

United Republic of Tanzania
President's Office, Regional Administration and Local
Government (PO-RALG)
Dar es Salaam City Council (DCC)

**THE PROJECT FOR REVISION OF
DAR ES SALAAM URBAN TRANSPORT
MASTER PLAN
IN
UNITED REPUBLIC OF TANZANIA**

FINAL REPORT

VOLUME-1 : PRESENT CONDITIONS

JULY 2018

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

EIGHT-JAPAN ENGINEERING CONSULTANTS INC.
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**THE UNITED REPUBLIC OF TANZANIA
PRESIDENT'S OFFICE
REGIONAL ADMINISTRATION AND LOCAL GOVERNMENT**

Telegrams: "LGSP"
Telephone: 255 (22) 2700764/65/69
Fax: 255 (22) 2700768
Email Address: cities.project@yahoo.com



Dar es Salaam Metropolitan Development Project,
3rd& 4th Floor Millennium Towers Building,
Ali Hassan Mwinyi Rd.
P.O. Box 34314,
DAR ES SALAAM

In reply please quote:
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11 July, 2018

M/s Eight-Japan Engineering Consultants Inc
In cooperation with
M/s Nippon Koei Co., Ltd.
M/s CTI Engineering International Co Ltd,
M/s Metropolitan Expressway Company Ltd.
Honcho 5-33-11, Nakano-ku,
Tokyo, Japan 164-8601
Tel: +81-3-5341-5111
Fax: +81-3-5385-8500

RE: PROJECT FOR REVISION OF DAR ES SALAAM TRANSPORT MASTERPLAN
SUB: ACCEPTANCE OF FINAL REPORT


Reference is made to the heading named above

The Government of Tanzania through President's Office Regional Administration and Local Government will like to recognize that under JICA financing, you signed the Contract to undertake a review of Dar es salaam Transport Master Plan of year 2008- 2032 and have a new revised of year 2018- 2040.

After various series of communication, presentations and incorporating observations/ comments from formed Technical working groups, government agencies, other stakeholders and a recent seminar carried out on 7th June, 2017 in Tokyo- Japan under presence of Tanzanian delegates, Japanese investors and JICA officials, the Final Report of the Dar es salaam Transport Masterplan 2018-2040 is hereby accepted.

Kindly continue to print the Final Report in copies specified into the contract for final handing over to the client. Meanwhile, we are looking forward to present this report to the higher level in a date to be communicated to you soon before the end of August, 2018.

Thank you for your continued cooperation.


Eng. Mussa Iyombe
PERMANENT SECRETARY

cc: The Country Director
Japan International Cooperation Agency (JICA) Tanzania Office
Dar es Salaam, Ohio St, 3rd. Floor, Barclay's House, Plot No. 1008/1

FOREWORD



It is an exciting times in Dar es Salaam. Planning for a series of major infrastructure projects are now at an advanced stage. This Transport Master Plan provides a totally new way of viewing our city. It is estimated that by 2040 Dar es Salaam will have a population of 12million inhabitants. This will produce numerous challenges but at the same time an invaluable opportunity to create a cohesive city that lives up to ambitious environmental objectives – an opportunity not available to every city.

The goals and direction outlined in the Dar es Salaam Transport Master Plan are aimed at making everyday life simpler in a large, competitive, close-knit city. The Transport Master Plan will be implemented in action and investment plans, and will be the starting point for present and future plans and programmes for different modes of transport in Dar es Salaam City. Work on the Dar es Salaam Transport Master Plan has been in progress since it was first commissioned by the City to JICA in 2008. Due to some shortfalls it was not well completed and there it was re-done since November 2016 and now it's come to a cheerful completion in July 2018.

It comprises number of sub-projects, resulting in reports that subsequently formed the basis of the provisional draft that was circulated for comments to various stakeholders. The Transport Master Plan was well received, and the comments that were presented helped make the final version of the Transport Master Plan even clearer. Support from the Ministries, Government Agencies, Academic Institutions, Private sector, politicians and other parties was secured gradually as the work progressed. This was achieved through dialogue, workshops and presentations. Political support for the Transport Master Plan has been built up incrementally.

The Transport Master Plan has been developed in parallel with the Corridor Development Strategy (CDS) under BRT phase 1 as they are all aiming at introducing Transit Oriented Development (TOD) to the city of Dar es Salaam. Close collaboration between the EJEC team of specialists, Five Dar es Salaam Municipalities the City Urban Planning Office led to highly favourable conditions for the successful preparation of the Dar es Salaam Transport Master Plan. The Master Plan point out a clear direction for transport plan until year 2040. This Transport Master Plan will provide Dar es Salaam inhabitants, businesses and other stakeholders with the opportunity to make their own long-term decisions, on where to live and invest. The result will be a large, close-knit city with successful businesses, environmental qualities, a vibrant urban landscape and a simpler everyday life.

On behalf of all citizens of Dar es Salaam, Dar City Council extends its deepest gratitude to the JICA for unmeasurable support to make this Transport Master Plan completed.



Sipora J. Liana

Director,
Dar es Salaam City Council
Dar es Salaam, July10, 2018

ACKNOWLEDGEMENT

Japan International Cooperation Agency (JICA) and the Study Team for the Project for Revision of Dar es Salaam Urban Transport Master Plan gratefully acknowledges the sincere contribution of all stakeholders from the Government of Tanzania, who dedicated their precious time, knowledge and capacity to develop the Dar es Salaam Urban Transport Master Plan. The Master Plan aims at promoting public transport utilization and improved smooth traffic flow by creating the railway network with smooth connectivity to various transport modes, introduction of the latest technology for the road network, and thus contributes to the economic growth and improves QOL in Dar es Salaam. The contributions from the government officials, transport agencies, and academic stakeholders for the Technical Working Group, Secretariat, and Joint Coordinating Committee (JCC) led to the results of the proposals in this report.

Special gratitude is also extended to the leadership demonstrated by Eng. Mussa Iyombe, the Permanent Secretary of President's Office and Regional Administration and Local Government (PO-RALG), and his colleagues in PO-RALG, who coordinated and facilitated among the numbers of stakeholders on the future requirement of Dar es Salaam Urban Transport system. Technical contributions from officials from the Ministry of Works, Transport and Communication (MOWTC), who greatly contributed to the active discussion through the series of working groups, is highly appreciated.

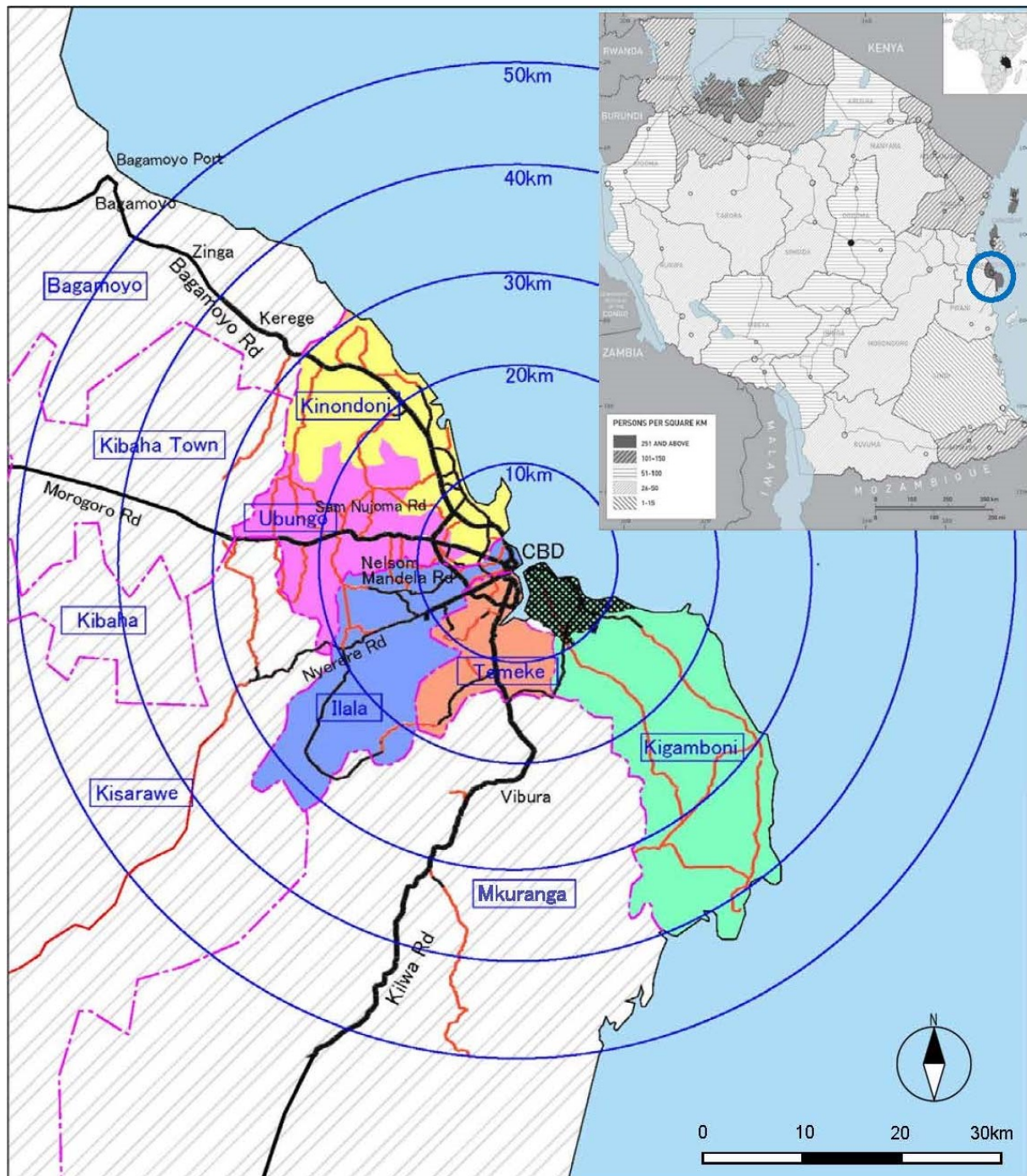
The JICA Study Team delivers the special appreciation to the World Bank and Dar es Salaam Metropolitan Development Project (DMDP) Team, who collaborated with us by sharing the latest information, by discussing issues and strategies, and by ensuring support to create the desirable city for the future of Dar es Salaam.

The Urban Transport Master Plan is produced by a highly participatory process. This would not be achieved without involvement all the stakeholders in Dar es Salaam Urban transport sector who participated in the workshop. We thank them for their inputs, in-depth comments and suggestions throughout the process.

JICA, as the development partner of Tanzania, and Study Team wish this Master Plan to be fully utilized and implemented as proposed in order to create a smart City of Dar es Salaam.

July 2018
JICA Study Team

Administrative Map of the City of Dar es Salaam



Population: 4.3 million in 2012.
 Annual population growth rate from 2002 to 2012: 5.6%
 Area: 1,393 km².
 Population density: 3,087 person/km² in 2012.
 GDP Growth Rate: approximately 7% (2013-2016)
 TANZANIA GDP: 2,131 thousand TZS/person
 Dar es Salaam GDP: 3,228 thousand TZS/person

THE PROJECT FOR REVISION OF DAR ES SALAAM URBAN TRANSPORT MASTER PLAN
FINAL REPORT

---VOLUME-1 : PRESENT CONDITIONS ---

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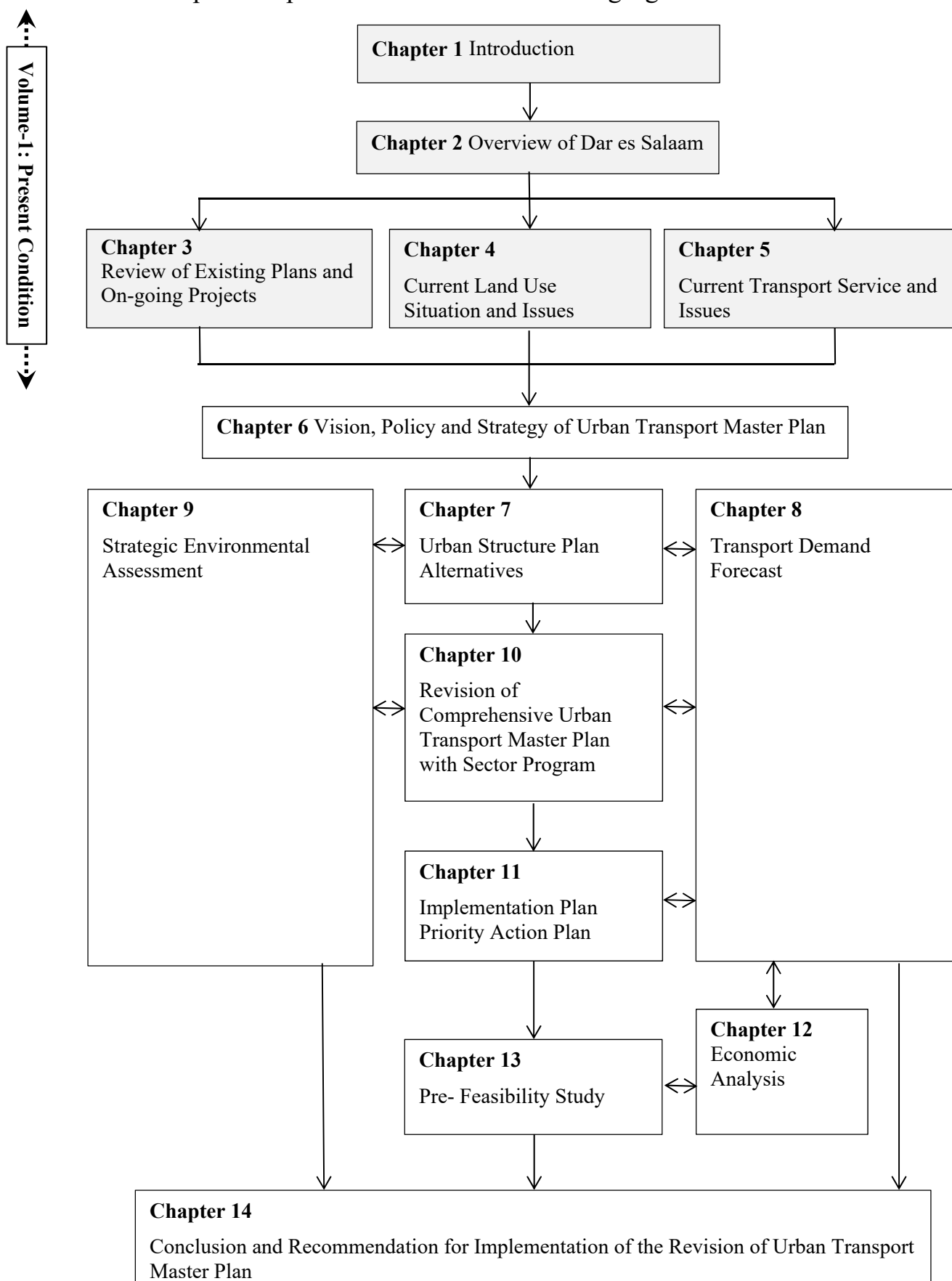
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ABBREVIATIONS

AfDB	Africa Development Bank
AFC	Automatic Fare Collection
AOMCBP	Air Quality Monitoring Capacity Building Project
ARU	Ardhi University
ATC	Automatic Train Control
ATO	Automatic Train Operation
ATP	Auto Transformer Post
ATS	Automatic Train Stop
B/C	Cost Benefit Ratio
BOT	Build-Operate-Transfer
BRT	Bus Rapid Transit
C/P	Counterpart
CA	Contracting Authority
CAPEX	Capital Expenditure
CBD	Central Business District
CBTC	Communication-Based Train Control
CBTST	Capacity Building of Transport Sector in Tanzania
CCTV	Closed-circuit Television
CSG	Client Stakeholders Group
CMHI	China Merchants Holdings International
CPI	Consumer Price Index
CRIP	Country Risk Insurance Premium
CTC	Centralized Traffic Control
CUPID	Capacity Building Project for the Improvement of Dar es Salaam Transport
DART	Dar es Salaam Rapid Transit
DAWASA	Dar es Salaam Water and Sewerage Authority
DCC	Dar es Salaam City Council
DDM	Dodoma
DMDP	DSM Metropolitan Development Project
DMU	Diesel Multiple Units
DRC	Democratic Republic of the Congo
DSM	Dar es Salaam
DSMGP	DSM Marine Gateway Project
DSM-RAS	Dar es Salaam Regional Administrative Secretary
DUMP	Dar es Salaam Urban Master Plan
DUTA	Dar es Salaam Urban Transport Authority
EAC	East African Community
EBF	Equity Bank Finance
EHU	Equipment Hire Units
EIA	Environmental Impact Assessment
EIRR	Economic Internal Rate of Return
EIS	Environmental Impact Statement
EMU	Electric Multiple Unit
EPZA	Export Processing Zone Authority
EU	European Union
FIRR	Financial Internal Rate of Return
FYDP I	First Five Year Development Plan
FYDP II	Second Five Year Development Plan
GDI	Gender Development Index

GDP	Gross Domestic Product
GRDP	Gross Regional Domestic Product
GHG	Greenhouse Gas
GIS	Geographic Information System
GoJ	Government of Japan
GoK	Government of Korea
GoT	Government of Tanzania
GVM	Gross Vehicle Mass
HCM	Highway Capacity Manual
HIS	Household Interview Survey
HSSE	Health, Safety, Security and Environment
ICD	Inland Container Depot
IEE	Initial Environmental Examination
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
ISP	Interim Service Provider
ITS	Intelligent Transport System
JCC	Joint Coordination Committee
JICA	Japan International Cooperation Agency
JNIA	Julius Nyerere International Airport
JPY	Japanese Yen
JST	JICA Study Team
KDA	Kigamboni Development Authority
KSG	Key Stakeholders Group
LAPF	Local Government Authority Pension Fund
LDC	Least Developed Country
LGA	Local Government Authority
LRT	Light Rail Transit
LTTP	Long-Term Perspective Plan
M/M	Minutes of Meeting
M/P	Master Plan
MC	Municipal Council
MC	Motor Cycle
MDGs	Millennium Development Goals
MOFP	Ministry of Finance and Planning
MOHA	Ministry of Home Affairs
MOLHSD	Ministry of Land, Housing and Human Settlements Development
MOWTC	Ministry of Works, Transport and Communication
MPI	Multidimensional Poverty Index
MRR	Middle Ring Road
MRT	Mass Rapid Transit
NBS	National Bureau of Statistics
NEAP	National Environmental Action Plan
NEMC	National Environment Management Council
NHC	National Housing Corporation
NIT	National Institute of Transport
NM	Nelson Mandela Road
NMT	Non-Motorized Transport
NSGRP	National Strategy for Growth and Reduction of Poverty
NSSF	National Social Security Fund
NPV	Net Present Value
O & M	Operation and Maintenance

OCC	Operation Control Centre
OCS	Overhead Contact System
OD	Origin - Destination
ODA	Official Development Assistance
OPEX	Operating Expense
PCU	Passenger Car Unit
PDCA	Plan-Do-Check-Act
PHPDT	Peak Hour Peak Direction Traffic
PIM	Public Investment Management
PIRR	Project Internal Rate of Return
PO-RALG	President Office, Regional Administration and Local Government
PP	Public Procurement
PPE	Personal Protective Equipment
PPP	Public-Private Partnership
PS	Permanent Secretary
PT	Person Trip
R/D	Record of Discussions
RAHCO	Reli Assets Holding Company
RAIS	Road Accident Information System
RFB	Road Fund Board
RFP	Request for Proposal
RoRo	Roll-on/Roll-off
ROW	Right of Way
RP/SP	Revealed Preference/Stated Preference
RRB	Regional Road Board
RSS	Receiving Substation
SADC	Southern African Development Community
SADCC	Southern African Development Coordination Conference
SATTF	Southern Africa Trade and Transport Facilitation Project
SEA	Strategic Environmental Assessment
SEZ	Special Economic Zone
SGR	Standard Gauge Railway
SP	Service Provider
SPC	Special Purpose Company
SPV	Special Purpose Vehicle
SUMATRA	Surface and Marine Transport Regulatory Authority
SUTP	Strategic Transport
TAA	Tanzania Airport Authority
TAC	Technical Advisory Committee
TANESCO	Tanzania Electric Supply Company Limited
TANLAB	Tanzania Roads Agency Laboratory
TANROADS	Tanzania National Roads Agency
TARURA	Tanzania Rural and Urban Road Authority
TAT	Transporters Association of Tanzania
TATOA	Tanzania Truck Owners Association
TAZARA	Tanzania-Zambia Railway
TDV	Tanzania Development Vision
TEMESA	Tanzania Electrical, Mechanical and Electronics Service Agency
TEU	Twenty-foot Equivalent Unit
TIB	Tanzania Investment Bank
TICTS	Tanzania Internal Container Terminal Services Limited
TIF	Tax Increment Financing

TOD	Transit Oriented Development
TPA	Tanzania Port Authority
TPF	Tanzania Police Force
TPDC	Tanzania Petroleum Development Corporation
TRA	Tanzania Revenue Authority
TRC	Tanzania Railways Corporation
TRL	Tanzania Rail Limited
TSIP	Transport Sector Investment Programme
TTC	Travel Time Cost
TZS	Tanzanian Shilling
TSS	Traction Substation
TWG	Technical Working Group
UDA	Usafiri Dar es Salaam
UDA-RT	Usafiri salama Dar es Salaam Rapid Transit
UDSM	University of Dar es Salaam
UGB	Urban Growth Boundary
UNRA	Uganda National Road Authority
UTMP	(Dar es Salaam) Urban Transport Master Plan
VAT	Value Added Tax
VFM	Value for Money
VGf	Viability Gap Funding
VMS	Variable Message Sign
VOC	Vehicle Operation Cost
VPO	Vice President's Office
WB	World Bank

BASIC INDICATORS

1. Size (DSM)	<ul style="list-style-type: none"> • 1,393 km² (0.19 percent of the Tanzania mainland)
2. Population (DSM)	<ul style="list-style-type: none"> • Total Population: 4,364,541 (National Census, 2012) • Percentage share to the Population of the Country: 9.7% (2012) • Annual Growth Rate: 5.6% (2002 -2012)
3. Industry (National Trend)	<ul style="list-style-type: none"> • Share of Primary Sector: 12,149 billion TZS, 27.1% (MOFP, 2017) • Share of Secondary Sector: 9,375 billion TZS, 20.9%(MOFP, 2017) • Share of Tertiary Sector: 23,273 billion TZS, 52.0%(MOFP, 2017)
4. Economic Indicator (National and DSM)	<ul style="list-style-type: none"> • Country GDP: 47.3 billion USD (WB, 2016) • GDP per Capita: 877 USD (WB, 2016) • Annual Growth Rate: 7.17 % (IMF, 2016) • DSM GDP (GRDP): 17,640 billion TZS (MOFP, 2016) • Employment: 1,719,466 in DSM, 10% of total employment in the Country (17,916,156) • Consumer Price Index (CPI): 1.66 (IMF 2016, Base year 2010)
5. Social Indicator (National and DSM)	<ul style="list-style-type: none"> • Multidimensional Poverty Index (MPI): 26% in DSM, smallest proportion at the regional level in the Country (NBS, 2011) • Gender Development Index (GDI) in DSM: value 0.851 (HDI, 2014) • Literacy Rate at National Level: 80.4% (WB, 2015) • Life Expectancy at National Level : 64.90 (WB, 2015) • Birth Rate at National Level : 5.08 (WB, 2015)
6. Environmental Indicator (DSM)	<ul style="list-style-type: none"> • Major rivers; Mpiji River, Msimbazi River, Kizinga and Mzinga Rivers • Forest reserves and Game reserve: Pande Game Reserve, Pugu Forest Reserve, Kazimzumbwi Forest Reserve, Vikindu Forest Reserve, Ruvu North Forest Reserve, Ruvu South Forest Reserve
7. Transport Indicator (DSM)	<ul style="list-style-type: none"> • Vehicles Registration: 1,664,186 (2016, TRA/JICA-CUPID) • Annual Growth Rate of Registered Vehicle: 21% (2010-2014, TRA) • Road Traffic Volume Growth Rate: New Bagamoyo Rd 2.18, Old Bagamoyo Rd 2.00, Nelson Manderl Rd1.62, Nyerere Rd. 1.45 (2008-2014, TANROADS, JICA)
8. City Organization (DSM)	<ul style="list-style-type: none"> • Dar es Salaam City Council (DCC) coordinate 5 Municipalities (Ilala Municipal Council, Temeke Municipal Council, Kinondoni Municipal Council, Ubungo Municipal Council, Kigamboni Municipal Council) • Dar es Salaam Regional Administrative Secretary (DSM-RAS) supervises DCC and MCs

CHAPTER 1 INTRODUCTION

1.1 Background of the Study

Dar es Salaam City is the most populated city and an important centre for economic activity and commerce in Tanzania. JICA conducted the study of Dar es Salaam Urban Transport in 2008, and the Master Plan with the target year of 2030 (hereafter “the previous M/P”). Of which projects proposed in the previous M/P, Tazara Junction Fly-over Project and New Bagamoyo Road Widening Project have been started by Japan’s Grant Aid. The Nelson Mandela Road Widening Project by EU, Bus Rapid Transit (BRT) Project by the World Bank, and Mwalimu Nyerere Bridge (Kigamboni Bridge) Project by the National Social Security Fund (NSSF) have also been launched based on the previous M/P. After the previous M/P was approved, JICA technical project called “Capacity Building Project for the Improvement of Dar es Salaam Transport” (CUPID) was implemented from 2010 to 2012. The CUPID PHASE II that began on September 2014 was completed in October 2017.

The current traffic demand in DSM is rapidly exceeding the previous M/P demand forecast. In the previous M/P, future population of DSM in 2018 was estimated to be 4.3 million, however, it had already reached up to 4.3 million in 2012 (the Population and Housing Census 2012). According to the data in 2014, the population will be over 10 million in the year 2030 (UN Department of Economic and Social Affairs, Population Division, World Urbanization Prospects 2014). The number of vehicle registration in DSM is also rapidly increasing by 14% annually, exceeding 8.4% increase ratio by the previous M/P.

Ministry of Works, Transport and Communications (MOWTC, former Ministry of Transportation) has started the trial operation of the railway as a pilot project from 2011, which was not included in the previous M/P.

DSM is the main entrance of the transport corridor to the neighbouring countries such as Zambia, Burundi, Rwanda, and Uganda. It is also the important main hub for the logistics. The current traffic issues of DSM affect the economic development of Tanzania, as well as the neighbouring countries. With these circumstances, both Governments of Tanzania and Japan agreed to launch the Project for the revision of the DSM Urban Transport Master Plan.

