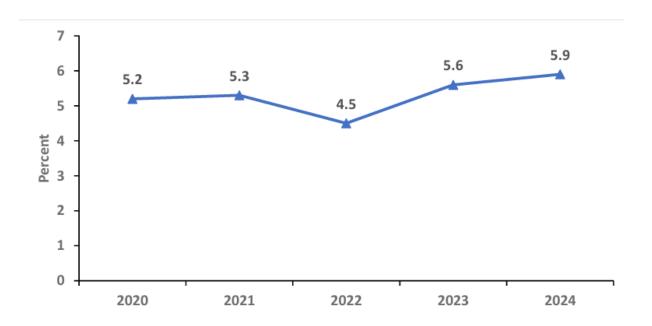


Figure 1: Third Quarter GDP Growth Rates from 2020 to 2024 (source: Tanzania National Bureau of Statistics 2024)

Tanzania is the 31st largest country in the world, covering 945,087 km² of land and water area and also shares borders with eight other countries, six landlocked.

Tanzania is a member of regional trading blocs with a combined market size of over 600 million people and a total GDP of approximately USD 1.0 Trillion. Despite its large land size, Tanzania often faces limited linkages between its productive lands and markets, which impact productivity, costs and overall competitiveness.

Tanzania has a total road network of 181,190.1km comprising of 37,435.04 km of National Roads and 144,429.77 km of district, urban and feeder roads.

Tanzania National Roads Agency (TANROADS) was established by the Executive Agencies (The Tanzania National Roads Agency) (Establishment) (Amendment) Order, 2020, Government Notice No. 232, published on March 27, 2020. TANROADS operates semi-autonomous under the Ministry of Works with mandates of day-to-day development and maintenance of the national road network, operation and management of weighbridge stations. According to Section 6 (2) of the Road Act 2007, TANROADS has a function to negotiate Concession Agreements with private entities to facilitate the financing and development of selected roads following guidelines prescribed by the Government.

The national road network covers 37,435.04 km, out of which 12,202.68 km is paved. The network comprises of 12,527.44 km of trunk roads, and 24,907.60 km of Regional Roads. The road network includes 9,566.50 km of paved Trunk roads, and 2,960.94km unpaved roads. Also, the Regional roads includes 2,636.18 km of paved roads, and 22,361.41 km unpaved.

These existing infrastructural deficiencies hinder Tanzania's ability to leverage its comparative advantage as a bridge economy that links the East African Community (EAC) and Southern African Development Community (SADC) regional markets or realise its enormous potential as a logistics hub connecting the markets of the EAC and SADC.

Tanzania, located on the eastern coast of Africa along the Indian Ocean, operates several major ports, including Dar es Salaam Port (the second largest in East Arica), Tanga Port, and Mtwara Port. Additionally, Bagamoyo Port is currently under development. These ports play a crucial role in the logistics of Tanzania and six landlocked countries in the region. East Africa and its road corridors and sea ports are shown in figure 2.

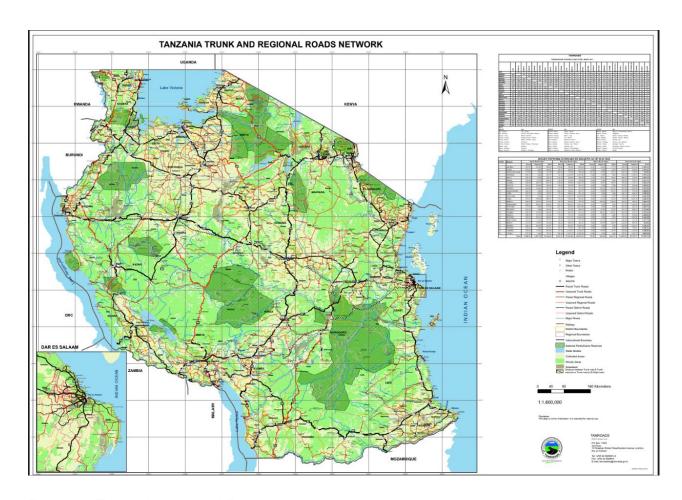


Figure 2: Tanzania National Road network

Therefore, Tanzania is an ideal location for investments in market-seeking industries that target emerging African markets in the EAC and SADC.