1.2 Outline of the Study

1.2.1 Objectives of the Project

[Objectives]

- To follow and review the previous M/P
- To revise the Urban Transport M/P in Dar es Salaam (target year 2040)
- To conduct Pre-feasibility study (Pre-F/S) for the selection of the priority projects based on the revision of Urban Transport M/P
- To develop capacity of C/Ps
- To contribute to the improvement of traffic condition through the achievement of the above items

[Expected Outputs]

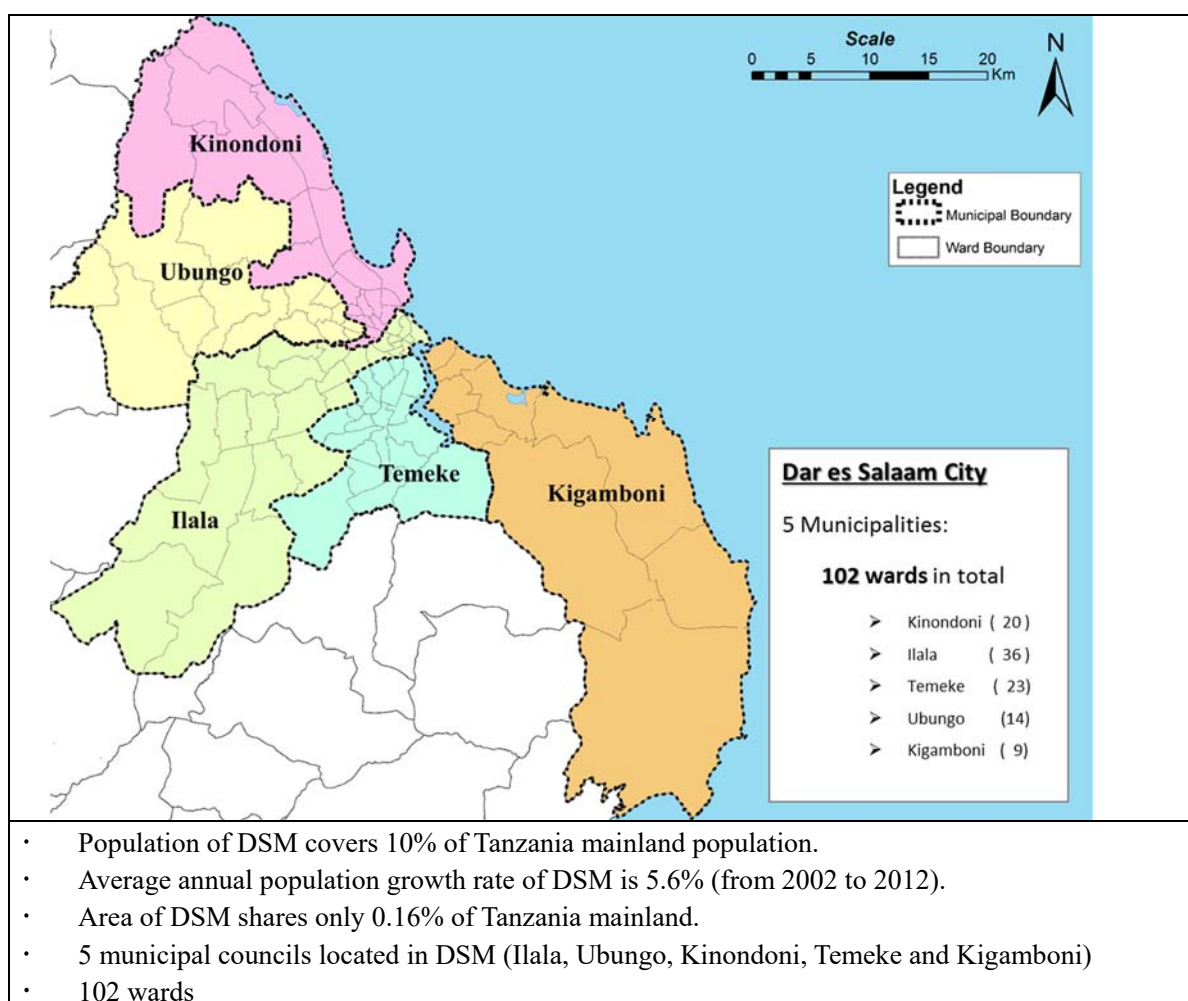
- Revised Urban Transport M/P in Dar es Salaam, in which the target year is set to be the year

2040

- Technical Transfer to formulate/revise Urban Transport M/P
- Conducting the exchange of information and opinions about the Urban Transport M/P among stakeholders from an early stage, agreements on the contents of the Urban Transport M/P, selection of the priority projects and implementation of the suggested projects by the M/P will be facilitated.

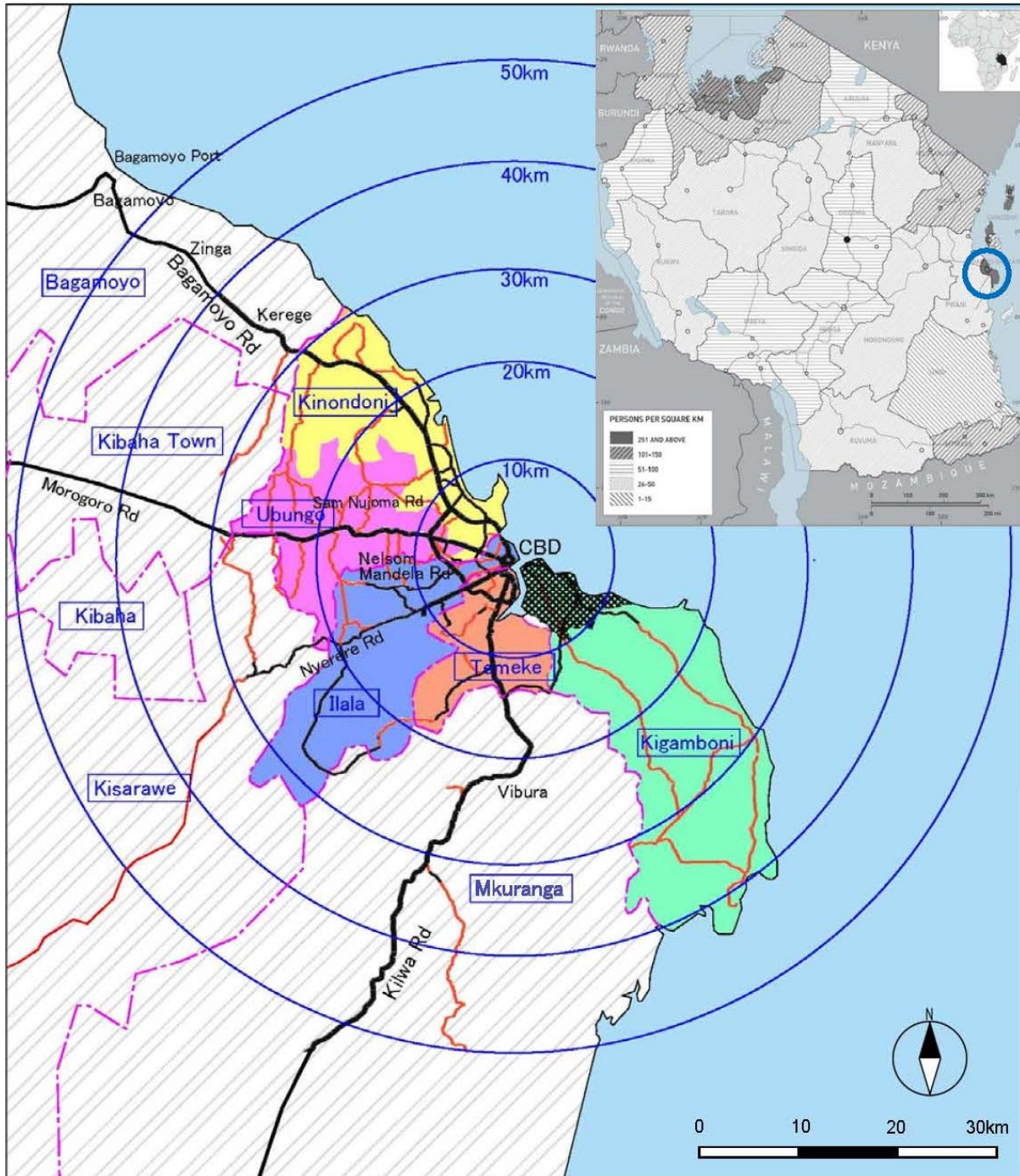
1.2.2 Target Area

The target area of the Project is DSM City administrative area, same as the previous M/P. The population of the city is 4.3 million, and the area is 1,393 km² (the Population and Housing Census in 2012). DSM City Council is subdivided into 5 municipal councils, 102 wards.



Source: JST

Figure 1.2.1 Target Area by Municipal Councils



Source: JST

Figure 1.2.2 Location of Dar es Salaam

1.2.3 Work Schedule

Process of the Project is shown in Table 1.2.1. The details of Work Schedule, Experts Assignment are attached in the Annex.

Table 1.2.1 Process of the Project (as of the end of June 2018)

Year	2016			2017				2018				
Month	Nov-Dec	Jan-Feb	Mar-Apr	May-June	Jul-Aug	Sep-Oct	Nov-Dec	Jan-Feb	Mar-Apr	May-June		
Work Item	Current Situation <ul style="list-style-type: none"> ● Population ● Environment ● Land use ● Road ● Public Transport ● Traffic Accident ● Traffic Management ● Review of Policy, Plans & Projects 			Analysis & Strategy <ul style="list-style-type: none"> ● Analysis on Traffic ● Strategy of MP ● Setting Alternative Plans for Urban Structure, Road Network, Public Transport Services and Traffic Management 				Draft Master Plan <ul style="list-style-type: none"> ● Policy, Plan and Project ● Future Population, GDP and Car-ownership ● Draft Mater Plan <ul style="list-style-type: none"> • Urban Structure • Road • Public Transport • Traffic Management ● Economic Evaluation ● Implementation Plan 			Revision of Dar es Salaam Urban Transport Master Plan	
SEA	SHM: ●Municipality ○National			● July				●○Jan ●Final				
JCC	◎ Jan			◎ May				◎ Nov ◎ Feb				
Report	ICR	PGR-1			PGR-2			ITR	DFR	FR		
Others					Training in JPN				Seminar in TZ	Seminar in JPN		

Source: JST

1.2.4 Counterpart Organizations and Agencies

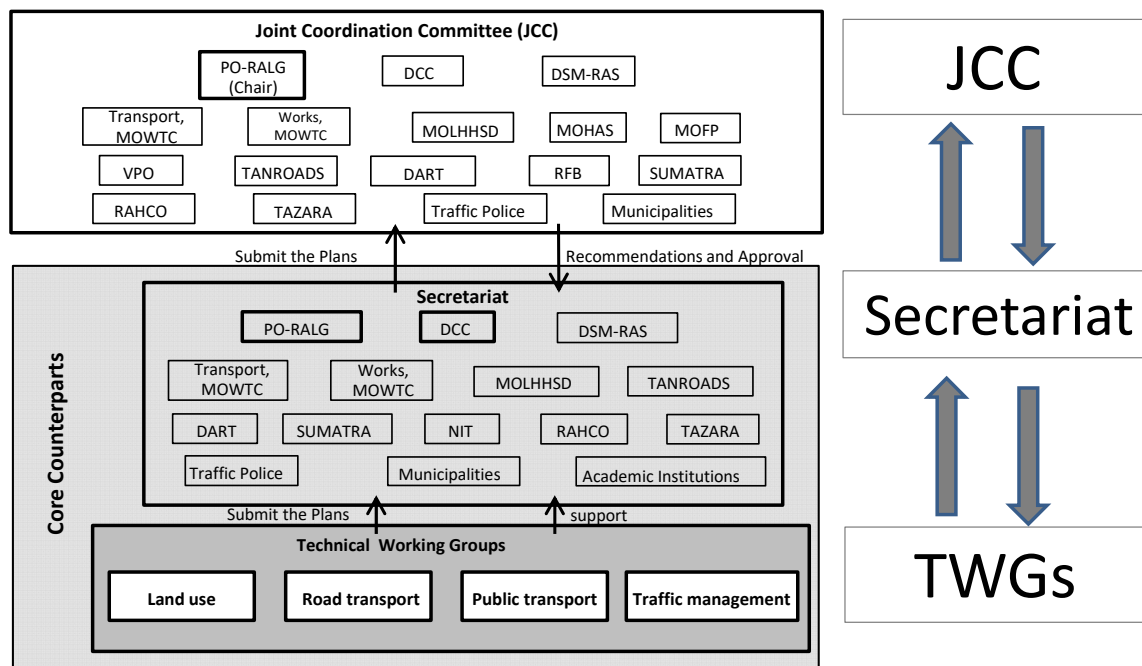
PO-RALG and DCC are the main C/Ps of the Project. They are in charge of coordinating and monitoring the project. JST assists PO-RALG and DCC to coordinate and communicate smoothly among stakeholders. The counterpart organization and agencies are as follows:

- PO-RALG (President’s Office, Regional Administration and Local Government)
- DCC (Dar es Salaam City Council)
- DSM-RAS (Dar es Salaam Regional Administrative Secretary)
- Transport, MOWTC (Ministry of Works, Transport and Communications)
- Works, MOWTC (Ministry of Works, Transport and Communications)
- MOLHSD (Ministry of Lands, Housing and Human Settlements Development)
- MOHAS (Ministry of Home Affair and Security)
- MOFP (Ministry of Finance and Planning)
- VPO (Vice President's Office)
- TANROADS (Tanzania National Roads Agency)
- DART (Dar es Salaam Rapid Transit)
- RFB (Road Fund Board)
- SUMATRA (Surface and Marine Transport Regulatory Authority)
- TRC (Tanzania Railway Corporation)
- TAZARA (Tanzania and Zambia Railway Authority)
- Zonal Traffic Police (Dar es Salaam)
- Municipal Councils (Ilala, Ubungo, Kinondoni, Temeke and Kigamboni)

1.3 Progress of the Activities (as of the end of June 2018)

1.3.1 The Structure of the Project Implementation

JST sets up the number of meetings for the discussion with the related counterpart organizations and agencies; such as JCC, Secretariat, and Technical Working Group (TWG). The structure of the project implementation is shown in Figure 1.3.1.



Source: JST

Figure 1.3.1 The Structure of the Project Implementation

The role of each meeting is clarified in Table 1.3.1. JST conducts TWG meetings in order to collect and share the ongoing project data and discuss the current issues. At the Secretariat meeting, the summary of the discussion in TWG is shared and discussed for future strategies and plans. In the JCC, the final decision shall be made by the harmonization of all the higher-level management of the key organizations. The members of the organizations and agencies are involved in each meeting through the discussion between JST and PO-RALG, and agreed in the Secretariat as shown in Annex.

Table 1.3.1 Role of the Project Organisations

Discussion meetings	Roles
JCC (Joint Coordination Committee)	<ul style="list-style-type: none"> • High level of discussion and decision making, approval on policy directives, strategies and plans • The meetings are conveyed at the timing of each report
Secretariat	<ul style="list-style-type: none"> • Summarization and detailed discussion on the issues raised in the TWG. • The meetings are held before JCC or anytime if necessary.
TWG (Technical Working Group)	<ul style="list-style-type: none"> • Technical issues on daily basis are discussed. • The members include mainly technical staff of the C/P.

1.3.2 Progress of TWGs, Secretariat, and JCCs

JST and C/Ps conducted meetings with the TWGs, Secretariat, and JCCs as shown in Table 1.3.2.

Table 1.3.2 Progress of TWGs, Secretariat and JCC (as of the end of April 2018)

	Agenda	TWG				Secretariat	JCC	
		TWG-1 Land Use	TWG-2 Road Transport	TWG-3 Public Transport	TWG-4 Traffic Management			
1	Inception Report	1st Round						
	1) Existing situation and Issues	3-Feb 2017	27-Jan 2017	15-Feb 2017	28-Feb 2017	1-Dec 2016	20-Jan 2017	
	2) Review on Current MP							
	3) Progress Report 1		27-Feb 2017	10-Mar 2016				
2	Progress Report 2	2nd Round						
	4) Analysis of Traffic Survey-1	21-Apr 2017 Joint Meeting						
	5) Population/Economic Framework	25-Apr 2017	11-May 2017	4-May 2017	11-May 2017	16-May 2017	22-May 2017	
	6) Policy and Strategy							
	7) Future Urban Structure							11-May 2017
	8) Traffic Demand Forecast-1 (Methodology)	9-May 2017 Joint Meeting						
3	Interim Report	3rd Round						
	9) Planning	26-Jul 2017	10-Oct 2017	5-Sep 2017	10-Oct 2017	14-Nov 2017	20-Nov 2017	
		26-Sep 2017	1-Nov 2017	14-Sep 2017	1-Nov 2017			
	10) Analysis of Traffic Survey-2	5-Sep 2017 Joint Meeting						
	11) Traffic Demand Forecast-2(Results)	9-Nov 2017 Joint Meeting						
	12) Draft Master Plan, Evaluation and Selection of Pre-F/S Projects							
4	Draft Final Report	4th Round						
	13) Economic Analysis	Individual meeting with related organizations; PO-RALG, DCC, MOWTC-Works, Transport, SUMATRA, TANROADS, TRC in Nov 2017 and Feb 2018				1-Feb 2018	6-Feb 2018	
	14) Staging Plan							
	15) Pre-F/S Projects							
	16) Management of M/P							

Source: JST

(1) TWGs

JST, together with DSM-RS and PO-RALG, conducted 23 TWG meetings by the end of February 2018. TWG is formulated by 4 groups; land use, road, public transport and traffic management. Each of TWG has been supervised and facilitated by the JICA experts, and assigned C/Ps contributed to analyse the issue, group work and presentation. From the end of April 2017, TWG has developed joint TWGs, since the issues and strategies are correlating with each other.

(2) Secretariat

JST convened 4 times with the Secretariat through the project period. At the Secretariat meetings, the issues and strategies discussed in the TWGs have been shared and discussed for the JCC meetings.

(3) JCC

PO-RALG and JST convened the Joint Coordination Committee (JCC) as follows. The points of discussion are summarized in the Annex.

Table 1.3.3 Outline of JCC Meetings (by the end of April 2018)

S/N	Date	Place	Agenda	Participants
1 st	20/January/2017	Protea Courtyard Hotel, DSM	<ul style="list-style-type: none"> • Outline of the Inception Report • Progress of the Pilot Projects-JICA CUPID • Current Issues and Main Projects in DSM 	37
2 nd	22/May/2017	Protea Courtyard Hotel, DSM	<ul style="list-style-type: none"> • Current Issues based on the Analysis of the Existing Situation and Traffic movement • Key Strategy on DSM Urban Transport M/P • Discussion on Alternative Plans proposed by the Technical Working Groups (TWGs) • Progress Report on JICA CUPID Project – Exit Strategy of DUTA and Ownership of Transport M/P – 	41
3 rd	20/November/2017	Karimjee Hall	<ul style="list-style-type: none"> • Future Framework of the MP • Vision and Policy, Strategy • Urban Structure Plan • Road Plan • Public Transport Plan • Traffic Management Plan • Staging Plan • Traffic Demand Forecast • Economic Evaluation • Proposal for the Pre-Feasibility Study • SEA • Organizational Structure 	47
4 th	6/February/2018	Protea Courtyard Hotel, DSM	<ul style="list-style-type: none"> • Summary of Draft Master Plan • Demand Forecast • Economic Evaluation • Strategic Environmental Assessment • Pre-Feasibility Study • Ownership and Management Structure • Way Forward 	39

CHAPTER 2 OVERVIEW OF DAR ES SALAAM CITY

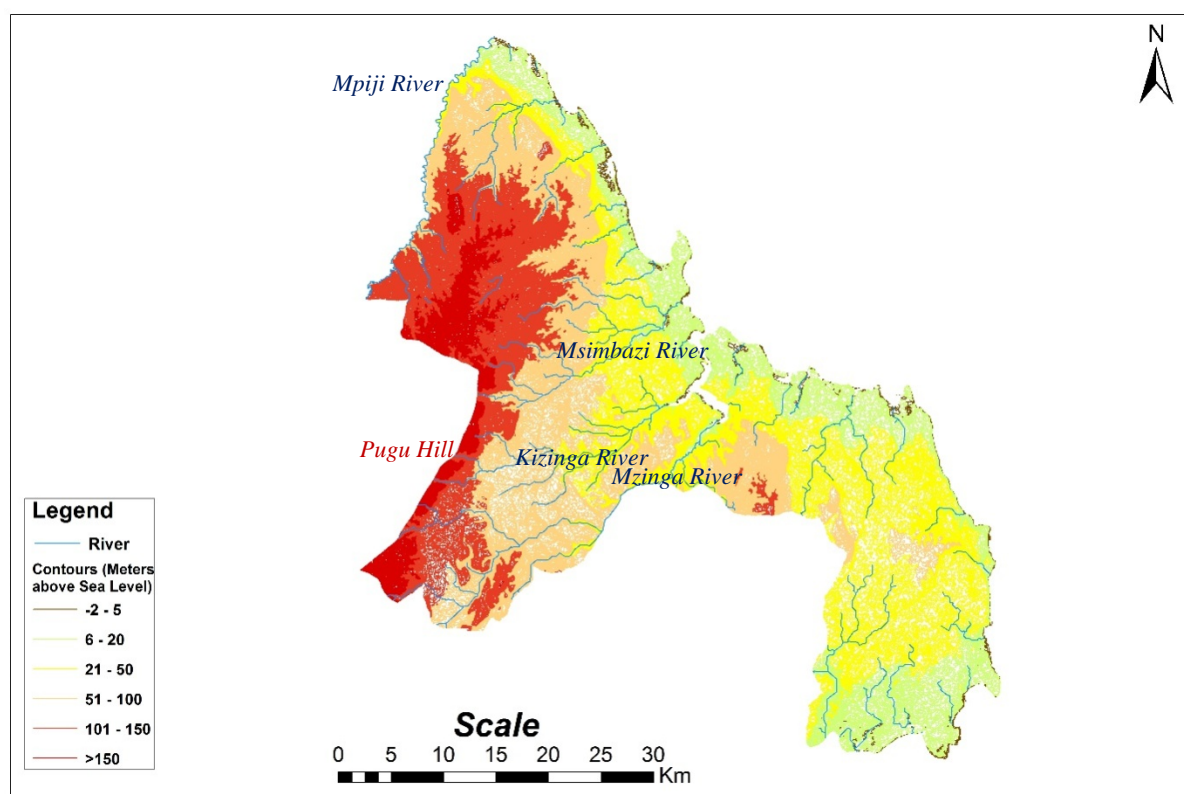
2.1 Natural Condition

2.1.1 Topography, Geology and River system

DSM is located in the eastern part of the Tanzanian mainland. It occupies 0.19% of the Tanzania mainland, stretching about 100km between the Mpiji River to the North and beyond the Mzinga River in the South. Topographically, as shown in Figure 2.1.1, the city is divided into three main terrain units of lowlands around the Indian Ocean shores and river valleys, the middle plateau and the hilly areas found in the North and West of the City.

Altitude of DSM is less than 200m above sea level. The area is generally flat to gently undulating plains, slope range 0-3% developed on old alluvial terrace no longer flooded. Major soils are well drained, moderately deep to deep, red, yellowish red or orange sands and loamy sands with sandy loams in subsoil, weak structure and very low natural fertility. Mixed alluvial deposits occur on recent flood plains along Msimbazi valley and Mzinga rivers. The areas are subject to frequent flooding.

The region contains watersheds of four major rivers. Mpiji River forms the northern boundary of DSM, Msimbazi River flows to the north of the city centre and Kizinga and Mzinga Rivers flow into the harbour area of the City. There are also smaller water courses in the City.



Source: JST

Figure 2.1.1 Topography of DSM

2.1.2 Natural Environment and Ecosystem

(1) Protected Area

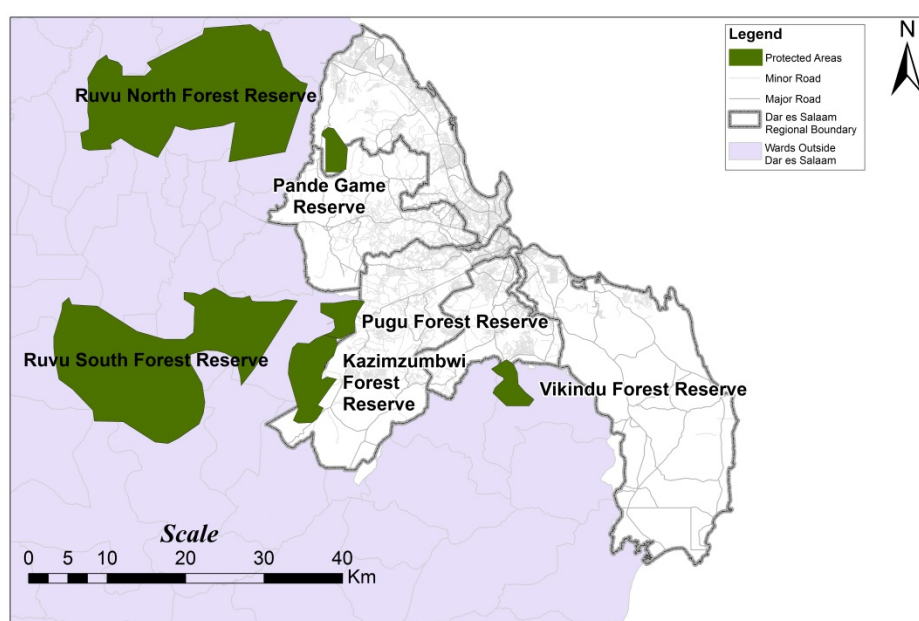
There is no National Park in DSM and the surrounding areas, but there are five forest reserves and one

game reserve within and around the DSM region. Among those reserves, Pande Game Reserve is in Kinondoni Municipal Council, Pugu Forest Reserve, Kazimzumbwi Forest Reserve are partially in Ilala Municipal Council, and Vikindu Forest Reserve is partially in Temeke Municipal Council.

Table 2.1.1 Protected Area in DSM and the Surrounding Area

	Name of the Area	Location
1	Pande Game Reserve	In Kinondoni, about 24km northwest of the CBD
2	Pugu Forest Reserve	Partially in Ilala, about 19km west of the CBD
3	Kazimzumbwi Forest Reserve	Partially in Ilala, about 25km west of the CBD
4	Vikindu Forest Reserve	Partially in Temeke, about 14km south of the CBD
5	Ruvu North Forest Reserve	Out of DSM region, about 33km northwest of the CBD
6	Ruvu South Forest Reserve	Out of DSM region, about 30km west of the CBD

Source: JST



Source: JST

Figure 2.1.2 Protected Area in DSM and the Surrounding Area

Vegetation and Ecosystem

The main vegetation of DSM region includes coastal shrubs, Miombo woodlands, coastal swamps and mangrove trees. Mangrove trees can be observed at the mouth of the Msimbazi River in the city centre. Tree species found include Neem trees (*Azadirachta indica*) and Ashoka trees (*Polyalthia longifolia*), which are among the most commonly planted trees in Tanzania, and a few African teaks (*Milicia excelsa*).

There are limited wildlife resources in DSM City due to its high demand for land for settlements and industrial development. The population particularly of wild animals has been significantly reduced. The only place where wild animals can be found in the city is DSM Zoo in Kigamboni Municipal Council. The common animals found in the study area include birds, butterflies, grasshoppers, ants of various kinds, etc. The common bird species sighted including both seasonal migratory and local birds are White Reef Heron (*Egretta dimorpha*), Little Egret (*Egretta garzetta*), Whimbrel (*Numenius phaeopus*) and Sanderling (*Calidris alba*).

Environmental Quality

1) Ambient Air Quality

Air quality may be monitored by observing the quantities of pollutants such as smoke, carbon dioxide, carbon monoxide, hydrogen sulphide, sulphur dioxide, lead, nitrogen dioxide etc. in the air. Table 2.1.2 below shows indicative information for air quality at sampled stations in DSM region. These data were collected during the Air Quality Monitoring Capacity Building Project (AQMCBP). This project was implemented with the aim of establishing baseline data and information on the concentration of selected impurities in ambient air. The AQMCBP was implemented through NEMC in collaboration with other stakeholders including DCC, Tanzania Bureau of Standards, Government Chemist Laboratory Agency, Tanzania Meteorological Agency, and University College of Lands and Architectural Studies.

Table 2.1.2 Average Concentration of Air Pollutants Sampled in DSM, Aug 2005 – Dec 2007

Pollutant (unit)	Station				Urafiki Post Office
	Mwenge	Tandika	Kariakoo	Fire	
Particulate Matter (PM ₁₀ (µg/m ³))	276.82	9.75*	282.59	1430.19	392.95
Sulphur dioxide (SO ₂ (ppb))	1.6	0.8	1.5	4.3	4.4
Nitrogen dioxide (NO ₂ (ppb))	7.8	10.1	13.7	13.9	8.2
Ozone (O ₃ (ppb))	21.7	14.4	27.2	21.2	32.9

Source: NEMC, 2008.