Given the budget constraints and unreliable donor funds, the Ministry of Works through TANROADS has opted for alternative funding mechanisms for road projects considering PPP model as alternative financing options beyond traditional methods.

2.0 POTENTIAL PPP PROJECTS IN TANZANIA

TANROADS has identified potential projects which have sufficient traffic for PPP investment, these projects are as follows:

2.1 Kibaha - Chalinze - Morogoro Expressway (205 km)

The Kibaha - Morogoro road is highly congested, and has a poor level of services that require immediate response. The increase in traffic volume is mainly due to the growth of economic activities within the country and the neighbouring countries. The average travel time under ideal condition from Kibaha to Morogoro is over 4.5 hours, whereas if the Expressway is provided, the travel time will be reduced to 1.5 hours. Also, the current condition of the road has significantly increased vehicle operations costs (VOC).



Figure 3: Typical traffic congestion along Kibaha-Morogoro road section

The primary objective of the proposed expressway project between Kibaha and Morogoro is to reduce travel time and vehicle operating costs (VOC). Its scope is to develop a Toll Expressway of 4 lanes (or above) dual carriageway (2 lanes in each direction or above) with a design speed of 120 km/hr from Kibaha to Morogoro under complete access control. It will include modern rest areas at selected intermediate locations along the route, a road service level that meets international standards, interchanges and a toll plaza with an e-tolling system at entry and exit points.



Figure 4: Kibaha-Chalinze-Morogoro expressway

A Transaction Advisor was engaged in October 2022 to provide services that include the preparation of Feasibility Studies, preparing bidding documents, Request for Qualifications and Request for Proposal. and assisting in the procurement of Private Parties and negotiations up to financial close. The proposed PPP model is **Design**, **Build**, **Finance**, **Operate**, **Maintain** and **Transfer** (**DBFOMT**).

The traffic along the road is comprised of International traffic to and from neighbouring countries of Rwanda, Burundi, eastern DR Congo, Uganda, Zambia, Malawi, DR Congo (Lubumbashi) and Zimbabwe originating from or going to the port of Dar es Salam, and National and local traffic originating from other regions.

Project benefits are expected to include the following:

- Introduction of Technologies and Skills associated with modern Expressways planning, construction, maintenance and operations;
- Reduction of Vehicle Operating Costs (VOC) and travel time and maintenance costs;
- Facilitating transportation of goods and services and stimulation of economic potential of the country;
- Providing easy access to various social services such as schools, health and market centers to the Community along the project area; and
- Enhancement of inter-regional and Regional economic integration.

The project is divided into two Lots, namely, Lot 1: Kibaha – Chalinze (78.9 km) and Lot 2: Chalinze – Morogoro (84.9km).

Project Preparation:

The concept paper and pre-feasibility study was prepared by TANROADS and was approved by the minister for works on September 2022. The feasibility study was prepared and approved by PPP Steering Committee on 7 March 2023. The document is available at TANROADS HQ.

Solicited procurement approach (international competitive procurement) is adopted as per Tanzania PPP Act Cap 103 and its Regulations of 2020 and amendments of 2023.

2.2 Morogoro – Dodoma (260 km)

The Morogoro – Dodoma highway traverses along the central corridor in the Tanzania road network that links the central and western regions and acts as a getaway to landlocked countries (Uganda, Rwanda, Burundi and the eastern Democratic Republic of Congo) from the Dar es Salaam Port.

The existing Morogoro - Dodoma highway is a two-lane single-carriageway characterised by mixed traffic. The road traverses though flat to rolling terrains with long slope gradients at specific locations.

The highway connects the commercial city of Dar es Salaam with capital city of Dodoma. The traffic flow along this highway is frequently interrupted due to occurrences of road accidents which negatively affects social and economic development of Tanzania and the neighbouring countries.

The lifespan of the existing road has elapsed beyond repair. Hence, the Ministry of Works through TANROADS has undertaken a feasibility study and detailed engineering design for rehabilitation.

Due to its' strategic and economic importance to the national development and smooth cargo transit to the neighbouring countries, the Ministry of Works is considering to construct an alternative road along the existing highway. The proposed new expressway (258 km) will have four-lanes and will be developed under PPP arrangement.

The forecasted traffic between Morogoro and Dodoma is 18,185 AADT in year 2047.

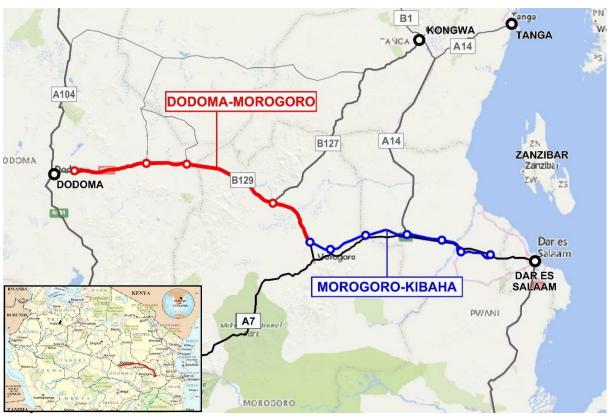


Figure 5: Location Map of Morogoro-Dodoma highway

Available documentation/studies:

The economic study, detailed engineering design, environmental &social impact assessment and preparation of tender documents for rehabilitation of the Morogoro - Dodoma highway, May 2023.

2.3 Dar es Salaam Outer Ring Road (78.61km) and Middle Ring Road (53.31km)

Dar es Salaam is the largest city in Tanzania accommodating the largest share of the urbanisation challenges in the country. It is located in the eastern part of the country, borders the Indian Ocean to the east and grows toward the west, North and south from the Indian Ocean. It is one of the east African large cities covering an area of 1800 square kilometres (1350 square kilometres of terrestrial land), with a total population of 5,383,728 (NBS, 2022). The city is the largest hub in Tanzania for administrative, commercial, industrial and transport activities.

Dar es Salaam has about 52% of Tanzania's vehicles and has a traffic density growth rate of over 6.3 % annually. It is the home of largest east African port the Dar es Salaam port which serves Tanzania and other landlocked countries like Malawi, Zambia, Burundi, Rwanda and the eastern and western parts of the Democratic Republic of Congo, handling exports and imports of various raw materials and manufactured goods.

The Dar es Salaam port revenue accounts for 38% of total revenue in Tanzania (Source: TRA). Decongestion of Dar es Salaam City and easing accessibility to and from Dar es Salaam Port will enhance the performance of the Port.

Dar es Salaam is mainly characterised by road transport modes to serve most of its population. However, the available road network is considered to be inadequate to satisfy the people at an acceptable level of service in terms of quality and safety of road users (Kanyama et al., 2004).

Dar es salaam is among the fastest growing cities globally and by 2035, it is predicted to attain a population of 13.4 million. In this regard traffic mobility is of high priority to drive the socio-economic development within the city itself and the county in general. Decongestion of the Dar es Salaam city is among solutions recommended in the Dar es Salaam Urban Transport Master Plan (JICA, 2018).

According to data from TANROADS Road Maintenance and Management System (RMMS), traffic within Dar es Salaam is up to 104,770 Annual Average Daily Traffic (AADT) in the busiest section. In order to decongest Dar es Salaam city, the Dar es Salaam Urban Transport Master Plan (2018) recommends development of satellite areas trough construction of outer ring road from Bunju-Kibamba-Pugu-Mzinga-Tuangoma to Kigamboni (78.65km) and middle ring road from Tegeta-Mbezi mwisho-Kifuru-Banana-Kipara to Kigamboni (53.31km) as illustrated in the figure below.