2) Water Quality

Data available on water pollution in Tanzania is presented in Table 2.1.3. Data obtained from a water quality study conducted in 1988 in DSM identified extensive surface water pollution as indicated by high conductivity, low dissolved oxygen, and high bacteriological contamination through evidence of pathogens with human excreta among others.

Table 2.1.3 Pollution Load to Surface Water Resources (kg/day) in DSM

Type	Industrial Effluent	Pit latrines	Septic tanks	Without facilities
BOD	28,330	15,282	3,275	9,897
COD	29,904	16,131	3,457	10,447
Suspended solids	47,216	25,470	5,458	16,495
Dissolved solids	83,940	45,280	9,830	29,325
Total Nitrogen	4,145	2,236	479	1,448
Total Phosphorus	787	425	91	275

Source: Managing sustainable growth and development of DSM by Sustainable Dar es Salaam Project (SDP)

Rivers in urban centres, for example Msimbazi and Kizinga in DSM, have been heavily contaminated by disposal of different types of waste from small industries, domestic and institutional sanitation systems, and solid waste from residential areas. Because of the high levels of pollution, the water quality of these rivers and streams has sharply decreased, thus rendering

the water not safe for domestic consumption or irrigation purposes. Pollution loads from various sources to Msimbazi River are shown in Table 2.1.4.

Table 2.1.5 Table 2.1.5 shows the seasonal variation in the water quality of Msimbazi River.

Table 2.1.4 Pollution Loads in Msimbazi River, 2011

Descriptions of diffuse pollution sources	Pollution loads estimates (t/yr)	
	Minimum	Maximum
On-site sanitation system	20.32	101.57
Industrial areas that have no sewers	17.70	141.56
Informal sector activities premises	16.12	80.61
Storm water from low-lying areas	8.57	42.83
Farm and animal grazing lands	19.75	80.57
Illegal solid waste disposal sites	11.17	55.86
Total pollution load	93.62	503.01

Source: State of the Environment Report, URT, 2011

Table 2.1.5 Water Quality in Msimbazi River during Wet and Dry Seasons, 2011

Parameter	Season	
	Wet	Dry
Iron (mg/ltr)	0.68 – 1.39	0.66 – 0.87
Suspended solids (mg/ltr)	59 – 131	28 – 50
Feacal Colliform count x 10 ⁴ / 100ml	2.7 – 58	3.69 – 11.7
Turbidity (NTU)	62 – 70	30 – 41
Colour	214 – 316	194 – 247
Chloride (mg/ltr)	402 – 413	372 – 450
Electric conductivity (mS/cm)	8.7 – 9.7	8.9 – 10.4
Sulphates (mg/ltr)	32 – 60.4	61 - 456

Source: State of the Environment Report, URT, 2011

3) Noise and Vibration

Noise pollution is gradually increasing in Tanzania. The health effects of hazardous noise exposure are now considered to be an increasingly important public health problem. However, currently there are no recorded measurements of noise and vibration. The standards for the control of noise and vibration have finally been effective since April 2015.

4) Waste Management

Waste management is a growing problem in the whole country. Increasing urbanization, rural to urban migration, and rapid development associated with population growth have resulted in increased solid and liquid waste generation mainly by industrial and domestic activities.

There is limited data available on waste management for the country. Table 2.1.6 shows the generation of waste by source in DSM. From the table it can be seen that most of the waste are generated from manufacturing followed by households.

Table 2.1.6 Generation of Waste by Source in DSM, 2012-2014

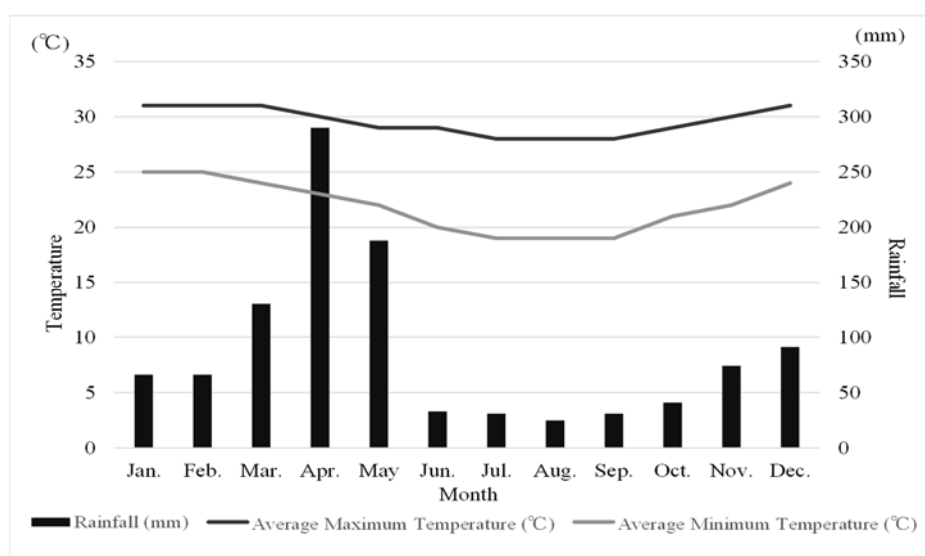
Source	Unit	2012	2013	2014
Agriculture, forestry and fishing	tonnes	111,164.40	138,681.75	125,592.12
Mining and quarrying	tonnes	71,407.69	57,104.25	80,675.49
Manufacturing	tonnes	540,382.50	432,360.75	610,517.25
Energy supply	tonnes	63,687.94	89,735.25	71,953.82
Construction	tonnes	57,126.15	73,419.75	64,540.40
Other economic activities	tonnes	185,274.00	244,732.50	209,320.20
Households	tonnes	524,943.00	595,515.75	593,073.90
Total waste generation	tonnes	1553985.7	1631550	1755673.178

Source: Dar es Salaam City Council

2.1.3 Climate, Rainfall and Hazard

(1) Climate, Rainfall

DSM has a tropical wet and dry savanna climate (Köppen-Geiger classification: Aw). Figure 2.1.3 shows the weather of DSM. The temperature fluctuates between 19°C at minimum and 31°C at maximum. DSM has two rainy seasons: from March to May and from November to December. Dry season is from June to August. Annual rainfall is around 1,100mm.



	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Average/Total
Average Maximum Temperature(°C)	31	31	31	30	29	29	28	28	28	29	30	31	29.6
Average Minimum Temperature (°C)	25	25	24	23	22	20	19	19	19	21	22	24	21.9
Rainfall (mm)	66	66	130	290	188	33	31	25	31	41	74	91	1,066

Source: BBC Weather, 2017

Figure 2.1.3 Weather of DSM

(2) Disaster Risk

DSM is already highly vulnerable to climatic variability, which is expected to increase as climate continues to change. The aspect of most frequent concern to DSM currently is heavy rainfall. In combination with poor drainage, illegal construction and other infrastructure problems, heavy rainfall

results in flooding that causes major losses and disruptions. For the multitudes of the City's population living in informal settlements, poor sanitation provisions and practices contribute to an additional threat: disease. Diseases commonly occurring in these congested, unsanitary settlements during flood periods include malaria, cholera, dysentery and diarrhoea. Some other factors that contribute to flooding in these settlements include flat topography, lack of storm - water drainage systems, blockage of natural drainage systems, building in hazardous areas, and unregulated housing and infrastructure development. Damages to smaller bridges and roads have been observed.

2.2 Socio-economic Profile of DSM City

2.2.1 Population

(1) Overview of Current Population

Tanzania, with a population of around 45 million people all over the country, has nearly identical proportion of male/female structured at 49%-51%. The population has increased by about 10 million people for 10 years between 2002 and 2012.

Table 2.2.1 Male/Female Population Trend of Tanzania

Item	2002	%	2012	%	Population Increase (2012-2002)
Male	16,829,861	48.9%	21,869,990	48.7%	5,040,129
Female	17,613,742	51.1%	23,058,933	51.3%	5,445,191
Total	34,443,603	100%	44,928,923	100%	10,485,320

Source: Tanzania Population and Housing Census in 2002 and 2012

The share of urban population in Tanzania increased from 22.6% in 2002 to 29.1% in 2012. Number of population increase between 2002 and 2012 in urban area is higher than that in rural areas.

Table 2.2.2 Urban/Rural Population Trend of Tanzania

Item	2002	%	2012	%	Population Increase (2012-2002)
Urban	7,943,561	23.1%	13,305,004	29.6%	5,361,443
Rural	26,500,042	76.9%	31,623,919	70.4 %	5,123,877
Total	34,443,603	100%	44,928,923	100%	10,485,320

Source: Tanzania Population and Housing Census in 2002 and 2012

DSM is a national economic centre of Tanzania and comprises five municipal councils and 102 wards. As shown in the table below, DSM accommodates a population of 4,364,541 (2012 Census) with an annual population growth rate at 5.6%, which is nearly twice as high as the national average growth rate (2.7%) during 2002-2012.

Table 2.2.3 Review of Two Consecutive Population Censuses

Region	2002		2012		Annual Avg. Growth Rate (2002-2012)
Tanzania Mainland	34,443,603	Share	44,928,923	Share	2.7%
DSM	2,487,288	7.2%	4,364,541	9.7%	5.6%

Source: Tanzania Population and Housing Census in 2012

Population in DSM was 0.85 million in 1978. It has increased to 1.36 million in 1988, to 2.48 million in 2002, and to 4.36 million in 2012. Population size in 2012 became about five times as large as the one in 1978. Average annual growth rate between 2002 and 2012 was 5.6%. The percentage share of

DSM in Tanzania in 2012 was 9.7%, highest among four censuses. It manifested that people tend to concentrate to DSM for 36 years in Tanzania. (Table 2.2.4)

Table 2.2.4 Population Trend in DSM, 1978, 1988, 2002, and 2012

Year	Tanzania Population	DSM		
		Population	Average Annual Growth Rate	Percentage Share in Tanzania
1978	17,512,610	851,222	-	4.9%
1988	23,095,878	1,360,865	4.8% (1978-1988)	5.9%
2002	33,443,603	2,487,288	4.4% (1988-2002)	7.4%
2012	44,928,923	4,364,541	5.6% (2002-2012)	9.7%

Source: National Housing Census 1978, 1988, 2002, and 2012

High internal immigration to DSM from other regions is a factor of rapid population growth. In fact, it is estimated that about 46% or approximately 1,996,887 of net migration shares population of DSM and about 55% of incremental population of DSM is due to the internal in-migration for the period of 2002-2012 (Table 2.2.5).

Table 2.2.5 Review of Internal Migration Trend over the Two Consecutive Population Censuses

Items	2002	2012	Annual Avg. Growth Rate	Incremental Population
Census Population	2,487,288	4,364,541	5.60%	1,877,253
In-migration	1,208,479	2,266,013	6.49%	1,057,534
Out-migration	237,446	269,126	1.26%	31,680
Net Migration (In-out Migration)	971,033	1,996,887	7.48%	1,025,854
Net Migration / Census Population (%)	39.04%	45.75%	-	54.65%

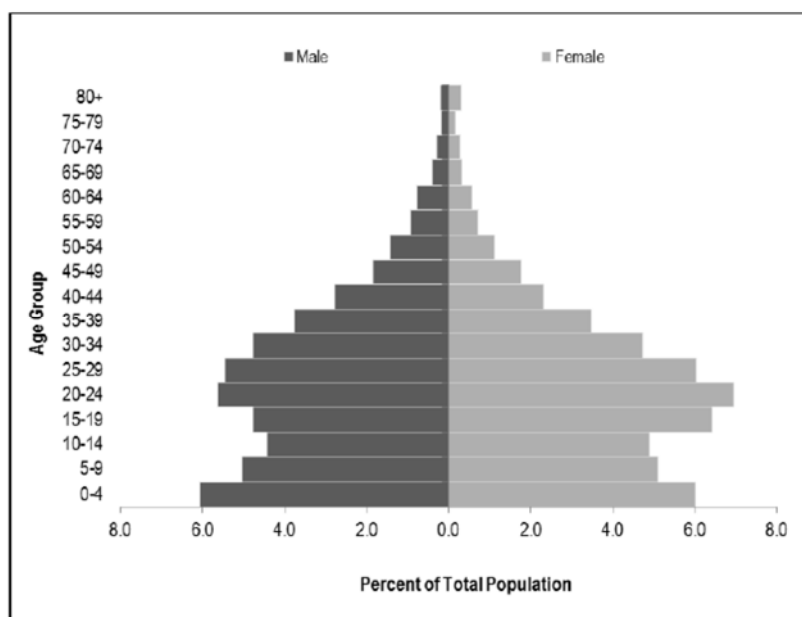
Source: Migration and Urbanization Report, Population and Housing Census 2012

Table 2.2.6 presents the summary of age and gender structure of DSM in 2012. Overall female population is about three percent greater than male, while the age group of 15-64, which is the potential working group, is 66.3% and predominant in the age structure. Figure 2.2.1 identifies that age group 0-4 years is highest, and age groups 20-24 years and 25-29 years are also fairly high.

Table 2.2.6 Outline of the Age and Gender Structures of the Target Area

Age Group	0-14 (31.6%)	15-64 (66.3%)	65+ (2.1%)	DSM
Male & Female	1,377,946	2,893,355	93,240	4,364,541
Male (48.7%)	678,454	1,400,829	46,503	2,125,786
Female (51.3%)	699,492	1,492,526	46,737	2,238,755

Source: Basic Demographic and Socio-Economic Profile DSM Region, Population and Housing Census 2012



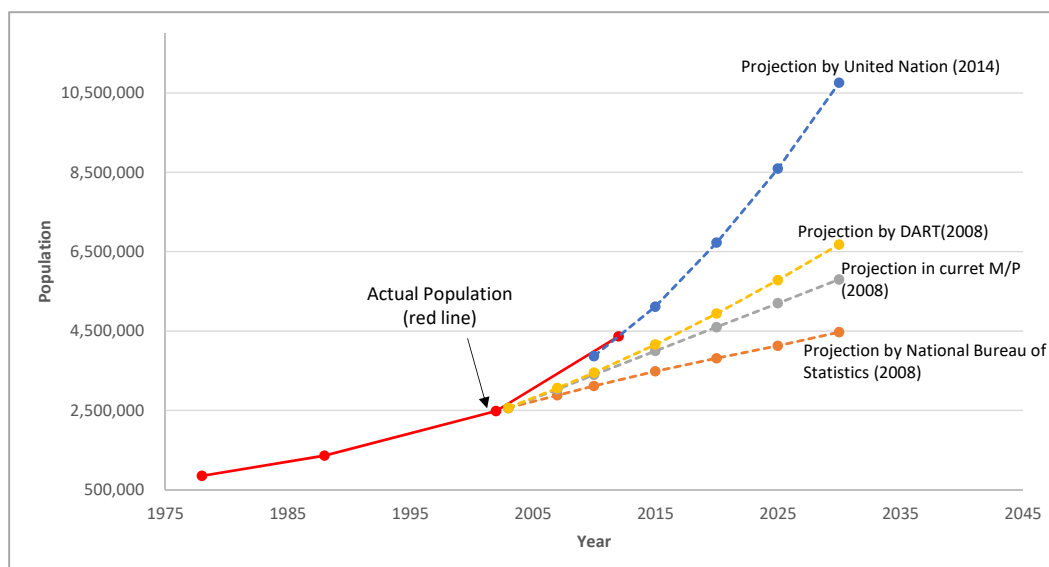
Source: Basic Demographic and Socio-Economic Profile DSM Region, Population and Housing Census 2012

Figure 2.2.1 Population Pyramid of DSM in 2012

(2) Trend and Existing Projections of Population Growth

DSM accommodates a population of 4,364,541 (2012 Census) with an annual population growth rate at 5.6%. Figure 2.2.2 shows the actual population projections by United Nations, DART, current M/P (UTMP), and National Bureau of Statistics (NBS). In 2008, DART, current UTMP, and NBS projected population growth up to 2030. DART projected high growth; current UTMP projected medium growth; and NBS projected low growth.

After that, Population and Housing Census in 2012 were published. Actual population of DSM in the Census 2012 is higher than all three projections. United Nation also projected population in 2014, and it projected that population will be over 10,000,000 persons in 2030.



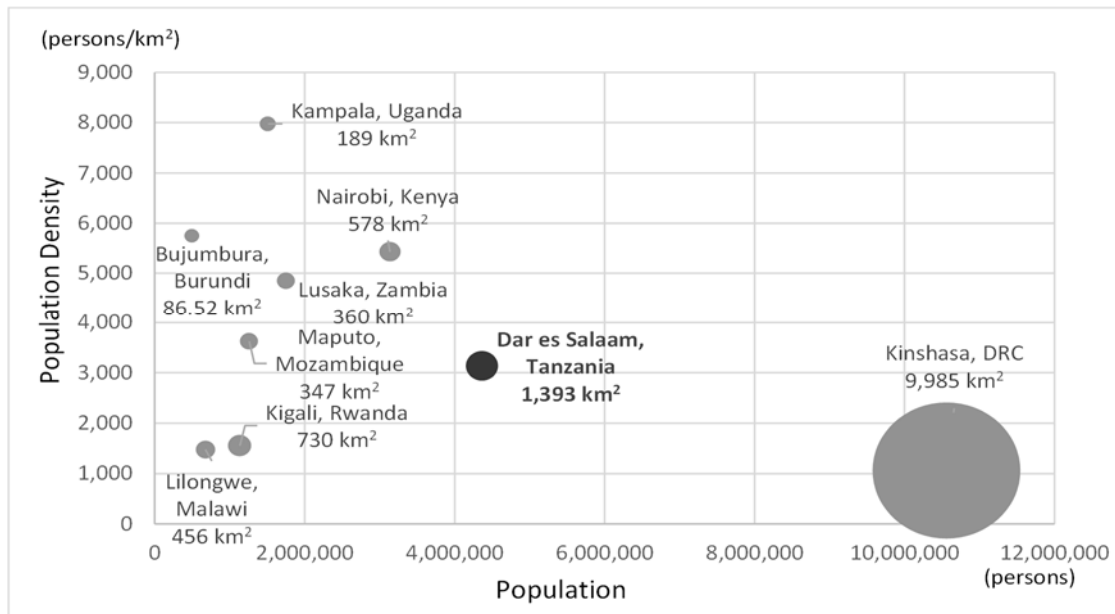
Source: JST based on the data of UN Dept. of Economic and Social Affairs, Population Division, World Urbanization Prospects 2014 and current UTMP 2008

Figure 2.2.2 Trend and Existing Projections of Population Growth

(3) Comparison of Demography with National Capitals of Neighbouring Nations

To grasp the level of population and its trend, JST compares population, population density, and population growth rate with other national capitals of neighbouring nations. Tanzania is surrounded by seven countries: Kenya, Uganda, Rwanda, Burundi, Democratic Republic of Congo, Zambia, Malawi, and Mozambique.

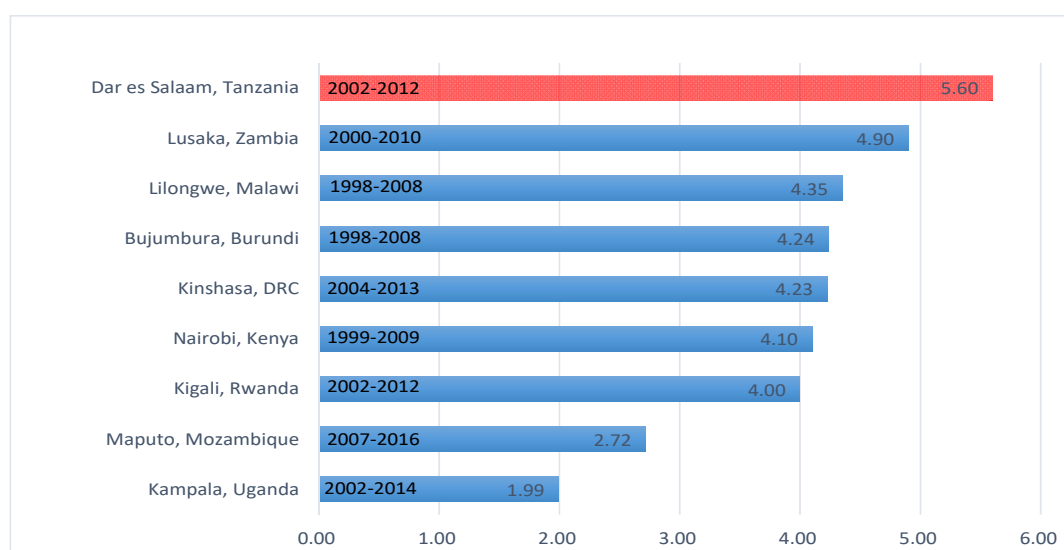
As shown in Figure 2.2.3, DSM has the second largest population following Kinshasa of Democratic Republic of Congo. Population density of DSM is the sixth highest among the cities. The size of dots or circles in the figure shows the size of land area. The larger the dot or circle is, the larger the land area is. Land area of DSM is also the second largest following Kinshasa.



Source: JST based on National Housing and Population Censuses of Each Nation

Figure 2.2.3 Population and Population Density of DSM and Neighbouring National Capitals

Figure 2.2.4 shows annual population growth rate of DSM and National Capitals of neighboring countries. The rate cannot be compared in a fair method because timing of census differs among the capital cities. Annual population growth of DSM is high compared to other national capital cities of neighboring countries.



Source: JST based on National Housing and Population Censuses of Each Nation

Figure 2.2.4 Annual Population Growth Rate of DSM and Other Neighbouring National Capitals

2.2.2 Socio-economy

(1) Industrial Share in Tanzania

Table 2.2.7 shows the industrial share by sector in Tanzania and Figure 2.2.5 shows the economic trend by sector.

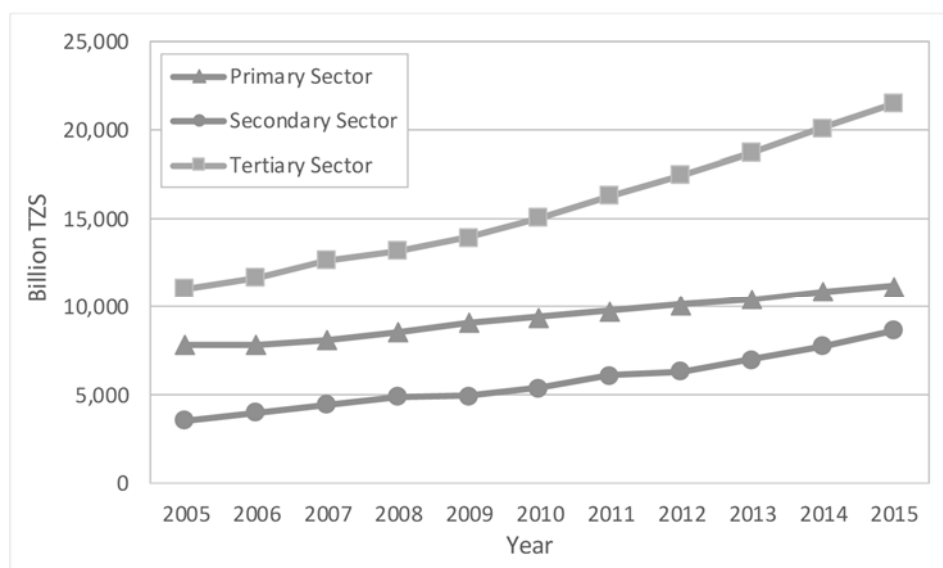
- In 2015, the recorded total industrial share was very high around 44,797 Billion Tanzania Shilling (TZS).
- The share of the primary sector has been observed to be decreasing from 2005 to 2015. On the other hand, the shares of secondary and tertiary sectors were increasing.
- The economy of Tanzania is growing at a stable rate and is keeping its balance.

Table 2.2.7 Industrial Share in Tanzania

Unit: Billion TZS

Year	Primary Sector		Secondary Sector		Tertiary Sector		Total	
2005	8,308	34.9%	3,805	16.0%	11,710	49.2%	23,823	100.0%
2006	8,336	33.4%	4,249	17.0%	12,393	49.6%	24,978	100.0%
2007	8,702	32.1%	4,793	17.7%	13,607	50.2%	27,102	100.0%
2008	9,176	32.1%	5,267	18.4%	14,171	49.5%	28,615	100.0%
2009	9,815	32.5%	5,328	17.6%	15,063	49.9%	30,206	100.0%
2010	10,110	31.5%	5,820	18.1%	16,203	50.4%	32,134	100.0%
2011	10,523	30.3%	6,606	19.0%	17,612	50.7%	34,741	100.0%
2012	10,869	29.8%	6,818	18.7%	18,818	51.5%	36,505	100.0%
2013	11,280	28.8%	7,579	19.4%	20,256	51.8%	39,116	100.0%
2014	11,749	28.1%	8,381	20.0%	21,725	51.9%	41,855	100.0%
2015	12,149	27.1%	9,375	20.9%	23,273	52.0%	44,797	100.0%
Note	Primary Sector: Agriculture, Mining and Quarrying Secondary Sector: Manufacturing, Electricity, Water, Construction Tertiary Sector: Trade and Repair, Accommodation & Food Service, Transport and Storage, Information and Communication, Financial & Insurance, Public Administration and Defense, Professional, Scientific & Technical Act, Administrative & Support Services, Real Estate, Education, Human Health and Social Service, Other Services							

Source: Highlights for the Third Quarter (July – September) Gross Domestic Product, 2016, National Bureau of Statistics Ministry of Finance and Planning, January 2017



Source: Highlights for the Third Quarter (July – September) Gross Domestic Product, 2016, National Bureau of Statistics Ministry of Finance and Planning, January 2017

Figure 2.2.5 Economic Trend by Sector

(2) GDP

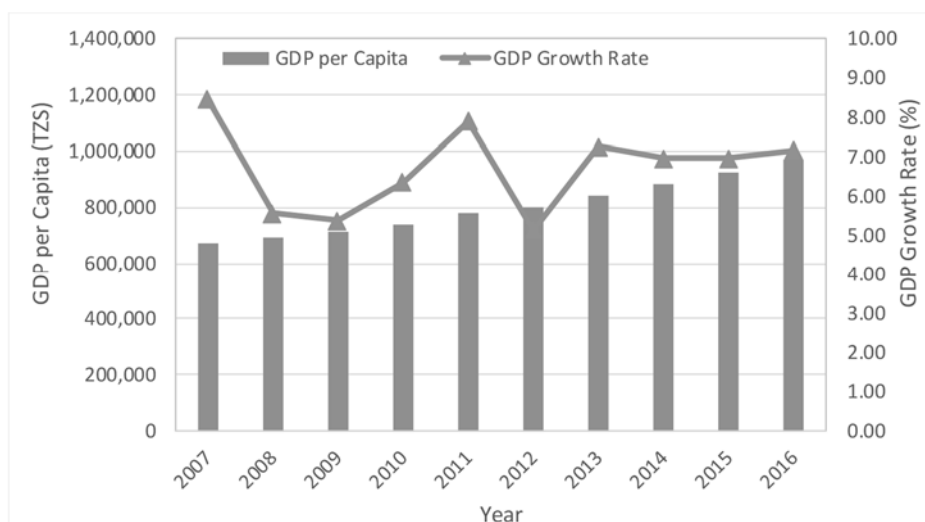
Table 2.2.8 shows the Tanzania GDP situation, and Figure 2.2.6 shows the GDP per capita and the GDP growth rate from 2007 to 2016 (past 10 years).

- The GDP in Tanzania is growing fast and has reached 47,263 billion TZS in 2016. Economic growth rate in Tanzania has reached the Top 3 status in Africa.
- The GDP growth rate in 2007 is accounted to be much higher at 8.46 than the other years. However, the GDP growth rate has decreased from 2008 and was able to grow back and has recovered in 2016 accounted at 7.17.
- The GDP per capita has grown higher since 2007. In 2016, the GDP per capita was accounted to be 971,845 TZS, which is 1.4 times bigger than in 2007.
- The GDP per capita has been observed to have a stable positive growth for the last ten (10) years. On the other hand, the GDP Growth Rate was observed to be erratic.