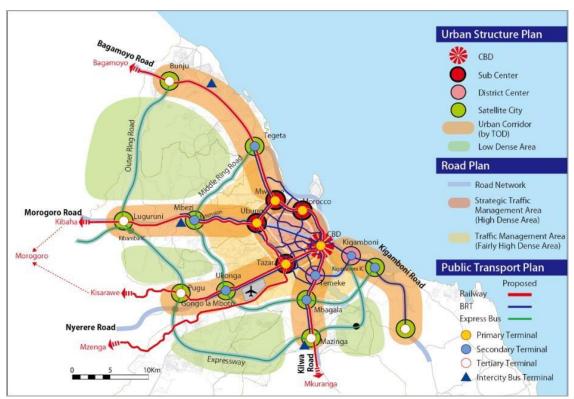


Figure 6: Proposed outer ring road and middle ring road in the Dar es Salaam Urban Transport Master plan of July 2018.

(a) Project preparation

Preparation of Pre-Feasibility study is underway and upon completion of the Pre-Feasibility Study, preparation of Feasibility Study will commence.

The economic benefits for development of this project among others will include the following:

- Introduction of new technologies and skills associated with modern expressways planning, construction, maintenance and operations;
- Reduction of vehicle operating costs (VOC) and travel time;
- Reduction of maintenance costs;
- Facilitating transportation of goods and services;
- Stimulation of economic potential of the country in relation to Dar es Salaam
 Port vis avis the hinterland and neighbouring countries;
- Decongestion of Dar es Salaam city and easing access to and from Dar es Salaam Port; and
- Providing easy access to various social services such as schools, health and market centres to the Community along the project area.

Available documentation/studies:

- 1. Dar es Salaam Urban Transport Master Plan, 2018, President's Office Regional Administration and Local Government.
- 2. Dar es Salaam City Master Plan 2016 2036, Ministry of Lands, Housing and Human Settlements.

2.3 Second Kigamboni Bridge at Magogoni

Kigamboni mucipal is among five municipals of Dar es Salaam city with an area of 577.86km² it has a 65km coastline. In accordance with national census of 2022 Kigamboni has a population of 317,902. Kigamboni is bordered to the north by Ilala municipal which is the CBD of the Dar es Salaam city, to the east by the indian ocean, the west by Temeke municipal and to the south by the Mkuranga district of Pwani region. Kigamboni is accessed by roads.

Kigamboni has the aim to be an Eco-City which is intended to exploit the available natural resources in the area. It is also expected to become a tourist pole in the region of East Africa. The development program is divided into three phases, starting in 2011 and to be completed in 2030. The city will have five zones: residential (36,2%), industrial (7,7%), touristic (8,3%), international business (5,6%), public facilities and open areas (40,2%).

Currently Kigamboni can be accessed by ferry through CBD (8km) for 60 minutes and overland through Mbagala-Kibada highway (45km) for 180 minutes, whereas it will take 60m minutes to reach Kigamboni via Nyerere bridge (16km).

In order to align with Kigamboni development plan and decongest Dar es Salaam city, the Dar es Salaam Urban Transport Master Plan (2018) shows Kigamboni has to be accessed through 3 bridges or related structures. Currently there is only one bridge (Nyerere bridge). Therefore, due to rate of population growth and development program the rest 2 bridges shall be required.