Table 2.2.8 Tanzania GDP Situation

		In Constant Price									
	Unit	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
GDP	Billion TZS	26,770	28,261	29,782	31,676	34,179	35,936	38,547	41,231	44,101	47,263
GDP Growth Rate	%	8.46	5.57	5.38	6.36	7.91	5.14	7.26	6.97	6.96	7.17
GDP per Capita	TZS	674,552	693,771	712,766	739,531	778,920	799,851	841,123	882,067	924,954	971,845

Source: Prepared by JST based on the IMF Statistical Data



Source: JST based on the IMF Statistical Data

Figure 2.2.6 Economic Trend of the GDP Growth

(3) GRDP

Table 2.2.9 shows GRDP at current market price in Tanzania from 2007 to 2016 (past 10 years) sourced by MOFP.

- GRDP in Tanzania main land has rapidly grown in past 10 years which reached at over 100,000 Billion TZS in 2016.
- GRDP in DSM has reached over 17,000 Billion TZS in 2016. And, GRDP growth rate is ranging from 12.8% to 17.4%.
- On the other hand, GRDP growth rate in other regions are accounted to be much higher over 10% than DSM (less than 10%). According to this situation, economic growth in Tanzania is expecting not only DSM economic situation but also other regions economic growth.

Table 2.2.9 GRDP Projection

REGION/YEAR	Unit: Billion TZS												
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2007-2016	2012-2016	2015-2016
Dodoma	807	1,000	1,141	1,391	1,630	1,904	2,152	2,423	2,636	3,030	15.8%	12.3%	15.0%
Arusha	1,209	1,515	1,762	2,137	2,498	2,929	3,366	3,787	4,271	4,877	16.8%	13.6%	14.2%
Kilimanjaro	1,261	1,566	1,738	1,953	2,427	2,789	3,218	3,619	4,126	4,607	15.5%	13.4%	11.7%
Tanga	1,494	1,607	1,782	2,038	2,505	2,884	3,313	3,715	4,235	4,846	14.0%	13.9%	14.4%
Morogoro	1,448	1,660	1,841	2,137	2,602	3,001	3,434	3,866	4,453	4,981	14.7%	13.5%	11.8%
Pwani	506	614	681	826	979	1,135	1,286	1,443	1,645	1,868	15.6%	13.3%	13.5%
Dar -es salaam	4,174	5,235	6,484	7,369	8,808	10,402	12,260	13,712	15,632	17,640	17.4%	14.1%	12.8%
Lindi	519	627	695	844	1,000	1,160	1,313	1,483	1,690	2,034	16.4%	15.1%	20.3%
Mtwara	648	805	893	1,258	1,363	1,625	1,788	2,017	2,363	2,802	17.7%	14.6%	18.6%
Ruwama	1,073	1,331	1,477	1,617	2,043	2,342	2,699	3,037	3,544	4,047	15.9%	14.7%	14.2%
Iringa	1,436	1,772	1,965	2,311	2,791	3,224	3,677	4,137	4,817	5,099	15.1%	12.1%	5.9%
Mbeya	1,916	2,353	2,762	3,227	3,849	4,501	5,273	5,931	5,108	5,832	13.2%	6.7%	14.2%
Singida	492	600	665	898	998	1,179	1,306	1,475	1,636	1,920	16.3%	13.0%	17.3%
Tabora	1,100	1,361	1,524	1,686	2,111	2,427	2,786	3,133	3,454	3,943	15.2%	12.9%	14.2%
Rukwa	926	1,153	1,304	1,483	1,818	2,101	2,415	2,718	3,181	3,736	16.8%	15.5%	17.4%
Kigoma	813	994	1,124	1,230	1,546	1,779	2,051	2,296	2,636	3,009	15.6%	14.0%	14.2%
Shinyanga	1,605	1,987	2,247	2,660	3,181	3,694	4,203	4,727	5,389	6,164	16.1%	13.7%	14.4%
Kagera	1,078	1,324	1,497	1,711	2,092	2,419	2,793	3,141	3,581	4,099	16.0%	14.1%	14.5%
Mwanza	2,316	2,851	3,469	4,016	4,769	5,620	6,655	7,478	8,452	10,051	17.7%	15.6%	18.9%
Mara	1,032	1,271	1,410	1,590	1,972	2,267	2,613	2,926	3,335	3,808	15.6%	13.9%	14.2%
Manyara	918	1,140	1,264	1,456	1,782	2,053	2,353	2,655	3,026	3,466	15.9%	14.0%	14.5%
Songwe	-	-	-	-	-	-	-	-	1,654	1,888	-	-	14.2%
Tanzania Main Land	26,770	32,765	37,727	43,836	52,763	61,434	70,953	79,718	89,210	101,856	16.0%	13.5%	14.2%

Source: MOFP, Statistical Office, 2017

(4) Employment

Employed population and its rate of occupation based on 2012 census data are shown in Table 2.2.10.

- In Tanzania, 62.8% of the total employed population shows “own agriculture” as their employment, however, major employed population in DSM was recorded to be “Employee” and “Own Non-Agriculture”, respectively with a total share of 91.0%.
- Employed population is approx. 1,719,000 persons in DSM, which is accounted for approx. 10%.
- This was brought about by DSM being the largest city in Tanzania and is a regionally important economic area.

Table 2.2.10 Employed Population by Region in 2012

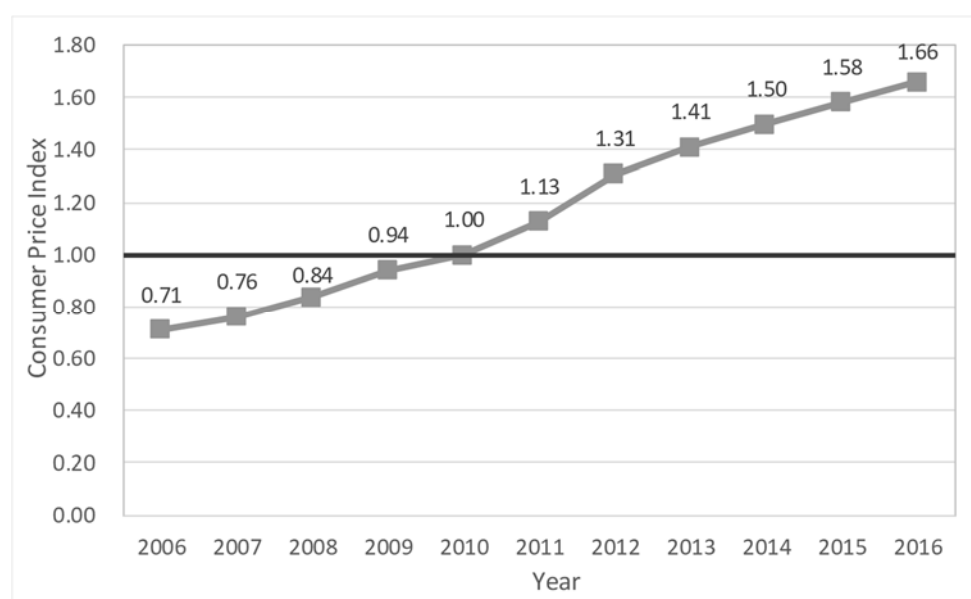
Region	Total	Employer	Employee	Own Non - Agriculture	Own Agriculture	Family Worker	Apprentices	Other
Tanzania	18,295,285	0.40%	11.60%	17.60%	62.80%	7.10%	0.20%	0.30%
Tanzania Mainland	17,916,156	0.40%	11.30%	17.20%	63.40%	7.20%	0.20%	0.30%
1 Dar es Salaam	1,719,466	1.40%	42.70%	48.30%	3.80%	2.90%	0.40%	0.60%
2 Mbeya	1,123,967	0.30%	7.70%	17.50%	67.90%	6.10%	0.20%	0.30%
3 Kagera	1,095,970	0.30%	8.20%	8.00%	76.00%	7.10%	0.20%	0.20%
4 Morogoro	1,002,049	0.40%	8.50%	12.10%	73.30%	5.40%	0.20%	0.20%
5 Mwanza	982,154	0.30%	10.80%	18.00%	64.80%	5.80%	0.20%	0.10%
6 Tanga	882,213	0.40%	8.30%	13.60%	75.30%	2.30%	0.10%	0.10%
7 Kigoma	863,004	0.30%	5.50%	8.80%	78.00%	6.90%	0.20%	0.30%
8 Dodoma	853,986	0.30%	6.80%	13.10%	71.80%	7.80%	0.10%	0.10%
9 Tabora	851,963	0.30%	5.70%	14.30%	66.50%	12.70%	0.20%	0.30%
10 Kilimanjaro	729,528	0.50%	14.80%	16.50%	62.10%	5.70%	0.30%	0.30%
11 Geita	687,213	0.30%	4.80%	13.40%	67.80%	13.20%	0.20%	0.40%
12 Arusha	664,427	0.50%	20.90%	32.00%	39.60%	6.70%	0.20%	0.20%
13 Mara	655,803	0.30%	6.90%	12.90%	69.90%	9.40%	0.30%	0.30%
14 Ruvuma	636,823	0.20%	5.90%	8.50%	80.60%	4.40%	0.30%	0.20%
15 Mtwara	629,119	0.30%	5.00%	7.90%	82.80%	3.60%	0.20%	0.20%
16 Simiyu	596,409	0.20%	3.30%	9.30%	73.70%	12.90%	0.20%	0.40%
17 Shinyanga	566,072	0.20%	7.40%	16.20%	64.30%	11.30%	0.20%	0.20%
18 Manyara	558,162	0.20%	6.30%	16.60%	58.40%	18.10%	0.10%	0.30%
19 Singida	554,188	0.30%	5.00%	13.90%	68.60%	11.40%	0.20%	0.50%
20 Pwani	460,517	0.40%	10.50%	23.70%	61.60%	3.60%	0.10%	0.20%
21 Lindi	422,236	0.30%	5.00%	9.40%	80.90%	3.90%	0.20%	0.20%
22 Iringa	419,148	0.30%	11.60%	12.20%	70.30%	5.20%	0.20%	0.20%
23 Rukwa	411,165	0.20%	5.20%	12.60%	72.20%	9.40%	0.20%	0.20%
24 Njombe	331,297	0.20%	7.40%	8.20%	80.40%	3.40%	0.20%	0.20%
25 Katavi	219,277	0.30%	5.60%	16.00%	66.20%	11.60%	0.20%	0.20%
Tanzania Zanzibar	379,129	0.40%	25.50%	37.40%	34.30%	2.00%	0.20%	0.10%
26 Mjini Magharibi	160,465	0.40%	15.50%	26.60%	55.20%	2.10%	0.10%	0.10%
27 Kaskazini Unguja	59,515	0.40%	16.50%	30.00%	51.20%	1.80%	0.10%	0.10%
28 Kaskazini Pemba	58,045	0.50%	40.10%	50.20%	7.60%	1.20%	0.20%	0.10%
29 Kusini Pemba	55,242	0.30%	13.70%	29.70%	52.60%	3.50%	0.20%	0.10%
30 Kusini Unguja	45,862	0.50%	14.20%	25.90%	56.30%	2.90%	0.20%	0.10%

Source: Basic Demographic and Socio-Economic Profile

(5) Consumer Price Index

The economic trend of the Consumer Price Index (CPI) from 2006 to 2016 is shown in Figure 2.2.7. This data is based on IMF and Economic Trend, using 2010 as base year.

- CPI in 2016 has reached to 1.66 by year 2010.
- CPI from 2010 to 2012 has a drastic growth accounted from 1.00 to 1.31.



Note: Base year is 2010

Source: IMF and Economic Trend

Figure 2.2.7 Economic Trend for CPI

2.2.3 Statistics in Transport

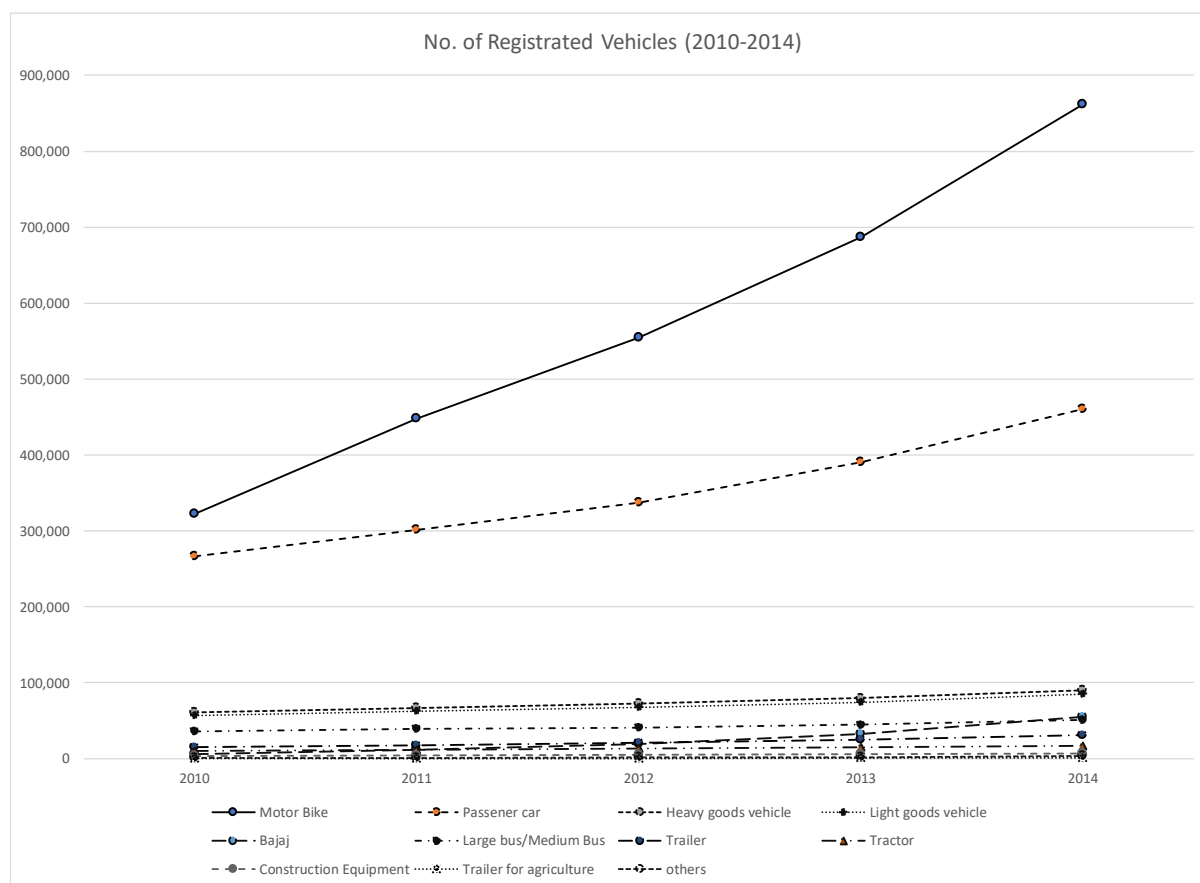
(1) Registration of the Vehicles in Tanzania

Number of registered vehicles in Tanzania from 2010 to 2014 is shown on the table below. Annual average growth rate of motorbike between 2010 and 2014 is 28%, while the one of passenger car is 15%. In total, average growth rate of vehicles in this period is 21%. Number of vehicles will increase continuously in conjunction with economic growth of Tanzania.

Table 2.2.11 Number of Registered Vehicles in Tanzania (2010-2014)

Type of Vehicle	2010	2011	2012	2013	2014	average growth rate 2010/14
Motorbike(nos)	322,239	447,647	554,265	686,863	862,026	28%
Passenger car(nos)	266,586	301,734	337,381	390,457	460,765	15%
Heavy goods vehicle(nos)	60,653	66,513	72,613	79,658	89,757	10%
Light goods vehicle(nos)	57,253	62,515	67,419	74,543	85,398	11%
Bajaj(nos)	6,477	11,677	19,031	32,505	55,149	71%
Large bus/Medium Bus(nos)	36,373	39,179	41,212	44,691	51,063	9%
Trailer(nos)	14,860	17,659	21,084	24,976	31,265	20%
Tractor(nos)	10,563	11,976	13,827	15,190	17,295	13%
Construction Equipment(nos)	3,575	4,627	5,430	6,186	7,258	19%
Trailer for agriculture(nos)	165	230	367	856	904	53%
others(nos)	689	1,101	1,542	1,908	3,306	48%
Total (no. of vehicles)	779,433	964,858	1,134,171	1,357,833	1,664,186	21%

Source: TRA/JICA-CUPID



Source: TRA

Figure 2.2.8 Number of Registration of Vehicles in Tanzania (2010-2014)

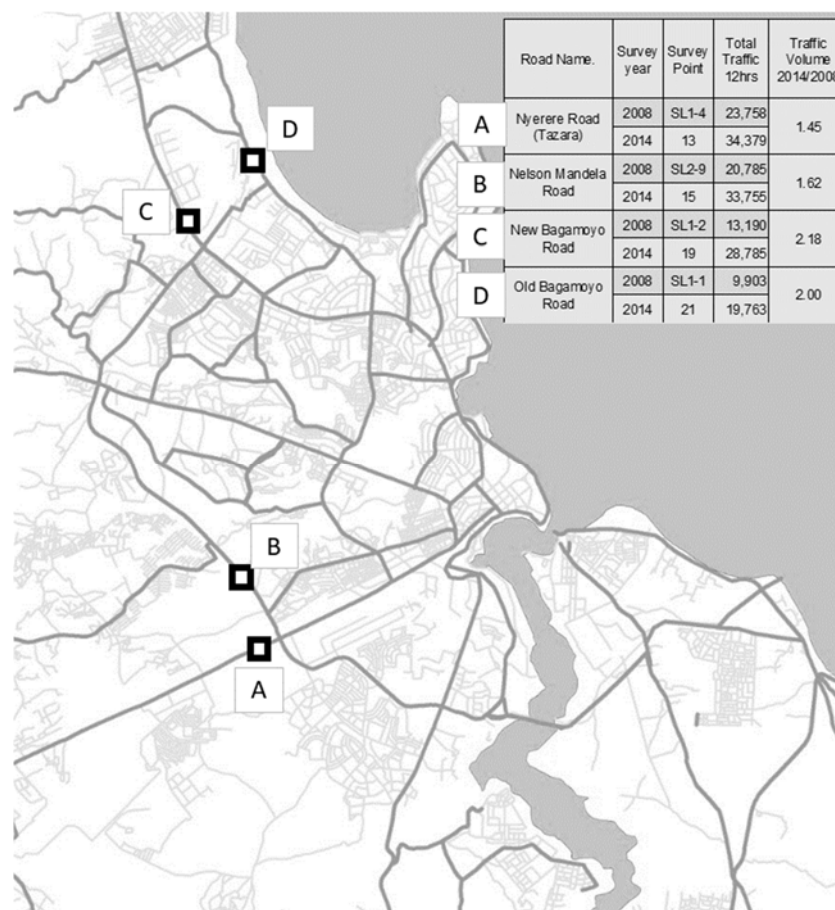
(2) Road Traffic Volume

The comparison of traffic volume between 2008 (surveyed by JICA M/P) and 2014 (survey by TANROADS) is shown below. Traffic volume on trunk road was increased by 1.45 to 2.18 times from 2008 to 2014. It is corresponding to annual average growth rate of 6% - 14%.

Table 2.2.12 Comparison of Traffic Volume between 2008 and 2014

Road Name.	Survey year	Survey Point	Car Total	Bus Total	Truck Total	Motor cycles	3 Wheelers Other vehicles	Other vehicles	Total Traffic 12hrs	Traffic Volume 2014/2008
Nyerere Road (Tazara)	2008	SL1-4	12,502	6733	3,152	1,244		127	23,758	1.45
	2014	13	16,438	5097	3,300	8,480	1,014	50	34,379	
Nelson Mandela Road	2008	SL2-9	12,018	4822	2,964	824		157	20,785	1.62
	2014	15	12,363	4300	4,619	9,889	2,571	13	33,755	
New Bagamoyo Road	2008	SL1-2	7,543	3886	1,309	387		65	13,190	2.18
	2014	19	17,727	3435	1,898	3,270	2,451	4	28,785	
Old Bagamoyo Road	2008	SL1-1	7,672	1281	513	296		141	9,903	2.00
	2014	21	13,884	1152	453	1,802	2,472	0	19,763	

Source: TANROADS (Survey in 2014), JICA (Survey in 2008)



Source: TANROADS (Survey in 2014), JICA (Survey in 2008)

Figure 2.2.9 Traffic Counts Location Map

(3) Traffic Accidents

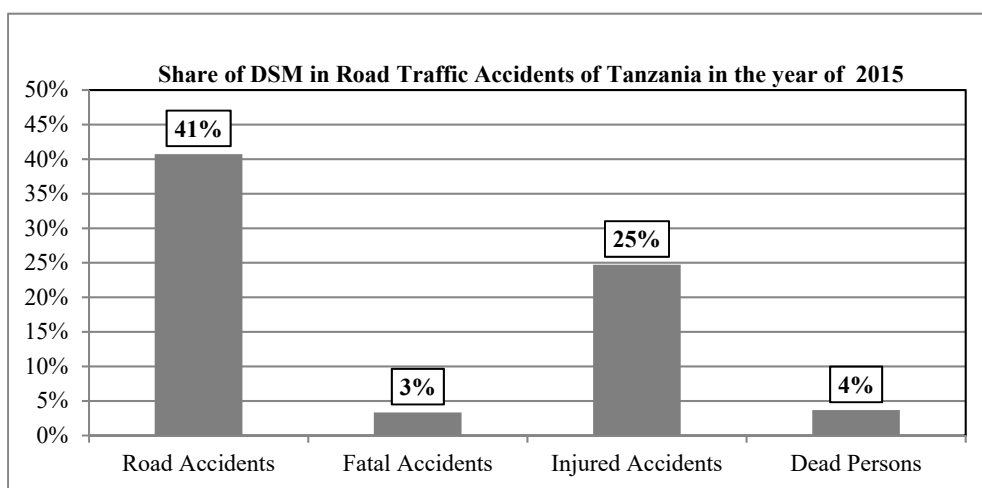
In Tanzania, there were 3,574 traffic accidents in 2015. Fatality by traffic accident in Tanzania in 2015 was 3,574 which was 7.7% of the population in Tanzania. Its rate is almost the same as those of neighbouring eastern African countries which were almost double compared to developed countries.

Fatality by traffic accident counted 322. More or less, 10 accidents and one dead happen by traffic accident per day. Number of traffic accidents is relatively higher than other regions, however, number of dead persons were lower per population compared to other regions.

Table 2.2.13 Comparison of Traffic Accidents in Other Countries in 2015

Police Region	Road Accidents	Fatality	Population ('000)	Fatality/Population	Remarks
Tanzania	8,777	3,574	46,220	7.7%	Population in 2012
Kenya	5,310	3,057	45,010	6.8%	Population in 2014
Uganda	18,495	3,324	34,635	9.6%	Population in 2014
USA	1,747,560	35,092	321,419	10.9%	
UK	146,203	1,804	65,110	2.8%	
France	56,603	3,461	64,277	5.4%	
German	305,659	3,459	81,198	4.3%	
Japan	536,899	4,859	127,095	3.8%	

Source: Tanzania Police Force, "Crime and Traffic Incidents Statistics Report January- December 2015", Kenya Statistical Abstract 2016, Kenya National Bureau of Statistics, Uganda Statistical Abstract 2016, Uganda National Bureau of Statistics, Statistics 2015 in Japan, National Police Agency, Japan



Source: Tanzania Police Force, "Crime and Traffic Incidents Statistics Report January- December 2015"

Figure 2.2.10 Share of DSM in Road Traffic Accidents of Tanzania in the Year of 2015

(4) Airport

1) Air craft Movements

Air craft movement in Julius Nyerere International Airport (JNIA) is almost the same between 2013 and 2015.

The number of aircraft movements in JNIA is almost 2.8 times of the no. of aircraft movements in Entebbe International Airport in Uganda and almost double that of Accra International Airport in Ghana.

Table 2.2.14 Air Craft Movements (2013-2015)

Aircraft Movements (no.)	2013	2014	2015
Dar es Salaam(Tanzania)	77,185	77,990	75,240
Nairobi(Kenya)	91,000	100,000	100,000
Entebbe(Uganda)	30,364	26,886	27,650
Accra(Ghana)	41,934	41,849	37,611

Source: TAA, Statistical Abstract in Kenya, in Uganda, Ghana

2) Number of Passengers

Number of air passengers slightly increased between 2014 and 2015. Numbers of passengers at JNIA is almost the same as Accra International Airport in Ghana, and almost double the numbers of Entebbe International Airport in Uganda.

Table 2.2.15 Airport Passenger Volume (2013-2015)

Number of Passengers	2013	2014	2015
Dar es Salaam(Tanzania)	2,348,819	2,478,055	2,496,394
Nairobi(Kenya)	5,947,000	6,387,000	6,481,000
Entebbe(Uganda)	1,464,004	1,449,824	1,520,439
Accra(Ghana)	2,448,066	2,369,754	1,227,519

Source: TAA, Statistical Abstract in Kenya, in Uganda, Ghana

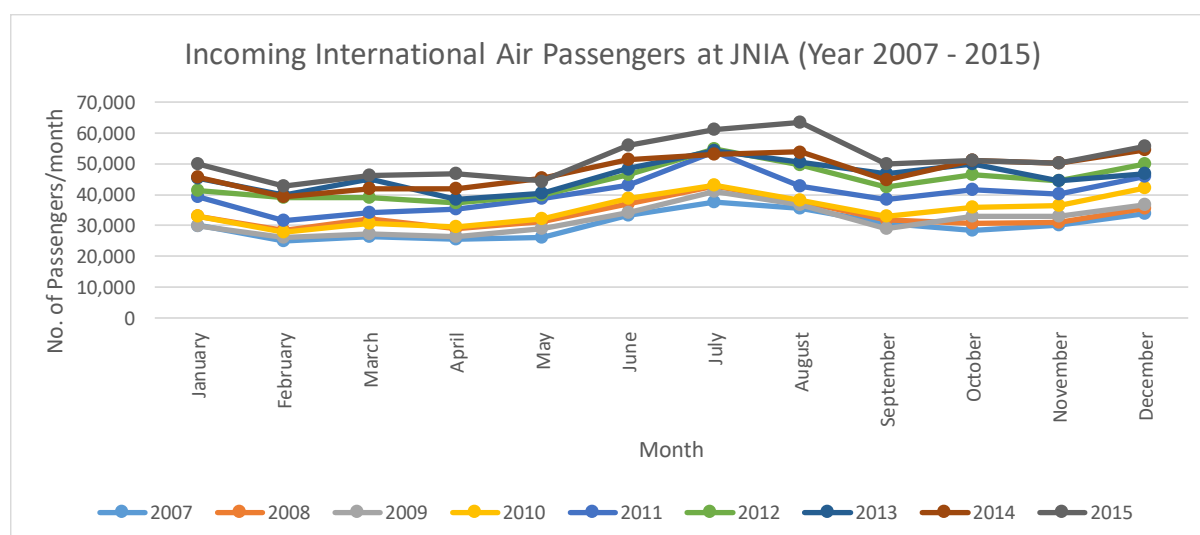
Number of air passengers increased from June to August, as high seasons, and decreased from February to May and from September to November as low seasons.