Project preparation

One private party expressed interest to construct a second bridge under PPP model through unsolicited approach, this bridge which connect CBD and Kigamboni. The proposed location is along the current route used by ferry. The approval to undertake Pre-Feasibility Study an unsolicited bidder was issued on June, 2024. Upon acceptance of the Pre-Feasibility Study Report by Government, the private party will prepare a Feasibility Study Report. If the Feasibility Study is accepted, the procurement of the investor will be competitive in accordance with PPP Act CAP 103, its Regulations of 2020 and its amendments. Currently preparation of Pre-FS is underway



Figure 7: Proposed location of 2nd Kigamboni bridge across Magogoni

2.4 Toll Road Tunnel Project through Kitonga Mountain Forest Reserve

Tanzania Zambia highway (TANZAM) which connects Tanzania and southern & central African countries passes through mountainous hills commonly known mlima Kitonga which is located at Kilolo district in Iringa region of Tanzania southern highlands. The road section through Kitonga mountains has steep grades and 21 sharp curves, the area is prone to frequent crashes hence fatalities and severe injuries. Trucks and busses are

venerable to crashes with frequent brake failures and loss of control to steep grades.

In order to navigate the road safely vehicles are forced to travel very slow below speed required for highways. Accidents, adverse weather or mechanical issues on this difficult terrain can cause further delays hence unpredictable travel time and negatively affect transport logistics.

Therefore, TANROADS has identified tunnel construction can be one of the feasible solutions to overcome the stated challenges. This solution will reduce travel time improve, improve safety and will bring economic benefits such as reducing vehicle operating costs, saving transport costs boost regional economy and will bring long term infrastructure value.

Conceptually two tunnels will be required, the first will be 5km long the second will be 6.5km long each tunnel will have 2 lanes each direction. The tunnels will be connected to 25km approach road with 2 lanes.



Figure 8: Kitonga mountain along Tanzam highway

2.5 Nakonde-Tunduma Smart Transit Border and access road (21.3km)

The Tunduma/Nakonde Smart Border between Tanzania and Zambia is the border post which facilitates transit border services between Tanzania, Zambia, Democratic Republic of Congo and Zimbabwe. The border facilities are overwhelmed in infrastructure and technology deficiencies.

Execution of Nakonde-Tunduma Smart Transit Border will be very strategic for the INTA-Government between Tanzania, Zambia and the Democratic Republic of Congo and will establish new trade routes, connecting the Democratic Republic of Congo and Zambia, fostering economic growth and regional integration as infrastructure improvement will improve economic integration, including social-economic activities.

The Project design include buildings for supporting the social-economic activities that will be taking place, offices for Immigration, Customs process, Police, drug enforcement, border control, clearing & forwarding agents, and health centers. Also the project will include 21.3km access roads and parking facilities.

Social-economic Benefits of Nakonde-Tunduma Smart Transit Border include the following;

- a) Decongestion of Trucks in Tanzania (Tunduma region) for crossing to Zambia.
- b) Easy mobility and access to copper production areas.
- c) Improve commercial environment;
- d) Create employment opportunities;
- e) Increase tax revenues;
- f) Increase the number of post borders between Tanzania and Zambia.

Assessment of the existing traffic count for three years (2021-2023) revealed AADT growth rate of 39% for trucks from DRC through Zambia, each year were as follows; 2021 the AADT recorded was 1,191 trucks, 2022 the total AADT recorded was 1,518, and 2023 the AADT recorded was 1,655, all these are for total freight travelling from Democratic Republic of Congo through Zambia, once the Nakonde -Tunduma Smart Transit Border will be operational after construction and has a feeling that the Project will be bankable without Viability Gap Funding (VGF) because the payment mechanism is user pay.



Figure 9: Freight growth along DRC-Zambia- Dar es Salaam corridor

3.0 CONCLUSSION

In conclusion, the Government of Tanzania, under the leadership of her excellence Dr. Samia Suluhu Hassan the President of United Republic of Tanzania, recognises the significance of private sector involvement in addressing the immense infrastructure needs of the country. Acknowledging that government resources alone are insufficient,

the Government has established a robust legal framework for Public-Private Partnerships (PPP). The potential projects presented above are anticipated to garner consideration from the private sector to partner with public sector in developing them through PPP model.