Table 2.2.16 Monthly Airport Passenger Volume (2007-2015)

Unit: nos

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
January	29,990	33,047	29,902	33,097	39,287	41,210	45,237	45,630	50,007
February	24,898	28,517	25,995	27,976	31,590	39,156	39,779	39,331	42,667
March	26,430	32,119	27,398	30,802	34,056	39,133	44,961	42,001	46,192
April	25,543	29,069	26,317	29,541	35,277	37,221	38,417	41,799	46,862
May	26,144	31,383	29,115	32,270	38,695	39,790	40,575	45,328	44,322
June	33,185	36,961	34,136	38,602	43,146	46,341	48,330	51,294	55,791
July	37,599	42,720	41,104	43,118	53,901	54,795	54,138	53,134	61,125
August	35,674	37,763	36,782	38,140	42,735	49,577	50,549	53,779	63,520
September	30,844	31,835	29,020	32,942	38,416	42,336	46,838	44,759	49,933
October	28,373	30,665	32,960	35,965	41,473	46,514	49,802	50,986	51,116
November	30,264	31,134	33,130	36,559	40,072	44,514	44,429	50,074	50,232
December	33,738	35,636	36,704	42,132	45,958	49,854	46,702	54,494	55,685
TOTAL	362,682	400,849	382,563	421,144	484,606	530,441	549,757	572,609	617,452

Source: TAA



Source: TAA

Figure 2.2.11 Monthly Incoming International Air Passengers at JNIA (Year 2007-2015)

3) Air Cargo Volume

Total cargo volume at JNIA is 22,014 tons in 2015. Cargo volume of Kenyatta International Airport in Kenya in 2014 was 259,000 tons, while cargo volume tonnage at Accra International Airport in Ghana and Entebbe Airport in Uganda are around double the cargo volume at JNIA. Cargo tonnage in JNIA slightly increased from 2013 to 2015.

Table 2.2.17 Airport Cargo Volume (2013-2015)

Unit: Tons

Cargo Volume (Tonnes)	2013	2014	2015
Dar es Salaam(Tanzania)	21,891	21,255	22,014
Nairobi(Kenya)	244,318	258,627	243,285
Entebbe(Uganda)	57,719	54,856	56,465
Accra(Ghana)	43,668	54,390	51,325

Source: TAA, Statistical Abstract in Kenya, in Uganda, Ghana

(5) Port

DSM has the biggest seaport in Tanzania. Handling cargo volume was 14 million tons in 2013/2014. Compared to Mombasa port in Kenya, Mombasa dealt with 22 million corresponding to 1.57 times the volume of DSM port.

Table 2.2.18 Cargo Throughput in Tanzania

Unit: '000 Metric Tons

Port	DSM	Tanga	Mtwara	Kilwa,Lindi and Mafia	Seaport Total
Import	11,867,655	264,918	221,022	21,387	12,374,982
Export	2,037,897	103,424	135,334	32,814	2,309,469
Transshipments	430,275	0	0	0	430,275
Total	14,335,827	368,342	356,356	54,201	15,114,726

Source: Tanzania Port Authority, "Annual Report & Accounts for the year ended 30th June, 2014"

Table 2.2.19 Import, Export & Trans-shipment Cargo Volume between 2011 and 2015

Total Freight through Dar es Salaam Port (000'Tons)						
S/N	DESCRIPTION	2011	2012	2013	2014	2015
1	DRY GENERAL CARGO					
	Imports	4,846	6,053	6,642	7,100	6,657
	Exports	1,705	1,924	1,892	2,232	2,137
	SUB TOTAL	6,551	7,977	8,534	9,332	8,794
2	BULK OIL					
	Imports	3,624	3,687	4,471	4,357	4,882
	Exports	77	25	37	66	362
	SUB TOTAL	3,701	3,712	4,508	4,423	5,244
3	OTHER BULK LIQUID					
	Imports	-	234	267	306	362
	Exports	-	28	14	0	0
	SUB TOTAL	-	262	281	306	362
	Transshipment	139	87	187	415	201
4	TOTAL					
	Imports	8,470	9,974	11,380	11,763	11,901
	Exports	1,782	1,977	1,943	2,298	2,499
	Transshipment	139	87	187	415	201
	GRAND TOTAL	10,391	12,038	13,510	14,476	14,601

Source: Tanzania Port Authority, "Annual Report & Accounts for the year ended 30th June, 2014"

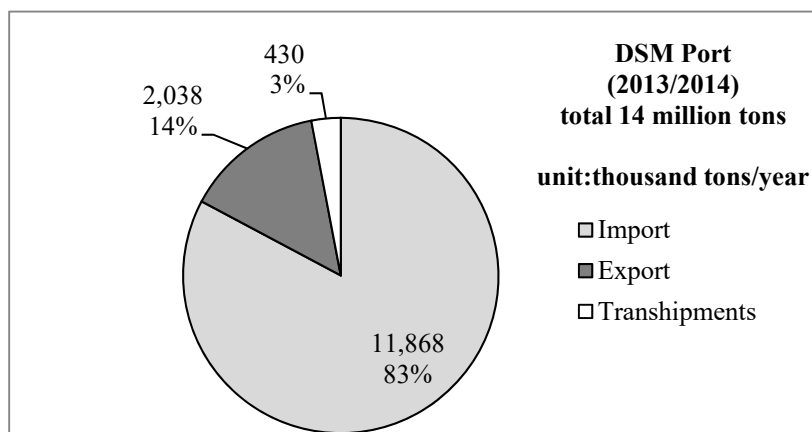
Table 2.2.20 Comparison with Mombasa Port

Unit: '000'Tons

	2011		2012		2013		2014		2015	
	DAR	Mombasa	DAR	Mombasa	DAR	Mombasa	DAR	Mombasa	DAR	Mombasa
Imports	8,470	16,938	9,974	18,732	11,380	19,150	11,763	20,777	11,901	22,680
Exports	1,782	2,788	1,977	3,045	1,943	2,983	2,298	3,366	2,499	3,534
Transshipment	139	227	87	143	187	174	415	732	201	518
Total	10,391	19,953	12,038	21,920	13,510	22,307	14,476	24,875	14,601	26,732

Source: Tanzania Port Authority, "Annual Report & Accounts for the year ended 30th June, 2014"

The import volume at DSM was 12 million tons whereas export was two million. The ratio of the import volume for the export was six times.



Source: Tanzania Port Authority, "Annual Report & Accounts for the year ended 30th June, 2014"

Figure 2.2.12 Import and Export Composition in Cargo at DSM Port

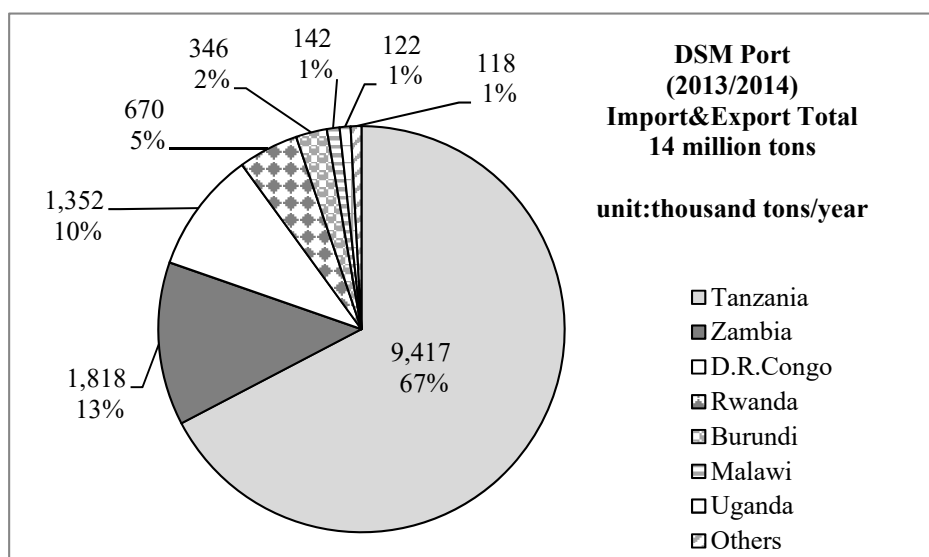
Total Imported and Exported Cargo at DSM goes to inside Tanzania by 67%, to Zambia by 13%, to D.R. Congo by 10%.

Table 2.2.21 Countrywide Distribution of Cargo through DSM Port (2013/2014)

unit: Metric Tons

Police Region	Tanzania	Zambia	D.R.Congo	Burundi	Rwanda
Import	8,071,001	1,509,885	963,782	333,887	645,475
Export	1,345,851	308,256	388,675	12,272	25,159
Transshipments	430,275	0	0	0	0
Total	9,847,127	1,818,141	1,352,457	346,159	670,634
Police Region	Malawi	Uganda	Others	Total	
Import	141,194	120,890	74,796	11,860,910	
Export	342	1,428	43,410	2,125,393	
Transshipments	0	0	0	430,275	
Total	141,536	122,318	118,206	14,335,827	

Source: Tanzania Port Authority, "Annual Report & Accounts for the year ended 30th June, 2014"



Source: Tanzania Port Authority, "Annual Report & Accounts for the year ended 30th June, 2014"

Figure 2.2.13 Countrywise Distribution of Cargo through DSM Port

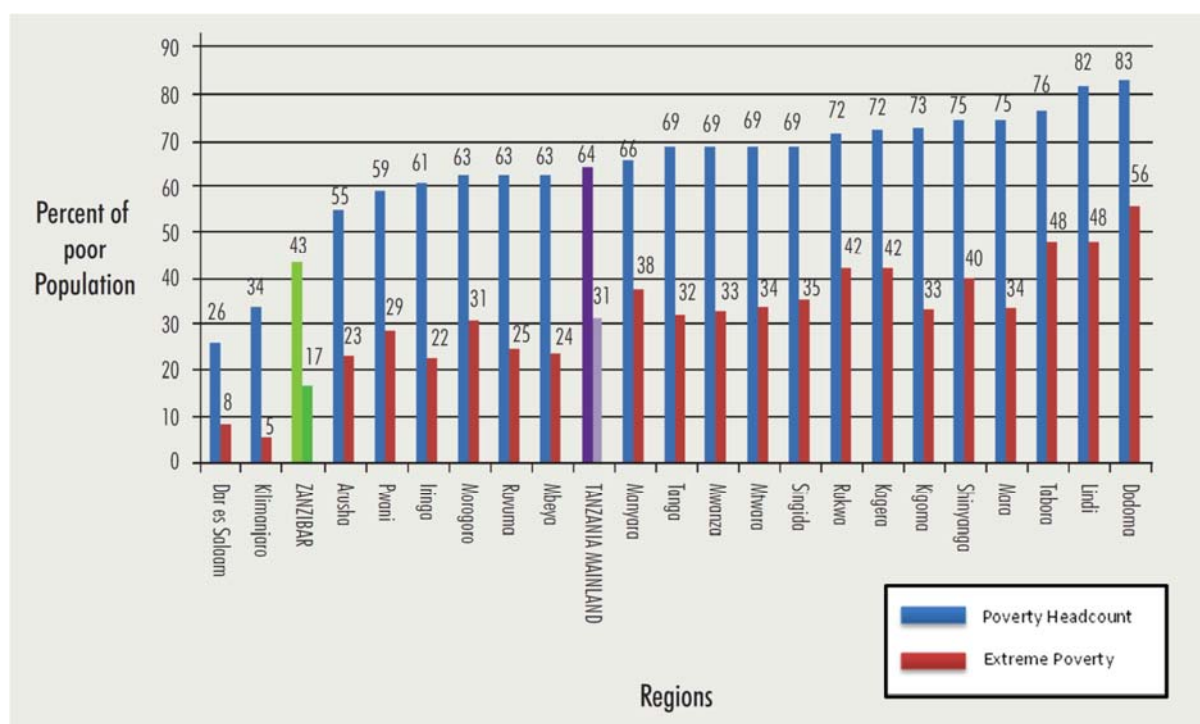
2.2.4 Society and Life in DSM

(1) Poverty

Tanzania is classified as LDC (Least Developed Country) and poverty is one of the serious problems the country faces. Multidimensional Poverty Index (MPI) is used to measure a wide range of deprivations that individuals and households may face. The concept of weighted deprivation is helpful particularly to understand the status of people below the poverty line. MPI has three dimensions (education, health, and standard of living) and uses 10 indicators that include:

- Education: Years of schooling and school attendance,
- Health: Child mortality and nutrition,
- Living Standards: Type of cooking fuel, sanitation, availability of clean and safe water, access to electricity, type of floor, and ownership of assets.

Figure 2.2.14 below presents the distribution of Tanzania's regions according to MPI. The figure reveals that DSM, Kilimanjaro and Arusha are the most prosperous regions in the country. The figure also shows that the incidence of poverty in DSM according to MPI is 26% and the proportion of the population in extreme poverty in DSM is 8%.



Note: Blue shows Poverty Headcount and red shows extreme poverty.

Source : Tanzania Human Development Report 2014; MPI values computed using Demographic and Health Survey data 2010 (NBS 2011)

Figure 2.2.14 MPI in Tanzania by Region

(2) Gender

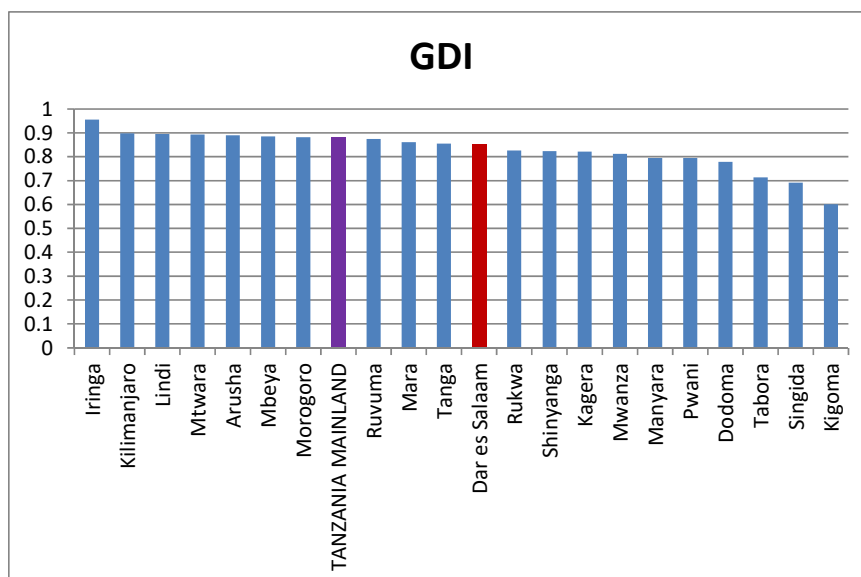
Cultural stereotypes and patriarchal practices contribute to gender inequalities in DSM. Women and girls are often marginalized in both education and employment. After the 1995 Beijing Declaration, DCC has been making more efforts to empower women and institutionalise gender equality in all sectors of the society in collaboration with the national government. For example, women are encouraged to form economic groups and 4,100 groups in total were formulated in the DSM region. The women groups are assisted with loans to engage in various microeconomic activities such as small-scale businesses, agriculture, poultry keeping, tailoring, etc.

Table 2.2.22 Women Economic Groups by District, 2013

District	Total number of groups	Total members	Number of groups assisted	Total loaned (Tzs)	Loan received per group (Tzs)	Percent of group assisted
Kinondoni	283	1,915	261	462,050,000	1,770,307	92
Ilala	204	5,661	0	0	0	0
Temeke	3,613	18,065	236	413,000,000	1,750,000	7
Total	4,100	25,641	497	875,050,000	1,760,664	12

Source: DSM Region Socio-Economic Profile, 2014

Gender Development Index (GDI) measures discrepancies in Human Development Index (HDI) by gender. A GDI value approaching 1.0 implies a smaller gap between women and men in terms of HDI. DSM region is the 11th in GDI with GDI value of 0.851 as shown in Figure 2.2.15 and Table 2.2.23 GDI and Indicators of DSM.



Source: JST based on Tanzania Human Development Report 2014

Figure 2.2.15 GDI in Tanzania by Region

Table 2.2.23 GDI and Indicators of DSM

	GDI		HDI		Life Expectancy		Expected Years of Schooling		Estimate GDP per capita	
	Value	Rank	Value		(Years)		(Years)		(Tshs.)	
			Female	Male	Female	Male	Female	Male	Female	Male
DSM	0.851	11	0.653	0.767	61.8	57.3	7.35	8.02	1,344,305	2,146,134

Source: JST based on Tanzania Human Development Report 2014

(3) Crime Statistics

Tanzania has consistently shown in recent decades to have a high overall crime rate. The growth of towns, population increase, the development of science and technology has increased the erosion of morals in the country. For example, Afrobarometer, a comparative series of public opinion surveys, observed that in 2012, Tanzanians reported higher rates of crime and anxiety about their safety than people in all 35 other African countries that were surveyed. Tanzania is not a leader in violent crimes such as murder, rape, and armed robbery, but rather petty theft and burglary.

Table 2.2.24 below shows criminal offences by region as well as population offences per police officer and police officer per 100km². DSM region has the highest number of criminal offences as shown in the table.

Table 2.2.24 Population and Criminal Offences per Police Officer and Police Officers per 100km²

Police Region	Criminal Offences	Population/Police Officer	Police Officer / Km ² 100	Offences / Police Officer
Arusha	25,253	952	5	13
Dar es Salaam	122,663	780	33	13
Dodoma	18,469	1,303	4	11
Geita	14,632	1,881	3	15
Iringa	12,304	894	2	11
Kagera	17,482	1,865	9	12
Katavi	6,210	1,068	1	11
Kigoma	11,497	1,748	4	9
Kilimanjaro	29,608	1,020	13	17
Lindi	5,867	965	1	6
Manyara	14,466	1,421	2	13
Mara	15,721	1,601	6	13
Mbeya	27,793	1,564	6	15
Morogoro	28,672	1,300	3	16
Mtwara	8,655	1,145	7	8
Mwanza	40,167	1,615	20	21
Njombe	7,059	941	3	9
Pwani	17,667	787	5	12
Rukwa	7,865	1,255	2	9
Ruvuma	12,051	1,334	2	11
Shinyanga	11,389	1,548	4	11
Simiyu	6,840	2,470	1	10
Singida	10,178	1,312	2	9
Tabora	16,533	2,254	1	15
Tanga	18,046	1,487	11	12
Tarime - Rorya	9,079	0	25	10
Vikosi	1,432	0		
Tanzania Mainland	516,166	1,250	4	14
Kaskazini Unguja	431	313	116	1
Kusini Unguja	465	161	80	1
Mjini Magharibi	331	198	1,037	0
Kaskazini Pemba	143	460	93	0
Kusini Pemba	235	469	152	0
Tanzania Zanzibar	1,605	265	189	0
Tanzania	519,203	1,071	5	11

Source: Crime and Traffic Incidents Statistics Report, 2015

(4) Indigenous People

Tanzania has a multi-ethnic population with more than 125 different ethnic communities. Four of these- the Hadzabe, the Akie, the Maasai and the Barabaig- identify themselves as indigenous peoples. The concept of indigenous peoples is not acknowledged in Tanzania but the government “recognizes the vulnerability of some of the marginalized communities”. In early 2012, a Draft Indigenous Peoples Policy Framework was issued by the government’s Social Action Fund. This document specifically mentions the Hadzabe and the Barabaig, and adds that “the determination of which ethnic groups in Tanzania are recognized as Indigenous Peoples is still in process”.

The majority of the indigenous peoples live in northern Tanzania, in the Arusha and Manyara regions. While it cannot be excluded that people representative of these tribes are present in Dar es Salaam as part of their livelihood strategy, Dar es Salaam as a city does not have indigenous entities as such.

2.2.5 Regional Framework

(1) Headquarters of the East African Community (EAC)

The East African Community (EAC) is the regional intergovernmental organisation with the partner states of the Republics of Kenya, Uganda, the United Republic of Tanzania, Republic of Burundi and Republic of Rwanda. In 2011, South Sudan became the sixth member. The EAC aims to enhance the cooperation among the countries in political, economic and social fields for their mutual benefit. With the population of 150 million, Gross Domestic Product of US\$ 146 billion (as of 2016, EAC statistics), the EAC is one of the fastest growing regional economic blocks in the world. In order to enhance the inter-regional trading, the customs union, which enables the increase of free trade among the EAC, has activated in 2005 as the regional trade integration. In the framework of EAC, Tanzania is one of the original states, and has its headquarters in Arusha.

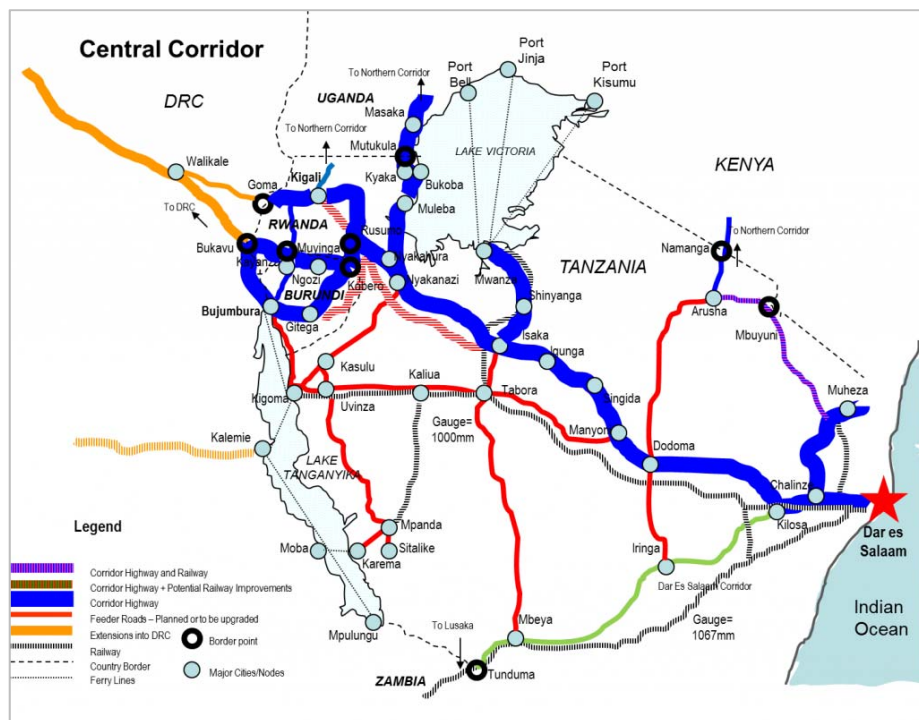


Source: EAC, 2017

Figure 2.2.16 Members of the East African Communities

(2) Gateway of the Central Corridor

Taking the economic and geographic initiative, DSM is sustainably developing as the gateway to the whole country and furthermore to the East African Community (EAC). The port of DSM is acting as a logistic gate to the landlocked countries of Uganda, Rwanda, Burundi, supporting the East African busiest shipping port of Mombasa in Kenya. The Government of Tanzania is paying further focuses for formulating the international corridor from DSM Central Corridor to Malawi, Zambia and DR Congo is one of the cases. The formulation of the DSM Corridor is expected to invite foreign investment for agriculture, business creation of tourism, and enhance the logistic networks.



Source: CCTFA Official Map, 2017

Figure 2.2.17 Central Corridor and DSM

- **East Africa Commercial and Logistic Centre**

In October 2017, the project plan of the East Africa Commercial and Logistic Centre was announced. The project is to establish the Commercial and Logistic Centre at Ubungo Bus terminal. An agreement has already been made between TANROADS, DART and the Chinese company, who shall allocate 330 billion TZS budget.

It will constitute 3,550 shops, 5,000 Parking Lots and all business from different cities will be served at Ubungo, and by using SGR, the products will be transported to Kigoma and Mtukula, while Kigoma Commercial Centre will have 500 Shops that will serve for RWANDA, BURUNDI and DRC. The project is expected to encourage the economic and logistic network within EAC.



Source: DCC, DART November, 2017

Figure 2.2.18 East Africa Commercial and Logistic Centre at Ubungo (Image)

(3) COMESA and SADC

The Common Market for Eastern and Southern Africa (COMESA) is a regional economic group aiming at establishing a free trade area that encompasses 19 countries. The mission of COMESA is to achieve sustainable economic and social progress through increased cooperation and integration in all fields of development, particularly in trade, customs and monetary affairs, transport, technology, industry and energy, gender, agriculture, environment and natural resources. Tanzania joined COMESA in November 1994, but has officially withdrawn since September 2001. It is because the changes in internal tariff arrangements would harm Tanzania.

Tanzania remains the member of Southern African Development Community (SADC), which was established as a development coordinating conference (SADCC) in 1980 and transformed into a development community in 1992. SADC is also the regional economic community comprising 15 member states. Its common agenda includes: i) Promotion of sustainable and equitable economic growth and socio-economic development that ensures poverty alleviation with the ultimate objective of its eradication; ii) Promotion of common political values, systems, and other shared values, which are transmitted through institutions that are democratic, legitimate and effective; and iii) Promotion, consolidation and maintenance of democracy, peace and security. Under these agenda, Tanzania plays a role as one of principal stakeholder to the member states of SADC.

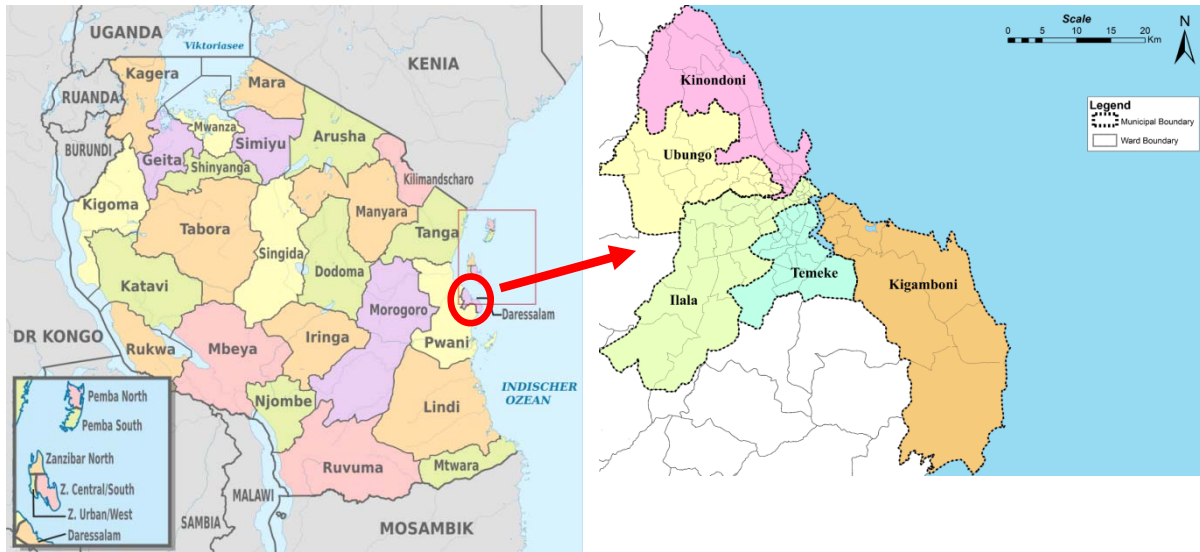


Source: SADC Official Map, 2017

Figure 2.2.19 Tanzania as the Member of SADC

(4) Regions in Tanzania and DSM

Tanzania is composed of 30 administrative regions: 27 in the mainland and 3 in Zanzibar. Among the regions in the mainland, DSM is the smallest, with a size of 1,393km², but is the most populated. In the administrative structure of the local government in Tanzania, the region is generally divided by several numbers of districts, and the districts are composed of a number of the city councils or municipal councils. DSM is apart from its standard administrative structure, as the centre of population and economic activities. The DSM Region has five municipal councils; Ilala, Kinondoni, Temeke, Ubungo and Kigamboni, with one city council called Dar es Salaam City Council (DCC).

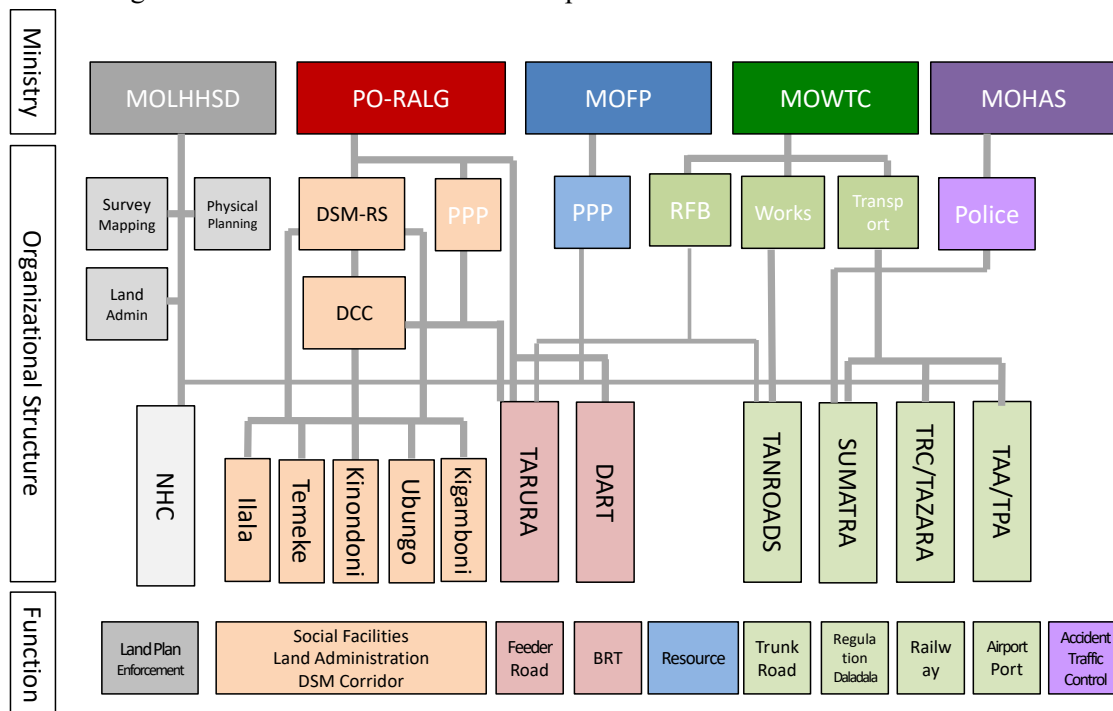


Source: JST, 2017

Figure 2.2.20 Regions in Tanzania and Municipal Councils in DSM Region

2.3 Roles and Responsibility of the Stakeholders

The current organizational structure and relationship of the stakeholders are shown below.



Source: JST as of 21 Nov 2017, amended from JICA CUPID

Figure 2.3.1 Organizational Structure and Relationship of the Stakeholders

2.3.1 Administrative Structure of DSM

(1) Overview of National Government

President's Office, Reginal Administration and Local Government (PO-RALG) is the responsible counterpart organization of the Project. PO-RALG is mandated for the regional administration, local government, civil services and good governance. Vice President's Office (VPO) is for the duties of

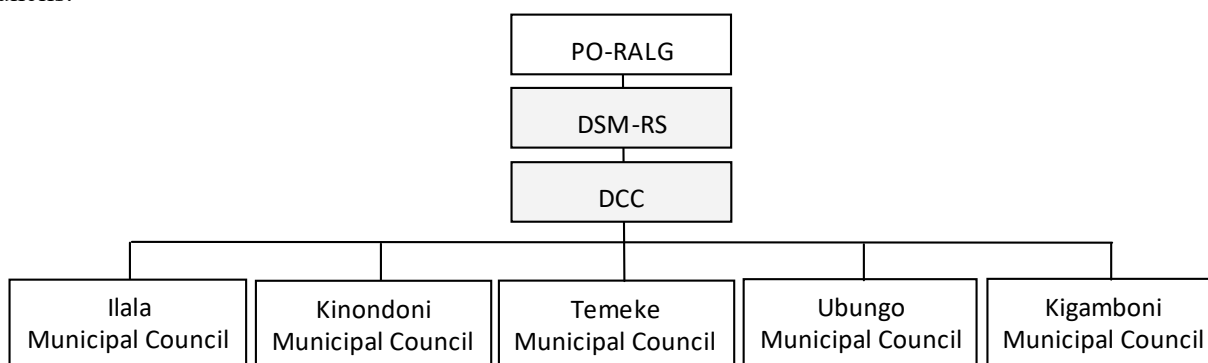
union affairs and environment. Among the 17 ministries, 4 ministries shall cooperate for the project; Ministry of Finance and Planning (MOFP) manages overall revenue, expenditure and financing of the Government, Ministry of Home Affairs (MOHA) has the mission of maintaining Law and Order and protect life and property. Ministry of Land, Housing and Human Settlements (MOLHHSD) has been mandated to administer land and human settlement in the country, and Ministry of Works, Transport and Communication (MOWTC) is responsible for development and maintenance of roads, equipment and plants, bridges, safety and environment, transport network and communication so as to contribute towards achieving a coherent vision for economic development of the country. Organizational structures of the stakeholders are shown in the Annex.

(2) President Office of Regional Administration and Local Government (PO-RALG)

The function and responsibilities of PO-RALG are mentioned in the Local Government Act (1982). PO-RALG is mandated for formulating, monitoring and evaluating the decentralization, rural and urban development and their policy implementation. The infrastructure division of PO-RALG has three sections: urban infrastructure, rural infrastructure, and research centre.

(3) Administrative Structure of DSM

All the local government authorities are supervised by PO-RALG. Administratively, PO-RALG supervises DSM region, DSM-region supervises DSM City Council, and DCC supervising municipal councils.



Source: JST Interview from DCC, January, 2017

Figure 2.3.2 Administrative Structure of DSM

1) DSM Regional Administrative Secretariat (DSM-RAS)

DSM Region is one of the administrative regions in Tanzania out of the 27 regions in the mainland. The Region covers only 1,393km²; however, it contains the largest population in the country. The remarkable point of this Region compared to the others in its boundary. The area covered by the Region is completely same as the one by DSM City Council. One of the most important functions of the Region is to monitor the annual performance of the City Council and Municipal Councils, then report quarterly to PO-RALG. Due to the performance of these LGAs shall reflect on the budgeting of forthcoming year, the Region has the responsibility to monitor and advice to enhance steady progress of the LGAs' performance.

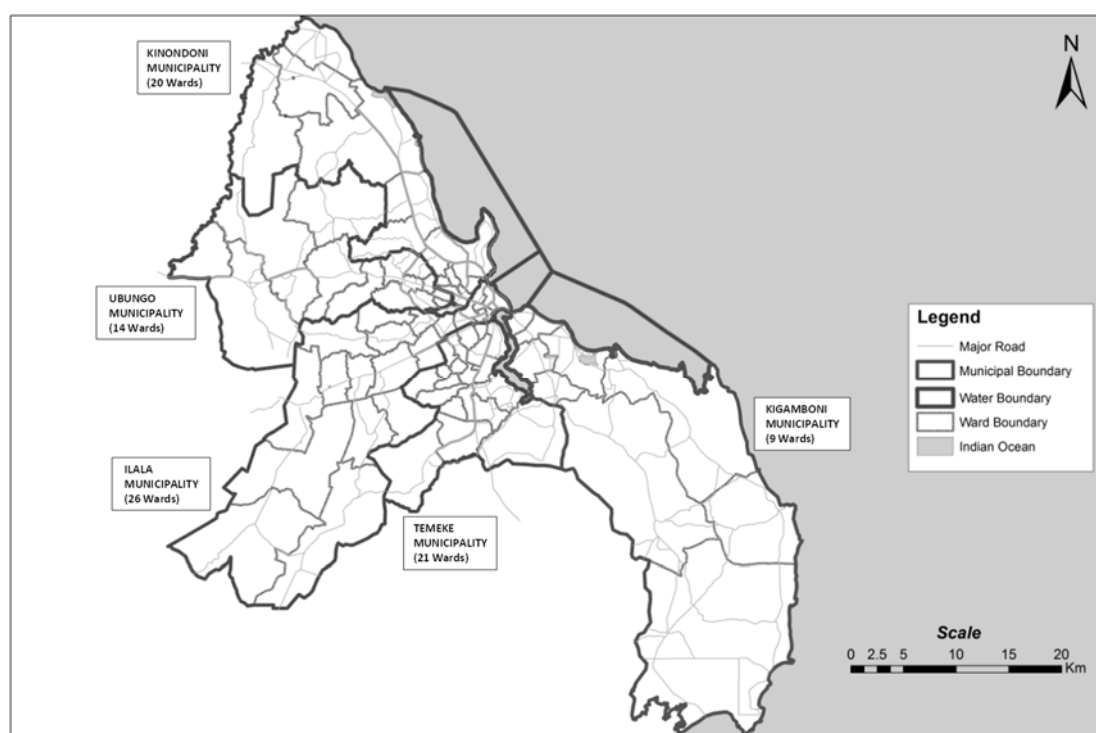
2) DSM City Council (DCC)

DSM City Council has a unique status in the Tanzanian administrative organization. The city is subdivided into five municipal councils; Ilala (IMC), Kinondoni (KMC), Temeke (TMC), Ubungu and Kigamboni. The administrative structure of the City Council has been restructured in July 2017.

Planning, Monitoring and Evaluation Section is newly established for supervising the cross sectoral projects in DCC. Monitoring of the projects shall be complied with the governmental law or guidelines. DCC has the Works department; however, three engineers have been shifted to TARURA after its establishment in October 2017. Administrative function of DCC for urban planning is mentioned in the subsection of 2.3.2.

3) Municipal Councils (MCs)

Five Municipal Councils of Ilala, Kinondoni, Temeke, Ubungo and Kigamboni are further subdivided into divisions and wards (kata). In January 2017, the total number of wards in DSM is 102. Each ward is again subdivided into five to seven streets called mitaa. The figure shows the number of wards in the municipal councils. Administrative functions of the Municipal Councils are mentioned in subsection of 2.3.2 for Urban Planning, and 2.3.4 for Road Management.



Source: Map illustrated by JST, based on the data collected by each Municipal Councils, January, 2017

Figure 2.3.3 Number of Wards

2.3.2 Urban Planning and Development

(1) MOLHHSD: for Urban Planning and Development

Physical Planning Division of the Ministry of Land, Housing and Human Settlements Development (MOLHHSD) has jurisdictions of urban planning and land use planning.

The Physical Planning Division of MOLHHSD consists of five sections: Urban Physical Design and Renewal Planning Section, Physical Master Planning Section, Rural Physical Planning Section, Settlement Regularization Section, and Physical Development Control Section. Tasks of each section are shown in Table 2.3.1.

Table 2.3.1 Tasks of Each Section in Physical Planning Division

Section	Tasks
Urban Physical Design and Renewal Planning Section	<ul style="list-style-type: none"> · Assist planning authorities in the preparation of urban redevelopment plans for all urban areas and oversee their implementation; · Prepare layouts for prime areas, coastal and beach areas; · Prepare layouts for Institutions, industries, mining and agricultural centres; · Scrutinize and recommend for approval detailed layout plans; · Prepare layouts for institutions, industries, mining and agricultural centres; · Scrutinize and recommend for approval or rejection revised and redesigned layout plans from local authorities and regions, private firms and institutions; and · Keep and maintain all planning records of urban layouts and village land use plans; and · Review and oversee the review detailed planning schemes and Redevelopment plans.
Physical Master Planning Section	<ul style="list-style-type: none"> · Assist Planning Authorities in preparation of General Planning Schemes which includes; (Master Plans, Interim Land Use Plans and Strategic Urban Development Plans) · Carry out research on planning issues; · Develop and Monitor the implementation of approved general planning schemes; · Scrutinize and recommend for approval or rejection of general planning schemes; · Develop guidelines, circulars, directives and publications for general planning schemes; and · Review and oversee the review of general planning schemes.
Rural Physical Planning Section	<ul style="list-style-type: none"> · Prepare, monitor, evaluate and review implementation of policies, laws and regulations which conflict with each other; · Scrutinize and recommend for approval of village, District, Region, zonal, and national land use plans; · Scrutinize and recommend major land use changes for approval; and · Develop guidelines, circulars, directives and regulations for regional and physical planning and monitor their implementation.
Settlement Regularization Section	<ul style="list-style-type: none"> · Assist planning authorities in upgrading unplanned settlements by identifying and recognizing existing land use, tenure and establishment of an evaluation and monitoring system to feed into decision making process; · Research and document unplanned settlements for regularization and preparation of strategies for implementation; · Prepare guidelines and circulars for improving and preventing unplanned settlements in urban centres; · Create awareness on regularization through seminars, publications, brochures etc; · Prepare and coordinate usage of procedures in preparation, checking, approval and implementation of regularization schemes; · Scrutinize and recommend for approval schemes of regularization as interventions for securing land tenure and provision of infrastructure; and · Identify and build capacity of technical staff in the sub sector at City, Municipal Town and local levels.
Physical Development Control Section	<ul style="list-style-type: none"> · Prepare, monitor, evaluate and review implementation of policies, legislation, guidelines and standards on physical development control; · Prepare and monitor enforcement of Town Planning regulations development conditions, procedures, circulars and directives; · Identify and recommend for declaration of planning areas in urban and rural areas ripe for development, redevelopment, and conservation after consultation with local authorities; · Scrutinize and recommend for approval/rejection of change of land use and subdivision; · Receive inspect and recommend measures for resolving planning appeals; · Monitor and supervise enforcement of development control; · Monitor and carry out evaluation of urban development; and · Collaborate with other institutions and organizations on environmental issues concerning physical development control.

Source: Ministry of Land, Housing and Human Settlements Development

(2) DSM City Council (DCC) :for Urban Planning and Development

Regarding urban planning, DCC plays a role of coordination among urban plans at the municipality level. For example, DCC adjusts land use plans at municipal boundaries and checks consistency with the existing city level urban plan. The Urban Planning Section of DCC has four planners. According to the Urban Planning Act, DCC can be the planning authority to formulate city-level urban master plan including future urban image, development vision, land use policy, infrastructure development

policy.

For the detailed example, the Planning and Coordinating section in DCC handles the coordination of the projects such as DIDP (DSM Infrastructure Development Planning) and DMDP (DSM Metropolitan Development Project), through collecting MCs' base needs and issues of drainage, road maintenance, and report to the DSM-RAS and PO-RALG.

(3) Municipal Councils (MCs) :for Urban Planning and Development

Among the five Municipal Councils, Kinondoni, Ilala, and Temeke Municipal Councils were established in 2001. Ubungo and Kigamboni Municipal Councils were newly established in 2016. Ubungo Municipal Council consists of 14 wards which used to belong to Kinondoni Municipal Council. Kigamboni Municipal Council consists of 9 wards which used to belong to Temeke Municipal Council. Each municipal council has a municipal assembly (Full Council) with council members selected in elections. Full Council elects Hon Mayor. Municipal Director has responsibility of municipal administration. According to the Urban Planning Act, the municipal council has a role to formulate municipal-level urban master plans and detail plans.

1) Kinondoni Municipal Council (KMC)

Land Development and Urban Planning Department of Kinondoni Municipal Council administer urban planning and land use control in the municipality. The department has four sections: 1) Towns Planning, 2) Survey/Mapping, 3) Land Management, and 4) Land Evaluation.

The department has a detailed land use plan based on DSM Master Plan of 1979. The detailed land use plan is referred in controlling land use and plot ratio. The department prepared a detailed land use plan for existing urban areas and potential urban areas in the future, but the department does not have the detailed land use plan for overall area of the municipality. The department has regulations for limiting the number of floors for building height control. The regulation was also prepared based on DSM Master Plan of 1979.

2) Ilala Municipal Council (IMC)

Land and Planning Department of Ilala Municipal Council administer urban planning and land use control in the municipality. The main tasks of the department is to prepare detailed land use plan for the municipality and to arrange for development control, building permission, change of land use category, subdivision, land conflict resolution, etc.

3) Temeke Municipal Council (TMC)

Land and Urban Planning Department of Temeke Municipal Council administer urban planning and land use control in the municipality. The department has a role to appraise development projects in the municipality, to formulate detailed land use plan, and to review and update maps.

4) Ubungo Municipal Council (UMC)

Town Planning and Natural Resources Department of Ubungo Municipal Council administer urban planning and land use control in the municipality. It has five sub-departments: Town Planning, Lands, Land Valuation, Survey and Mapping, and Forestry and Natural Resources. The department has the following roles:

- Settling land disputes
- Announcing planning areas

- Issuing building permit
- Upgrading scatter settlement to planned settlements
- Evaluation of the settlements
- Preparing drawings for urban planning
- Performing amendments to the drawings and maps of the urban drawings
- Reviewing of building permits
- Supervising land developments according to laws and regulations
- Providing counselling and awareness to people regarding land developments

5) Kigamboni Municipal Council (KGMC)

Urban Planning and Land Management Department of Kigamboni Municipal Council administers urban planning and land use control in the municipality. It has five sub-departments: Town Planning, Land Management, Land Valuation, Survey and Mapping, and Forestry and Natural Resources. The department has the following roles:

- Settling land dispute
- Transferring of land ownership
- Valuation of land property
- Topographical survey and base maps
- Producing Deed plans
- Control extensions
- Land adjudication
- Preparing drawings for urban planning
- Performing amendments to the drawings and maps of the urban drawings
- Reviewing of building permits
- Supervising land developments according to laws and regulations
- Providing counselling and awareness to people regarding land developments

(4) Institution for Urban Planning and Development

1) The Urban Planning Act, 2007

The Urban Planning Act consists of seven parts, 81 articles, and five schedules. This is an act to provide for the orderly and sustainable development of land in urban areas, to preserve and improve amenities; to provide for the grant of consent to develop land and powers of control over the use of land and to provide for other related matters.

Part IV contains articles related with the planning process. DSM Urban Master Plan falls in general plan which shows land use policy and infrastructure development policy for sustainable development for the planning area. The master plan needs to be formulated by following the planning process of general plan specified in this act. Part IV also contains land use regulations. According to Article 38, planning authorities such as city councils and municipal councils can set the standards for density of buildings, height of buildings, coverage, floor area ratio, etc.

Article 7 mentions that every city council, municipal council, town council and township authority shall each become a planning authority in its area of jurisdiction. As far as DSM, DCC shall become a planning authority for city-level urban plan and municipal councils shall become a planning authority for municipal-level urban plan.

Table 2.3.2 Outline of Urban Planning Act 2007

Part	Article	Item	Main Provisions
I	1-2	Preliminary Provisions	Short title and commencement, Interpretation
II	3-4	The Policy Framework	Fundamental principles of urban planning, Objectives of Land use planning
III	5-7	Institutional Framework	Responsibilities of the Minister, Appointment and Responsibilities of the Director, Planning Authorities
IV	8-59	The Planning Process	Declaration of planning areas, General Planning Scheme, Detailed Planning Scheme, Control of Development of Land and Planning Consent
V	60-71	Purchase of Land, Acquisition, and Compensation	Purchase of Land by Planning Authority, Land Acquisition, Compensation, Claim for Betterment, Dispute Settlements
VI	72-75	Supplementary Planning Powers	Powers of entry, Redistribution of land, Enforcement notice
VII	76-81	Miscellaneous Provisions	Regulations, Amendments of Schedules, Annual Report

Source: The Urban Planning Act 2007

2) Guidelines for the Preparation of General Planning Schemes and Detailed Schemes for New Areas, Urban Renewal and Regularization

The guidelines have been prepared in close observation of relevant legislation and policies governing urban development planning development and management such as the Urban Planning Act (2007), the Human Settlements Development Policy (2000) and the Land Act (1999). The guidelines are about 30 pages containing six chapters: i) Introduction, ii) Guidelines for Preparing General Planning Schemes, iii) Guidelines for Detailed Planning Schemes for New Areas, iv) Guidelines for Urban Renewal Schemes, and v) Guidelines for Preparing Schemes of Regularisation, and vi) Annex I (Definition).

3) Urban Planning and Space Standards Regulations 2011

Urban Planning and Space Standards Regulations 2011 is the one provided based on (1) of Article 77 of The Urban Planning Act, 2007. "Urban Planning and Space Standards" include standards for residential areas, building lines and setbacks, plot coverage and plot ratio, health and education facilities, golf courses, passive and active recreation, public facilities by planning levels, public facilities by population size, parking and agricultural show grounds, standards for electric supply, and its way leave, way leave for water supply, road width, communication pylons, sewerage treatment plants, ponds, transportation terminals, stream/river valleys buffer zone, beaches and industrial plots and recommended colors for land uses. Details of the standards are specified in Schedule of the regulations.

4) National Human Settlements Development Policy

The need to develop a National Human Settlements Development Policy arose from the government's resolve to address and reverse the deterioration of human settlements' conditions in the country. The overall goals of the policy are the following:

- To promote development of sustainable human settlements
- To facilitate the provisions of adequate and affordable shelter to all income groups in Tanzania

The document of the policy does not simply provide the policy but shows the policy statements

corresponding to the issues. Table 2.3.3 shows issues and corresponding policy statements for urban development issues.

Table 2.3.3 Issues and Policy Statements for Urban Development Issues

Item	Issue	Policy Statements
Physical Growth	The uncontrolled expansion of towns is undesirable because in certain areas it encroaches on productive rural agricultural and pasture land, and increases the costs of the provision of infrastructure.	The government shall ensure that land is used efficiently and effectively. The future trend will be vertical growth rather than horizontal. The planning machinery shall put a limit to municipal physical growth after which development shall be directed to satellite towns.
Urban Renewal	There is underutilization of prime lands in urban areas and uncoordinated piecemeal redevelopment which does not go hand in hand with the provision of services and long-term development schemes of urban areas.	The government shall encourage optimum utilization of the land in planning areas and ensure comprehensive implementation of redevelopment plan without compromising the interests of the holders of land rights.
Urban Transport	The existing urban transport system is inefficient, in part, because of increased car ownership without corresponding road capacity and poor traffic management.	The government shall facilitate the establishment and operation of swift, safe, and efficient transport systems in urban areas.

Source: Urban Planning and Space Standards Regulations 2011

2.3.3 Road and Traffic Control Sector

There are presently five classifications for roads in Tanzania. Responsibility differs depending on the classification as shown in Table 2.3.4.

The Trunk and Regional Roads are under the responsibility of TANROADS which is a semi-autonomous agency under MOWTC. The district, urban and feeder roads are the responsibility of LGAs who are under the oversight of PO-RALG. PO-RALG has an oversight function of preparing policies and strategies in consultation with stakeholders as well as coordinating, monitoring, and providing support to LGAs in road works implementation activities.

Table 2.3.4 Road Classification and Responsibility

Classification	Description	Responsible Organization
Trunk Roads	Primary and international roads that link ports, airports and gateways, total 12,786 of which 7,646 kilometres are paved	TANROADS
Regional Roads	Connecting districts and regional hubs to the main arterial routes, total 22,214 kilometres of which 1,398 kilometres are paved and the balance of 20,816 kilometres remain unpaved	TANROADS
District Roads	Tertiary routes and roads that link district capitals within the regions, ultimately linking to Regional and Trunk routes, total 25,113 kilometres of which 12,054 kilometres are paved	LGAs
Feeder Roads	Basic roads that link to the District roads, total 21,191 kilometres	LGAs
Urban Roads	All roads with urban area or city, total 5,937 kilometres	LGAs

Source: Joint Transport Sector Review Paper 2017

(1) PO-RALG: for Road and Traffic Control

1) Objective, Roles and Tasks

PO-RALG is responsible for managing urban and rural road networks. With the assistance of the Regional Secretariats (RS), PO-RALG is responsible for monitoring, coordination, dissemination of policy issues and supporting LGAs in implementation of their road works. Among the activities of the Ministry is to ensure that LGAs' roads are improved and maintained in good condition and are accessible all year.

District, Urban and Feeder roads are now managed by the 185 LGAs caused by the introduction of new administrative areas. The LGAs, which are implementing agencies, are categorized as Cities, Municipal Councils, Town Councils and District Councils. The LGAs carry out inventory and condition surveys, planning, prioritization, project design, tendering and supervision of road maintenance and development works. The LGAs also provide technical support to the villages/communities in maintaining and improving the community roads. The LGAs are reporting on road implementation activities to PO-RALG through the Regional Secretariat offices.

The Road network (District, Urban and Feeder Roads) under Local Government Authorities' comprise of 108,946km. This network is currently managed by the Tanzania Rural and Urban Road Agency (TARURA). The Government decided to establish a dedicated agency mandated to manage rural and urban road networks. TARURA, responsible for implementation of LGAs' road works, was established and inaugurated on 2nd July 2017. It became officially operational in September 2017. Table 2.3.5 and Table 2.3.6 show the existing LGA road classification by road class.

Table 2.3.5 Road Network under PO-RALG by Road Classification

Classification	Existing Classification Km	%
District Roads	44,572	41
Feeder Roads	48,443	44
Urban Roads	15,931	15
Total	108,946	100

Source: Joint Transport Sector Review Paper 2016 and 2017

Table 2.3.6 Road Network under PO-RALG by Pavement Type

Surface Type	Proposed Reclassification Km	%
Earth	83,091.24	78.51
Gravel	24,405.40	20.27
Paved	1,449.55	1.22
Total	108,946.19	100

Source: Joint Transport Sector Review Paper 2017

(2) MOWTC: for Road and Traffic Control

1) Objective, Roles and Tasks

The objective of Ministry of Works, Transport & Communications (MOWTC) in its road sector is to provide expertise and support on development and maintenance of roads. Namely:

- To initiate and review roads, development policies, guidelines and standards;
- To monitor roads construction services;

- To develop applications and guidelines for women participation in public works and road development works;
- To develop and disseminate appropriate labour based technology, standards, specification, manual and guidelines;
- To prepare road/bridge development proposals for mobilization of public infrastructure work financing;
- To build capacity of Regional Secretariat (RS) and Local Government Authorities (LGAs) on roads construction and maintenance; and
- To monitor and evaluate the performance agreement between the Ministry and implementing agencies.

Implementing agency is TANROADS, which is an Executive Agency under the MOWTC, established under section 3(1) of the Executive Agencies Act (Cap 245) and came into operation in July 2000. Refer to next section on TANROADS.

(3) TANROADS: for Road and Traffic Control

1) Objective, Roles and Tasks

The Tanzania National Roads Agency (TANROADS) which was established on 1st July 2000 by an order published in the Government Gazette, Notice No. 293 of 2000 under Section 3(1) of the Executive Agencies Act No. 30 of 1997, is responsible for the management of 35,000km of national roads made up of 12,786km of trunk roads and 22,214km of regional roads as of June 2016.

Its mission is to plan, design, construct and maintain efficiently in a cost effective, safe and environmentally sustainable manner the Trunk and Regional Roads Network consistent with the Poverty Reduction Strategy and other Government policies through a competent and well-motivated workforce.

The core business of the agency is maintenance and development of the network to support the socio-economic development of the country. TANROADS is also responsible for management of the Central Materials Laboratory and Regional Materials Laboratories that are responsible for materials testing and conducts research on new road technology.

In addition to road construction and maintenance, following tasks are also under TANROADS' responsibility:

- Determining what needs to be done on the network and carried out by TANROADS or by consultants appointed by TANROADS
- Project planning for carrying out based on priority ranking
- Engaging contractors to carry out the works
- Supervising the works done by TANROADS or by consultants appointed by TANROADS
- Establishing and operating toll roads where is feasible
- Establishing and maintaining an appropriate databank for the national road network
- Establishing and operating weighbridges and enforcing axle load control on the national road network
- Carrying out/commissioning research in support of operations when necessary
- Advising the Ministry of Works on standards and specifications for road works
- Currently TANROADS also manages four (4) equipment hire units. (Soon to be transferred to TEMESA)

2) Structure of the Organization

TANROADS is tasked with the maintenance of the classified Trunk and Regional Roads network under agreement with the MOWTC. In order to achieve this, TANROADS has divided the country into four zones comprising of four to six regions per zone, with each region under the control of a Regional Manager. A zonal director who reports directly to the Chief Executive in the Head Office heads each zone. The Regional Managers are responsible for routine maintenance carried out by force account while local contractors are utilised to undertake periodic maintenance and minor rehabilitation works. As far as equipment is concerned, TANROADS is developing a self-financing Equipment Hire Unit in four regions in order to provide service to their field offices and to contractors undertaking maintenance works.

(4) DSM-RAS: for Road and Traffic Control

1) Relation, demarcation and responsibility in road sector between DSM-RAS and LGAs

- Roads in DSM City are always owned, constructed and maintained by either the respective LGA for District and Feeder roads
- DSM-RAS and DCC have no roads. However, they are advisors and supervisors of the LGAs including monitoring and evaluating the issues related to road management, uses, construction and maintenance.
- DSM Regional Commissioner is the Chairman of the Road Fund Board.
- Budget for roads from different LGAs should be checked and approved by DSM-RAS office before going and after coming back from the government treasurer. Then it is finally approved for implementation of the road projects.
- LGAs are the clients of the road projects. Therefore, they have a responsibility to engage in contract either with the consultant or contractor for the planned road projects.
- DSM-RAS also has a responsibility to hold the meeting at least four times per year to advise and discuss about the all issues related to the road sector in the region and all respective LGAs.

Table 2.3.7 Summary of Demarcation

Category	DSM-RAS	LGAs (TARURA)
Road Management	DSM-RAS is the advisor and supervisor of the LGAs and is in charge of monitoring and evaluating all issues related to road management, uses, construction and maintenance within the LGAs.	LGAs own roads. Construction and maintenance for the roads is executed by their respective LGAs
Budget	DSM-RAS checks and approves the budget for roads from LGAs before going and after coming back from the final approval of the government treasurer.	LGAs are responsible to prepare a budget for their roads management, construction and maintenance
Position	DSM-RAS is a Chairman of the road fund board	LGAs are the clients of the road projects in their respective LGAs
Activity	DSM-RAS is responsible to hold a meeting at least four times a year to advise and discuss all issues related to the road sector within the region and all respective LGAs.	LGAs have a responsibility to engage in contracting the consultant or contractor for the planned road projects in their respective LGAs.

2) DCC: for Road and Traffic Control

DCC performs a coordinating role and attends to issues that cut across all five municipal councils.

In the road sector, since DCC does not own roads in DSM, respective municipal councils have responsibility on managing the road.

3) Municipal Councils: for Road and Traffic Control

At the local government level, the MCs deal with construction, maintenance and operation of the basic road networks within their jurisdictions, i.e. secondary and tertiary roads up to community roads. Roads are managed by the MOWTC. At the central government level, larger roads (trunk roads) are addressed by TANROADS under the MOWTC.

The MCs undertake routine and recurrent maintenance, periodic maintenance, spot improvement, rehabilitation and reconstruction of roads. The maintenance management system used by the councils gives priority to roads in good condition. These roads get full maintenance throughout the year to ensure sustainability and durability. Roads in fair conditions are planned for rehabilitation and periodic maintenance and are at the same time given routine maintenance to slow down deterioration. Roads in poor condition are given spot improvement to make them passable while awaiting reconstruction. Almost all road maintenance in the municipalities are carried out by contractors. The current funding for this type of maintenance is from own sources of the MCs, central government and donors.

Five MCs mentioned above are currently re-organized and re-staffed due to division of jurisdiction. Therefore, it is not cleared yet on organization, staffing or length of responsible roads other than Temeke MC which is original.

- a) Road Network under municipality
 - Total Road length (Total L=421.31km)
 - Paved and Unpaved (Paved L=52.41km, Unpaved L=368.9 km)
- b) Roles and Tasks on Road Project

Table 2.3.8 Roles and Tasks on Road Project

Category		Remarks
Road & Bridge Planning and design	Planning & Designing of new roads or bridges	Big projects such as bituminous road and bridges are executed by outsourcing. Small projects such as box culvert are executed by MC.
	Maintenance Planning	
Road & Bridge Construction	Supervision	Big projects such as bituminous road and bridges are executed by outsourcing.
Road & Bridge Maintenance	Crack sealing, Asphalt patching Drainage cleaning	By outsourcing
	Street light exchanging	
	Medium scale such as overlaying or replacing	By outsourcing
	Large scale (Rehabilitation)	By outsourcing

Source: Temeke MC

(5) SUMATRA: for Road and Traffic Control

1) Objective, Roles and Tasks

Surface and Marine Transport Regulatory Authority (SUMATRA) is a Multi-sectoral regulatory agency, which was established by an Act of Parliament (No. 9) of 2001 to regulate Rail, Road and Maritime transport services.

In the road sector, SUMATRA is tasked, among others, with the functions of issuing, renewing, cancelling and amending Road Service Licences as per the provisions of the Transport Licensing Act,

1973.

Prior to the establishment of SUMATRA, the above function was performed by the Central Transport Licensing Authority and the Regional Transport Licensing Authorities for the pan territorial and regional licences respectively.

The specific functions of SUMATRA in this regard include:

- Licensing of commercial vehicles.
- Determining and/or monitoring national and international yardsticks/benchmarks which can be used in determining the reasonableness of charges/rates/tariffs charged by the providers of road transport services.
- Formulating and reviewing codes of conduct for the providers and users of the road sector services.
- In collaboration with other stakeholders, overseeing investigation in road transport accidents.
- Liaising with Police, Ministry of Public Safety and Security and Ministry of Infrastructure Development on issues affecting road transport.
- Developing rules and regulations in Road Transport.
- Regulating tariffs and charges.

(6) RFB: for Road and Traffic Control

1) Objective, Roles and Tasks

The functions of the Roads Fund Board (RFB) as provided in the Road and Fuel Tolls Act Cap 220 (Revised edition of 2006) with respect to the Fund are:

- To advise the roads Minister on new sources of road and fuel tolls, adjustment of rates of existing roads and fuel tolls and on regulations for collection of road and fuel tolls for the purpose of ensuring adequate and stable flow of funds to road operations;
- To apply the money deposited into the Fund for the purposes approved by the Parliament;
- To set out procedures for agents with respect to the collection of roads and fuel tolls for the purpose of the Fund;
- To ensure full collection and transfer of collected roads and fuel tolls to the Fund's account;
- To develop and review periodically the formula for allocation and disbursement from the Fund to TANROADS, local authorities and other agencies and advise the roads Minister accordingly;
- To recommend to the roads Minister and allocation of funds for TANROADS, local authorities and other road agencies to undertake road management at a level that is suitable and affordable;
- To disburse funds from the Fund to TANROADS, local authorities and other agencies;
- To ensure that the operations of TANROADS, local authorities, other road agencies and the Fund are technically and financially sound;
- To monitor the use of the funds disbursed to TANROADS, local authorities or other agencies for the purpose of the objects of the Fund;
- To appoint the Roads Fund Manager and the Roads Fund Accountant;
- To appoint, subject to approval by the Controller and Auditor General, an auditor or auditors to carry out the audit of the Fund and
- To make any other recommendations to the roads Minister as it considers necessary to enable the Board to achieve its objectives.

(7) TANLAB: for Road and Traffic Control

The Central Materials Laboratory, now known as Tanzania Roads Agency Laboratory (TANLAB), provides testing of soils and other civil engineering construction materials for the government, consultants and contractors. Regional Material Laboratories under the regional managers' offices undertake soil, pavement and other tests in support of the regions' maintenance and development works.

(8) EHU: for Road and Traffic Control

Equipment Hire Units (EHU) is located in Arusha, DSM, Coast and Kilimanjaro. Two of them are located in the Tanzania corridor, namely DSM EHU and Coast EHU. The main objective of these units is to ensure that TANROADS regional offices make economize the limited available resources of motor vehicles, plants and construction equipment with the aim of improving road conditions in their regions. The Units operate on self-financing basis and their main customers include the Trunk and rural road engineers and building contractors. Equipment is used on Force Account Operations basis on Trunk Roads including Sections 1 and 3 of Tanzania Highway. EHU plays key role in road maintenance activities.

(9) Weighbridge Unit of TANROADS: for Road and Traffic Control

Vehicle overloading fees are to be paid for vehicles which exceed the maximum total weight limit in terms of Gross Vehicle Mass (GVM) (varying between 18 tons and 56 tons which are the maximum permissible weights of a two-axle truck and a truck with a drawbar trailer with a total of 6 axles, respectively), where the steering axle exceeds 8 tons or where one of the other axles exceeds 10 tons. The purpose of the fine is to limit the damage caused to roads by overloaded vehicles. The collection of overloading fees is the responsibility of TANWEIGH (the weighbridge unit of TANROADS).

(10) TPF: for Road and Traffic Control

Roles and tasks of Tanzania Police Force (TPF) in road sector is to take care of issues regarding traffic safety and control, regulation in accordance with Road Act, inspection of vehicles in the roadside and driver's test and so on. TPF is cooperating with other organizations such as SUMATRA and TANROADS in order to ensure that all issues related to the road transport sector, particularly the governing rules and road act, are followed by the road users. Relation among related organizations is summarized in Table 2.3.9.

Table 2.3.9 Summary of Relation of the Stakeholders

Category	TPF	SUMATRA	TANROAD
General	TPF is cooperating with other organizations especially SUMATRA and TANROADS to ensure that all set and related road act and rules are followed by the vehicles and road users accordingly.	SUMATRA is responsible for registration, supervision and making rules for all public transport and cargo vehicles.	TANROADS is the owner of all Trunk and Regional roads and is responsible for all matters related to the construction, supervision and maintenance of these road infrastructures.
Related Act	They are responsible to make sure that the following Road Safety Act and others are followed by the road users; i) GN 24-2015 ii) The road Traffic Act	They are surface and marine transport regulators according to the SUMATRA act of 2001. Also, they are responsible to ensure that the Road Safety act is followed by the all vehicle operators and users. It is illegal to operate the public transport and cargo vehicles without being registered by SUMATRA according to the 2001 act.	TANROADS is responsible to ensure that roads and its infrastructure are used according to the related road acts.

Source: JST

2.3.4 Public Transport Sector

(1) MOWTC: for Public Transport

Though the Ministry of Works, Transport & Communications (MOWTC) is the government body with primary responsibility of Transport Policy, Planning and Coordination function as well as oversight of infrastructure delivery and asset management.

The National Transport Policy (NTP) was formulated in 2013 by MOT (Ministry of Transport at that time) and updated in 2016 by MOWTC (Transport) and other related agencies. It is now under an approval process by the government.

(2) TRC: for Public Transport

1) Related organizations and its role

Railway operations had been conducted by TRC (Tanzania Railway Corporation) in Tanzania since 1977 however; it was divided into RAHCO (Reli Asset Holding Company), infrastructure Asset Company and TRL (Tanzania Railway Limited), Operation Company in 2007 with privatisation occasion.

In addition, connection railway with Tanzania and Zambia has been operated by TAZARA Railway since 1976. Railway route map is shown in Figure 2.3.4 Railway Route Map in Tanzania.



Source: Modified by JST based on the map from Wikipedia

Figure 2.3.4 Railway Route Map in Tanzania

The role of the related organizations is summarized in Table 2.3.10.

Table 2.3.10 Role of the Stakeholders

Organization	Role
TRC (RAHCO)	• Operation of the whole railway line in 2,600km length in Tanzania
TRC (TRL)	• Management of the infrastructure asset operated by TRC, and its maintenance • Development and implementation of the new railway project
TAZARA Railway	• Operation of the railway line connected with Tanzania and Zambia in 1,860km length. • Management and Maintenance of the infrastructure

Source: Website of TRC and TAZARA Railway and hearing

2) Legal System

Railway Act 2002 is passed as a railway law. Privatisation was done in 2007 under the Railway Act.

(3) DART: for Public Transport

The Dar Rapid Transit (DART) Agency was established under the Prime Minister's Office Regional Administration and Local Government (PMO-RALG) by Executive Order issued through Government Notice 120 on the 25th of May 2007. The DART was officially launched on 16th of June 2008. The objective of the DART is to establish and operate Bus Rapid Transport (BRT) system in the city of DSM and ensure orderly flow of traffic on urban streets and roads. DART system is designed to operate trunk and feeder services with deployment of high capacity buses and introduce new technology to the fare collection system, to increase its operational efficiency. The project is to be delivered using Public Private Partnership (PPP). The BRT project was conceived by the Dar es Salaam City Council in 2003. Conception designs were carried covering major roads of Morogoro, Kilwa, Nyerere, Bagamoyo, Mandela and Mwai Kibaki shown in Chapter 5.1.2(2). Works for BRT Phase 1 have been completed and handed over to the Government.

(4) SUMATRA: for Public Transport

SUMATRA has a role not only to the road sector but also to the public transport sector. Outline of SUMATRA is mentioned above in road sector.

(5) DUTA (planned)

1) Background

Based on the National Transport Policy (2003) and the DSM Transport Policy and Systems Development Master Plan (JICA 2008) the establishment of DSM Urban Transport Authority (DUTA) is proposed. The primary aim of DUTA is to develop a unified Strategic Urban Transport Policy (SUTP) and coordinate the policy and planning for urban transport.

The concept of DUTA in DSM has been developed for over seven years of planning and consultations under PO-RALG supported by the JICA CUPID project. The concept, with extensive stakeholder consultation has been 'designed for purpose' to suit the particular requirements of DSM.

DUTA is proposed as an independent and autonomous authority with legal power under its own special legislation for the function as a strategic policy-making and planning body. Its key strength is its inclusive and representative Board of Management structure which involves all key stakeholders (being the leadership of the key implementing agencies) to ensure full coordination and cooperation.

2) Legal Basis of DUTA

As of the end of May 2017, JICA CUPID project proposed DUTA for the temporary positioning under the Regional Road Board (RRB). This proposal is the only exit and intermediate strategy for DUTA establishment, rather than taking more years to define the supervising organizations. Under the urban transport surroundings in DSM drastically changing, establishment of DUTA is the most highlighted issue; the owner of this revised M/P has expected to be in the hands of DUTA, WB to support establishment costs of DUTA through BRT Phase 3 Project, and Mega transport projects awaiting: MRT (on-going study by TRC), Expressway (PPP study by TANROADS), etc.

3) Scope, Jurisdiction and Power of DUTA

DUTA is fully responsible for efficient and effective provision of urban transport for the city of DSM, its scope being:

- All urban transportation infrastructure and mobility
- Private and public transport modes
- Pedestrian and non-motorized transport
- Urban development policies and land-use planning

4) Functions of DUTA

DUTA will have the functions of:

- A Strategic Policy, Planning and Coordinating Authority
- Investment Funding and Financial Management
- A Contracting Authority
- Liaison, Communications and Stakeholder Management
- Network Management
- Research, Oversight and Performance Measurement

5) The role of DUTA

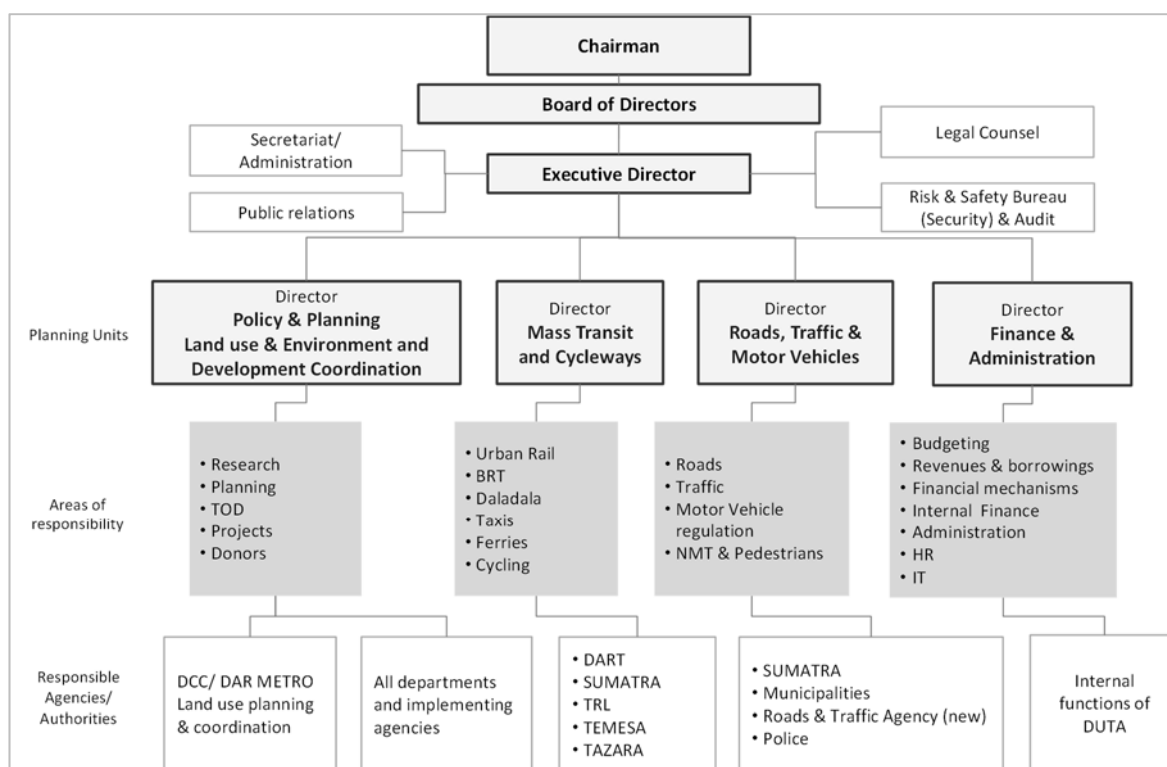
Planning and control systems in transport generally operate at three separate levels being:

- Tier 1: Strategic level, being the strategic planning of general and broad-based aims and direction to achieve set goals
- Tier 2: Tactical level, being guided by the strategic policy and works on making things happen in a practical sense, and in the most effective and efficient way.
- Tier 3: Operational level is delivery of the product or services following the tactical policies, regulations and standards.

6) Organization structure

The suggested organizational structure of DUTA is shown below. DUTA will be comprised of a Board of Directors, and an executive structure with planning departments. The strength and efficiency of DUTA is the involvement of all key stakeholders as members of the Board of Directors (being the implementing agencies) which will help to ensure full coordination and cooperation.

The planning departments within the executive arm of DUTA will provide research and planning support and technical expertise for the DUTA Board, and also provide oversight and monitoring of performance and outcomes. Without this expertise, DUTA would simply be a coordinating body. It is expected that DUTA, as an efficient and streamlined organisation will require no more than 40 staff.



Source: JICA-CUPID, 2017

Figure 2.3.5 Proposed Organizational Structure of DUTA

2.3.5 Environmental Sector

Environmental management in Tanzania falls under the Vice President’s Office (VPO). The Minister of State Responsible for Environment under VPO has the overall responsibility for matters relating to the environment and articulation of policy and guidelines necessary for the promotion, protection and sustainable management of the environment in Tanzania. The Minister shall make decisions on the approval of the Environmental Impact Statement and SEA report, and shall issue EIA certificate and SEA approval notice.

(1) Division of Environment, VPO

Division of Environment was established in 1991 under the Ministry of Natural Resources and Tourism. In 1995, Division of Environment was transferred to the Vice President’s Office (VPO) to give it the requisite priority and attention on promoting management of environmental agenda. Division of Environment is responsible for the overall environmental policy and regulation formulation, coordination and monitoring of environmental policy implementation in the country.

The Division is to be led by a Director and comprised of three sections as follows:

Biodiversity Conservation:

This section is responsible for developing, reviewing, and coordinating implementation of environmental policies, acts, regulations, guidelines, programs and strategies which are related to natural habitats and environmental conservation. Some of the specific areas of focus include biosafety; State of the Environment reporting; and biodiversity conservation of major lake basins such as Lake Tanganyika and Lake Nyasa. In addition, the section coordinates Global Environment Facility (GEF) activities.

Environmental Pollution Management:

The section is charged with the preparation, review and provision of advice on policies, legislation, and guidelines that are related to management of environmental pollution. Some of the specific areas of focus include ozone-depleting substances; persistent organic pollutants (POPs); and sustainable consumption and production.

Environmental Impact Assessment:

The main responsibilities of this section are to prepare and review environmental management policies, legislatives, regulations, guidelines, criteria and procedures for environmental impact assessments, risk assessments and strategic environmental assessments. Some of the specific areas of focus include climate change; poverty and environment mainstreaming; approval of Environmental Impact Statement (EIS) and Strategic Environmental Assessment (SEA).

(2) NEMC

National Environment Management Council (NEMC) was initially established in 1983 when the Government of Tanzania enacted the National Environmental Management Act No. 19 of 1983. The enactment of Environmental Management Act No. 20 of 2004 (EMA. 2004) repealed the National Environmental Management Act No. 19 of 1983 and re-established NEMC. It gives NEMC mandates to undertake enforcement, compliance, review and monitoring of environmental impact assessment, research, facilitate public participation in environmental decision-making, raise environmental awareness, and collect and disseminate environmental information. NEMC falls under the VPO and its role is to provide the Office with advice on all matters pertaining to environmental conservation and management.

The Directorate of Environmental Impact Assessment (DEIA) reviews the environmental soundness of projects, plans and programs, and aids informed decision-making towards achieving sustainable socio-economic development and ecological sustainability.

CHAPTER 3 REVIEW OF EXISTING PLANS AND ON-GOING PROJECTS

3.1 Urban Development Plan

3.1.1 National Development Plan

Tanzania Development Vision (TDV) 2025, Long-Term Perspective Plan (LTPP), and Second Five Year Development Plan (FYDP II) are the national level development plans that JST should refer to in the planning process. The target year of the TDV 2025 is the year of 2025. The government has not yet formulated a long-term development plan after 2025, so JST discussed the directions after 2026 with the counterparts.

(1) The Tanzania Development Vision (TDV) 2025

The Tanzania Development Vision (TDV) 2025 was developed in the latter 1990s as a result of a broad national consultation process. It is envisioned that Tanzanians will have graduated from a least developed country to a middle-income country by the year 2025 with a high level of human development. The economy will have been transformed from a low productivity agricultural economy to a semi industrialized one led by modernised and highly productive agricultural activities which are effectively integrated and supported by industrial and service activities in the rural and urban areas. A solid foundation for a competitive and dynamic economy with high productivity will have been laid. To follow this vision, the following five attributes in Table 3.1.1 are specified as the points to be achieved.

Table 3.1.1 Attribute and Main Contents of TDV

Attribute	Main Contents
High quality livelihood	<ul style="list-style-type: none"> • People-centred nation's development • Free from abject of poverty • Empowerment and effective democratic and popular participation by all social groups • Equitable creation of wealth and its distribution • Redressing of racial and gender imbalances
Peace, stability and unity	<ul style="list-style-type: none"> • Continuing peace, political stability, national unity and social cohesion
Good governance	<ul style="list-style-type: none"> • Good governance and rule of law in the process of creating wealth and sharing benefits in society • Empowerment of leaders and public servants for ensuring a culture of accountability
A well-educated and learning society	To be a nation whose people are ingrained with a developmental mind-set and competitive spirit
A competitive economy capable of producing sustainable growth and shared benefits	Creating a strong, diversified, resilient and competitive economy which can effectively cope with the challenges of development

Source: THE TANZANIA DEVELOPMENT VISION 2025, Planning Commission

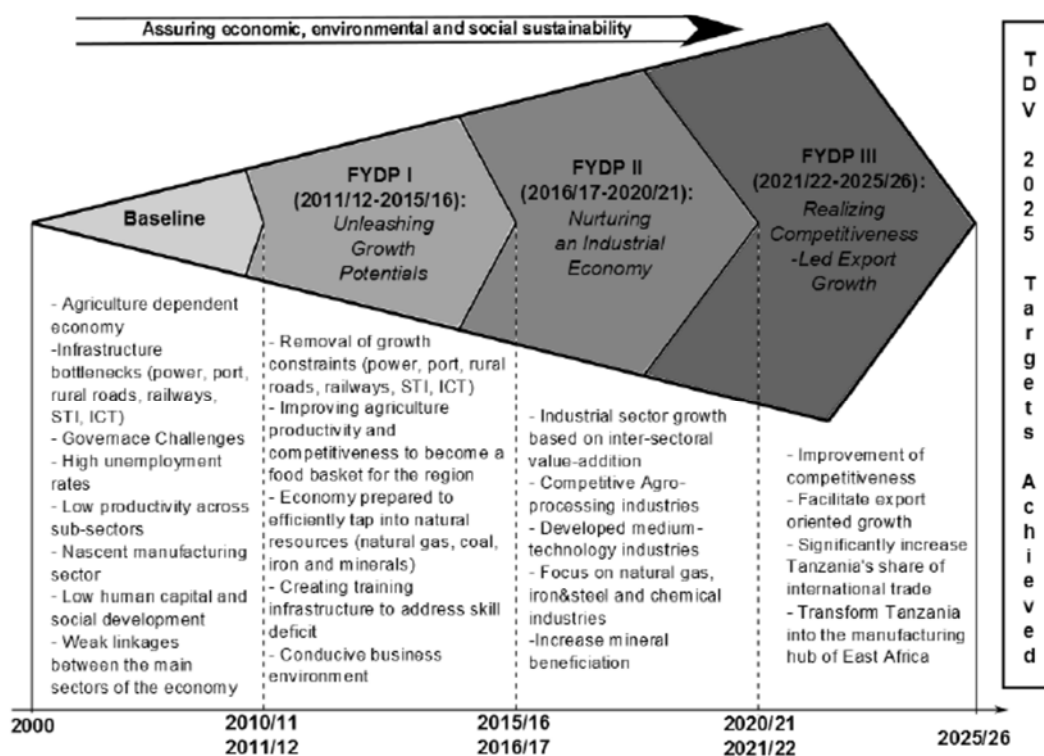
A competitive economy capable of producing sustainable growth and shared benefits mentioned above as one of the five attributes of the Vision entails an adequate level of physical infrastructure needed to cope with the requirements of the Vision in all sectors.

(2) Long-Term Perspective Plan (LTPP)

Implementation review of TDV 2025 conducted in 2009 and 2010 revealed a number of risks likely to

hinder the achievement of the set goals if strategic repositioning of implementation was not made. Following these reviews, the Government of Tanzania (GoT) reverted to long and medium-term planning in 2011 in a bid to accelerate attainment of TDV 2025 goals. In this regard, the Long-Term Perspective Plan (LTPP), 2011/2012-2025/2026 was developed and adopted to anchor the reorganization and steer Tanzania’s efforts towards achieving aspirations of the Vision.

LTPP outlines a development path that is cast in three five-year periods (FYDPs), each with a specific development agenda, as shown in Figure 3.1.1. The first FYDP aims to remove the economy’s growth constraints in order to unleash the growth potential of the country. In the second FYDP, the focus will be on nurturing an industrial-based economy whilst developing the country’s agriculture and agro-processing sectors to enable Tanzania to become the regional food basket. In the third FYDP, focus will be to boost exports of manufactured goods with sharpened competitiveness. The three phases are inherently interconnected, with the successful implementation of one being an imperative for the implementation of the other.



Source: President’s Office Planning Commission

Figure 3.1.1 Three FYDPs Achieving the Objectives of TDV

LTPP also set monitoring and evaluation framework as target indicators. Table 3.1.2 shows the examples of the monitoring and evaluation framework to be referred in land use planning for this project, such as GDP growth rate, population growth rate, urban population, etc. of national level

Table 3.1.2 Sample of Monitoring and Evaluation Framework

Target Indicators	Current Status (as of 2010)	Targets for FYDP I (2015)	Targets for FYDP II (2020)	Targets for FYDP III (2025)
GDP growth rate (%)	6.5	8.0	8.0	8.0
Population growth rate (%)	2.9	2.7	2.7	2.5
Total population (millions persons)	43.2	49.8	57	65
Urban Population (% of Total)	26.3	30	33.7	38

Source: Annex 1 of LTPP, Planning Commission, President’s Office (2012)

(3) Second Five Year Development Plan (FYDP II)

The Second Five Year Development Plan (FYDP II), 2016/17–2020/21, has integrated frameworks of the first Five Year Development Plan (FYDP I, 2011/2012-2015/2016) and the National Strategy for Growth and Reduction of Poverty (NSGRP/MKUKUTA II, 2010/2011-2014/2015) further extended to 2015/2016).

FYDP I, which had been implemented from 2011/12 - 2015/16, was launched in June 2011 based on the recommendations of the 2010 review of Tanzania Development Vision 2025. The overall goal of FYDP I is to unleash the country’s resource potentials to fast-track the provision of the basic conditions for broad-based and pro-poor growth.

The National Strategy for Growth and Reduction of Poverty (NSGRP, commonly referred to by its Swahili acronym “MKUKUTA”), was adopted by the Cabinet and Parliament in early February 2005. In 2010, it was reviewed and the current second version, MKUKUTA II, was to be implemented between 2010/11 and 2014/15. MKUKUTA II makes linkages with Vision 2025 and is committed to the Millennium Development Goals (MDGs) as internationally agreed targets for reducing poverty. MKUKUTA aims to reduce poverty through three broad outcomes: growth and reduction of income poverty; improved quality of life and social well-being; and good governance and accountability.

This integration implemented a government decision made in 2015 to merge the two frameworks. The objectives of integrating the two frameworks were to improve efficiency and effectiveness in implementation through organizing and rationalizing national resources under one framework, by addressing critical challenges, which beset implementation of the parallel frameworks.

FYDP II is built on three pillars of transformation, namely industrialization, human development, and implementation effectiveness. The objectives of the FYDP II are as follows:

- 1) Build a base for transforming Tanzania into a semi-industrialized nation by 2025;
- 2) Foster development of sustainable productive and export capacities;
- 3) Consolidate Tanzania’s strategic geographical location through improving the environment for doing business and positioning the country as a regional production, trade and logistic hub;
- 4) Promote availability of requisite industrial skills (production and trade management, operations, quality assurance, etc.) and skills for other production and services delivery;
- 5) Accelerate broad-based and inclusive economic growth that reduces poverty substantially and allows shared benefits among the majority of the people through increased productive capacities and job creation especially for the youth and disadvantaged groups;

- 6) Improve quality of life and human wellbeing;
- 7) Foster and strengthen implementation effectiveness, including prioritization, sequencing, integration and alignment of interventions;
- 8) Intensify and strengthen the role of local actors in planning and implementation, and
- 9) Ensure global and regional agreements (e.g. Africa Agenda 2063 and SDGs) are adequately mainstreamed into national development planning and implementation frameworks for the benefit of the country.

3.1.2 DCC Master Plan and Related Development Plan

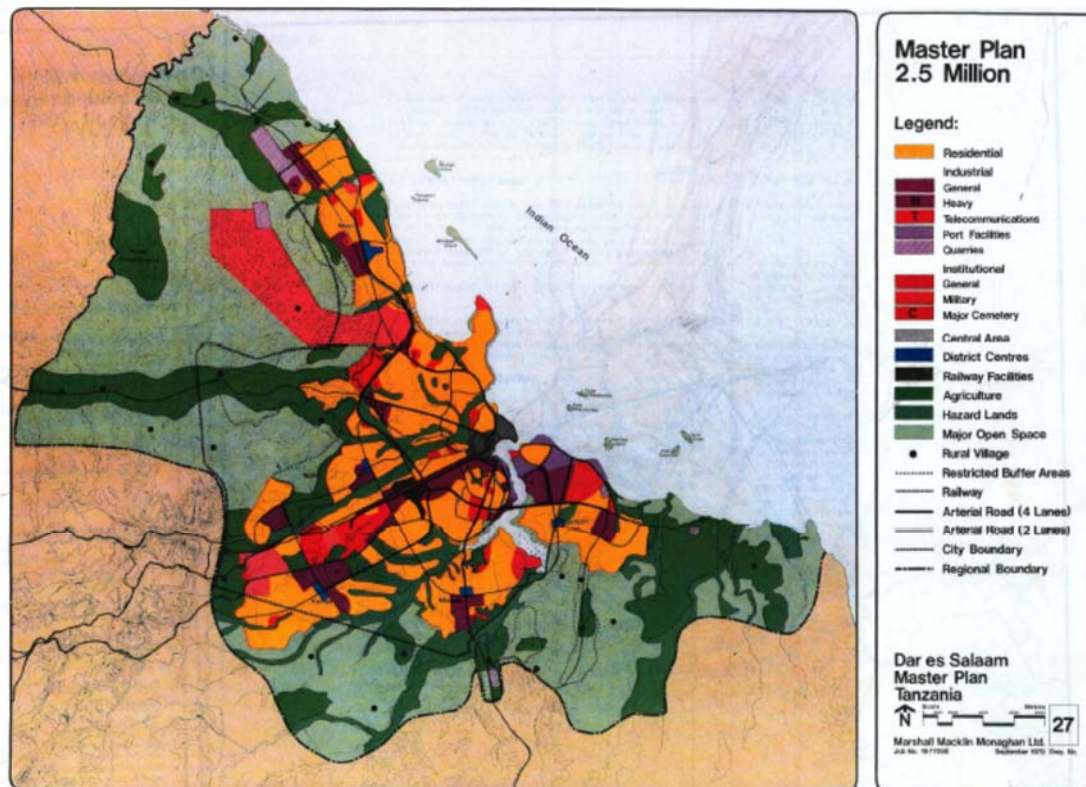
By January 2017, there was no Urban Master Plan of DSM that has been officially approved by the government. The urban master plan (DSM Master Plan of 1979) was formulated in 1979 and the following Master Plan was drafted in 2012. DSM Master Plan of 1979 was officially approved by the government, but the target year of the plan was 1999 and the plan does not match with the current urban situations. The succeeding Urban Master Plan in 2012 was not officially approved by the government. It is because the plan does not reflect the current urban situations; the plan lacks consensus building through stakeholder's meetings, etc.

(1) DSM Master Plan of 1979

DSM Master Plan was prepared in 1979, which aimed at directing the city's growth for the next 20 years, from 1979 to 1999. This master plan was prepared by a Canadian consulting firm on behalf of the Ministry of Lands, Housing and Urban development (now the Ministry of Lands and Human Settlements Development). The primary objective of the master plan was to provide planning and development guidelines for the urban area and the surrounding region. The basic concepts of the master plan were: (i) To develop neighbourhood units and "self-contained" planning districts located in outskirts of the city to accommodate increased urban population; and (ii) to develop a radial road network to be accessible to the CBD from all parts of the city.

The Master Plan provided for the city's population projection over the planning period; the population would increase from 0.9 million inhabitants in 1979 to 1.6 million inhabitants in 1989 and 2.5 million inhabitants in 1999. Based on this population framework, the Master Plan proposed new urban planning districts such as Mbezi, Tabata, Mbagala, Kigamboni and Kizinga. Each planning district will accommodate the population ranging from 200,000 to 300,000 inhabitants and provide employment opportunities for prospective residents. Theoretically, each planning district is "self-contained" with respect to the day-to-day needs for its residents.

Figure 3.1.2 illustrates the proposed land use plan to accommodate around 2.5 million inhabitants in 1999. The plan was based on ambitious assumptions that the road and railway crossing to the Kigamboni area would be constructed by the year 1989. The construction of the bridge was considered to be an essential factor for the future urban growth of DSM.



Source: DSM Master Plan, 1979, by Marshall Macklin Monaghan Limited of Toronto

Figure 3.1.2 DSM 1979 Plan

(2) DSM Master Plan 2012-2032

An Italian consulting firm was awarded the contract for the planning of DSM Master Plan 2012-2032, a project funded by World Bank. Ministry of Land, Housing and Human Settlements Development (MOLHHSD) was the executing agency of the planning. The consultant firm submitted the draft of the plan to MOLHHSD, but the ministry did not approve because the submitted version did not satisfy the requirements specified in Terms of Reference for the DSM Master Plan. According to Urban Planning Act, DCC was supposed to be the executing agency to develop the urban master plan for DSM. A local consulting firm, which was an associate firm of the Italian consulting firm, has continued working on the finalisation of the plan. The DSM Master Plan was incomplete for the entire time of preparing this Dar es Salaam Transport Master Plan

1) Large gap between current land use and future land use

Future land use proposed in the plan was not based on the existing land use. For example, agricultural area was proposed at residential area in the existing land use. The shift from residential area to agricultural area is not realistic in growing cities such as DSM.

2) Using old data for setting socio-economic framework

Population and housing census was carried out in 2012, but the plan was prepared based on 2002 census data.

3) Lack of Technical Supplements

Data or analysis results including future traffic demand data for justification of the plan were not submitted. The plan lacks sufficient scientific grounds.

(3) Kigamboni New City Master Plan

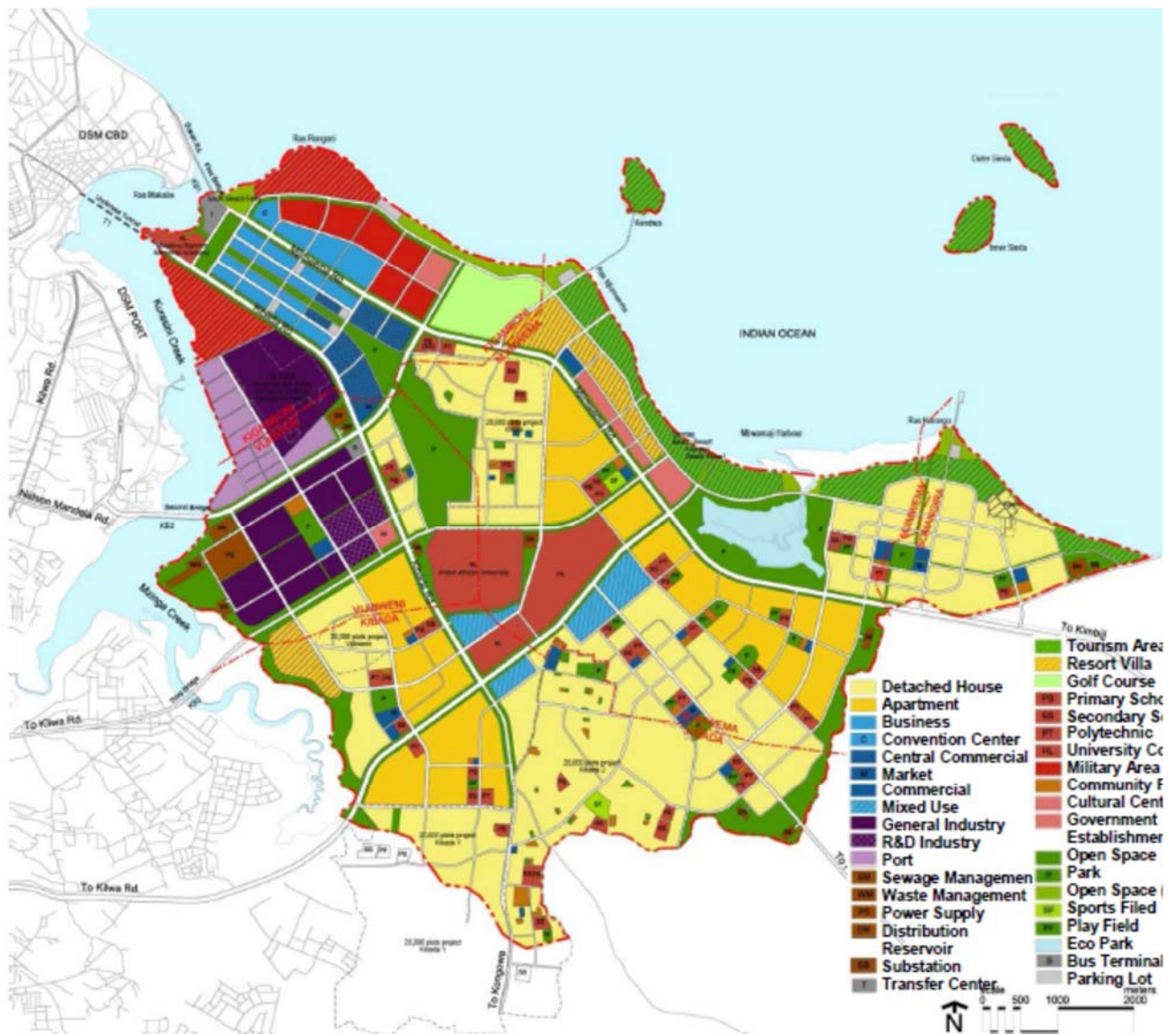
Kigamboni New City Master Plan was formulated in 2010 with a target area of about 6,500 ha of Kigamboni on the other side of the CBD's water area in Kigamboni Municipal Council. Korea Land and Housing Corporation in South Korea provided consulting services for the planning. The master plan envisages the development of international business centre taking advantage of the location close to CBD and fostering value-added industry. Table 3.1.3 shows the outline of Kigamboni New City Master Plan. Figure 3.1.3 shows future land use plan of the new city.

To implement the master plan for the new city, Kigamboni Development Authority (KDA) was established, but it was dissolved by the president on September 2017. Kigamboni Municipal Council took over KDA's work. The Kigamboni Plan under KDA was found to have proposed a plan that did not consider the existing plans and in some areas, the roads proposed were passing through military bases and institutions. It therefore became an expensive plan due to huge compensation. MOLHSD ordered the Municipal Council to revise the master plan.

Table 3.1.3 Outline of Kigamboni New City Master Plan

Target year	2030
Land area of target area	64,944,000 m ²
Target Municipal Council	Kigamboni
Target wards	Kigamboni, Mjimwema, Kibada, Vijibweni, Somangila
Population as of 2010	82,808 persons
Target population	500,000 persons
Vision	- The future of Africa - Transportation & Industrial hub connecting Africa to the Indian Ocean - The source of national economic growth through global business, tourism resort, advanced education and high-quality residence
Share by land use category in future land use	residence 36.2%, commerce and business 5.5%, industry 7.7%, tourism 8.3%, education 6.6%, institution 5.8%, utility 1.0%, entertainment (including parks) 17.3%, Others 11.4%
Total cost of the proposed projects	8,209,709 Million TZS

Source: Kigamboni New City Master Plan 2010



Source: Kigamboni New City Master Plan 2010

Figure 3.1.3 Future Land Use Plan in Kigamboni New City Master Plan

(4) Bagamoyo SEZ Plan

Export Processing Zone Authority (EPZA) has a development plan of Special Economic Zone (SEZ) in Bagamoyo. The planned site area is 10,000 ha. The SEZ will be developed at the hinterland of Bagamoyo Port, which will serve eight to 10 million TEUs by 2030. EPZA envisages Bagamoyo as a transport hub and production platform. Bagamoyo will be connected to land locked countries such as Zambia and Democratic Republic of Congo. The investment cost of 10 billion USD will be used to complete all projects. These information was obtained from the interview with the EPZA. Due to the signed contract of agreement for confidentiality with China Merchants Holdings International (CMHI), it has currently been difficult to obtain further detailed information of the Bagamoyo Development Plan.

According to EPZA, as of March 2018, the master plan for Bagamoyo SEZ is ready but revising the plan is necessary as a result of negotiation between the government and contractors. Regarding Bagamoyo port, the negotiation with contractors is in its final stage and construction will start

soon. Since EPZA already selected the contractors for SEZ and started the negotiation, the possibility of proceeding to the implementation stage is high.

3.2 Transport Plan

3.2.1 Review on JICA Urban Transport Master Plan in 2008

(1) Progress of JICA Urban Transport Master Plan in 2008

Out of 71 road development projects proposed by current JICA Urban Transport Master Plan established in 2008, 26 projects are on various stages of implementation. Remaining 45 projects are waiting for their implementation stages.

BRT Phase-1 with 20.9km has been completed and has been operating since 2016, although 11 BRT routes with the length between seven and 20km, 187km in total, were suggested to be completed by 2015.

Five road projects have been completed, three projects are under construction and one project is under procurement in January 2017, although 71 road development projects were proposed by Current Urban Transport Master Plan in 2008.

Seventeen projects are on various stage of implementation after completion of the studies.

Table 3.2.1 Status of Road Projects in January 2017

Status	No. of Project	Remarks
Completed	5	9 projects are on-going or completed for the implementation.
Under Construction	3	
Under Procurement	1	
Detailed Design Completed	3	17 projects are preparing to shift the next step for the implementation.
Basic Design Completed	2	
Under Basic Design	2	
Under Feasibility Study	6	
Project Financing	4	45 projects are still waiting for the implementation stage.
No Progress	45	
Total	71	

Source: JST

(2) Framework

As several frameworks for the future demand forecast in the year 2030, population is assumed to be 5.8 million, work population is assumed to be 2.32 million and the annual growth rate of GDP per capita is approximately 3.5-3.8% between 2003 and 2030.

Table 3.2.2 Population Projection for DSM

Year	Tanzania Mainland	Dar es Salaam Region		
	Population (1,000)	Population (1,000)	Average Annual Growth Rate	% share in Tanzania Mainland
2003	33,846	2,564		7.6%
2007	38,291	3,030	4.3% (2003-2007)	7.9%
2010	38,291	3,400	4.1% (2007-2010)	8.1%
2015	41,914	4,000	3.3% (2010-2015)	8.3%
2020	48,366	4,600	2.8% (2015-2020)	8.3%
2025	55,356	5,200	2.5% (2020-2025)	8.2%
2030	63,299	5,800	2.2% (2025-2030)	8.1%

Source: DSM Transport Policy and System Development Master Plan, Final Report, June 2008, JICA

Table 3.2.3 Economic Growth Assumption by JST

Year	TANZANIA			Dar es Salaam		
	GDP Growth Rate	GDP Per capita Growth Rate	Per capita GDP 2003=100	GRDP Annual Growth Rate	GRDP Per capita Growth Rate	Per capita GRDP 2003=100
2003-2010	5.5%	2.5%	119	7.6%	3.5%	127
2010-2015	5.5%	2.6%	135	7.0%	3.6%	152
2015-2020	5.5%	2.7%	155	6.7%	3.7%	182
2020-2025	5.5%	2.8%	177	6.4%	3.8%	220
2025-2030	5.5%	2.8%	204	6.1%	3.8%	265

Source: DSM Transport Policy and System Development Master Plan, Final Report, June 2008, JICA

Table 3.2.4 Projection of Work Population by Economic Sector in DSM, 2030

Year	Primary	Secondary	Tertiary	Total
2002	164,279	123,016	640,239	927,534
2030	116,000	232,000	1,972,000	2,320,000

Source: DSM Transport Policy and System Development Master Plan, Final Report, June 2008, JICA

(3) Urban Structure and Land use

As an urban structure in the future, Poly-centric Satellite Centers Development Pattern and Strategic Corridor Development Pattern were suggested by JST in 2008. In the 2008 M/P, JST recommended setting an urban growth boundary (UGB) to identify a limit of urbanization for the next 20 years as shown in Figure 3.2.3. The recommendation also mentions that the UGB should be reviewed every five years based on the analysis of population growth, natural conditions, land development constraints, and infrastructure development programs. Setting UGB was appropriate when the 2008 M/P was formulated. It is because the existing urban area in 2008 was located within UGB and the 2008 M/P considered that the projected population of 5.8 million in 2030 can be accommodated within UGB by avoiding disordered urban sprawl and expansion of unplanned settlements to the peripheral area.

Currently, the urbanization is progressing beyond the boundary recommended by JST in 2008 as actual population has grown faster than the projection. Actual population size as the precondition of

the concept UGB in 2008 has grown larger than projected. This rapid population growth is one of the key phenomena why revision of 2008 M/P is required.

1) Institutionalization

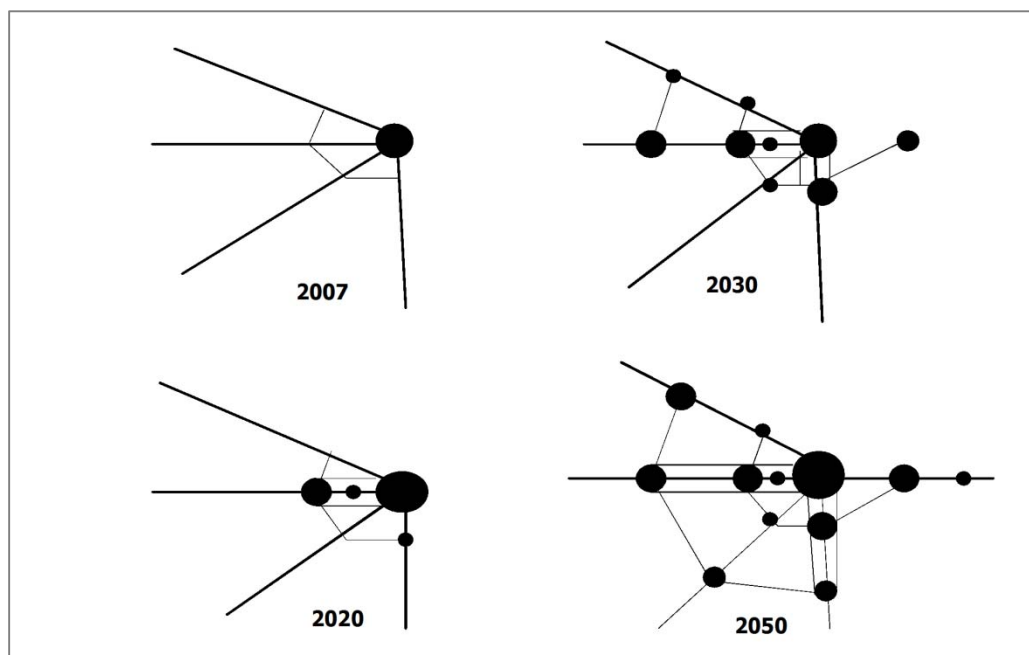
Institutionalization of UGB was not discussed in the Final Report. Steps on how to harmonize UGB with the legal system such as Urban Planning Act was not made.

2) Organization

The organizations which would institutionalize the UGB and that which set the UGB were not recommended in the final report. Although JST recommended the concept of UGB, it did not recommend on which organization would take initiative for institutionalizing, setting, and operating the UGB.

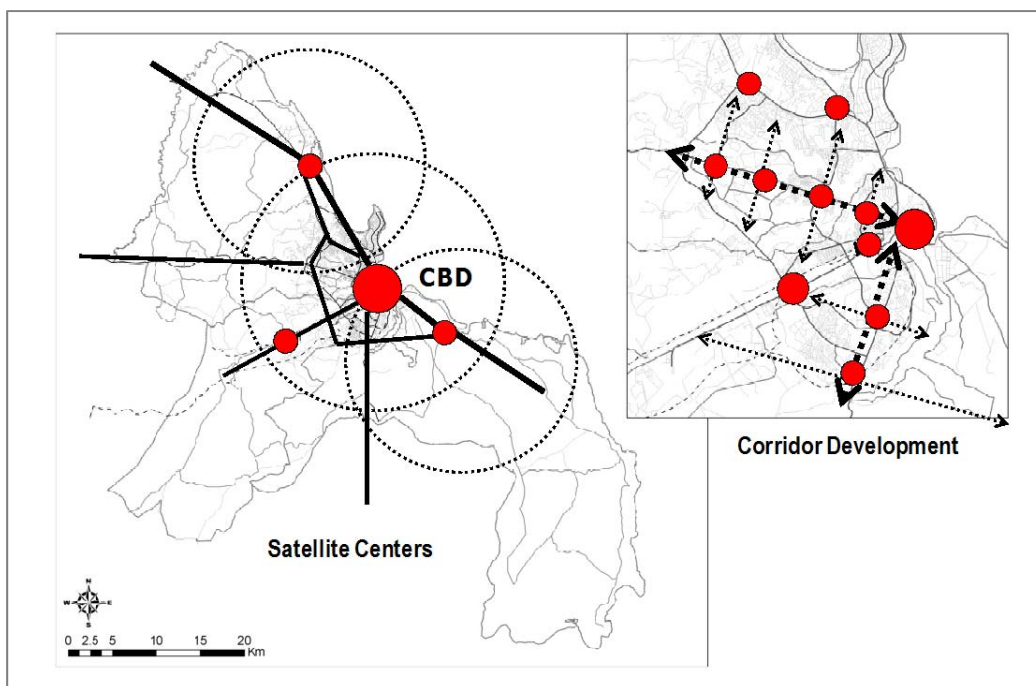
3) Action Plan

Action plan including who and what to do with regards to institutionalizing, setting, operating the UGB, etc. was not clarified in 2008 M/P.



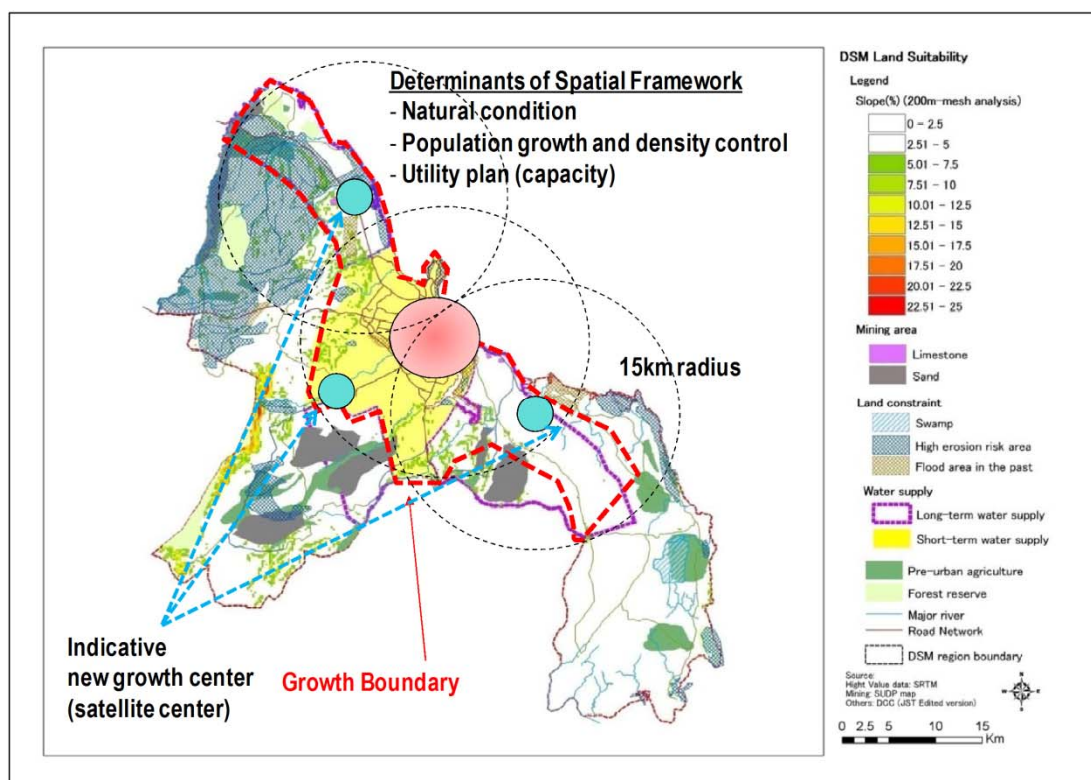
Source: DSM Transport Policy and System Development Master Plan, Final Report, June 2008, JICA

Figure 3.2.1 Future Urban Structure for DSM with a Time Frame from 2007 to 2050



Source: DSM Transport Policy and System Development Master Plan, Final Report, June 2008, JICA

Figure 3.2.2 Satellite Centres and Corridor Development

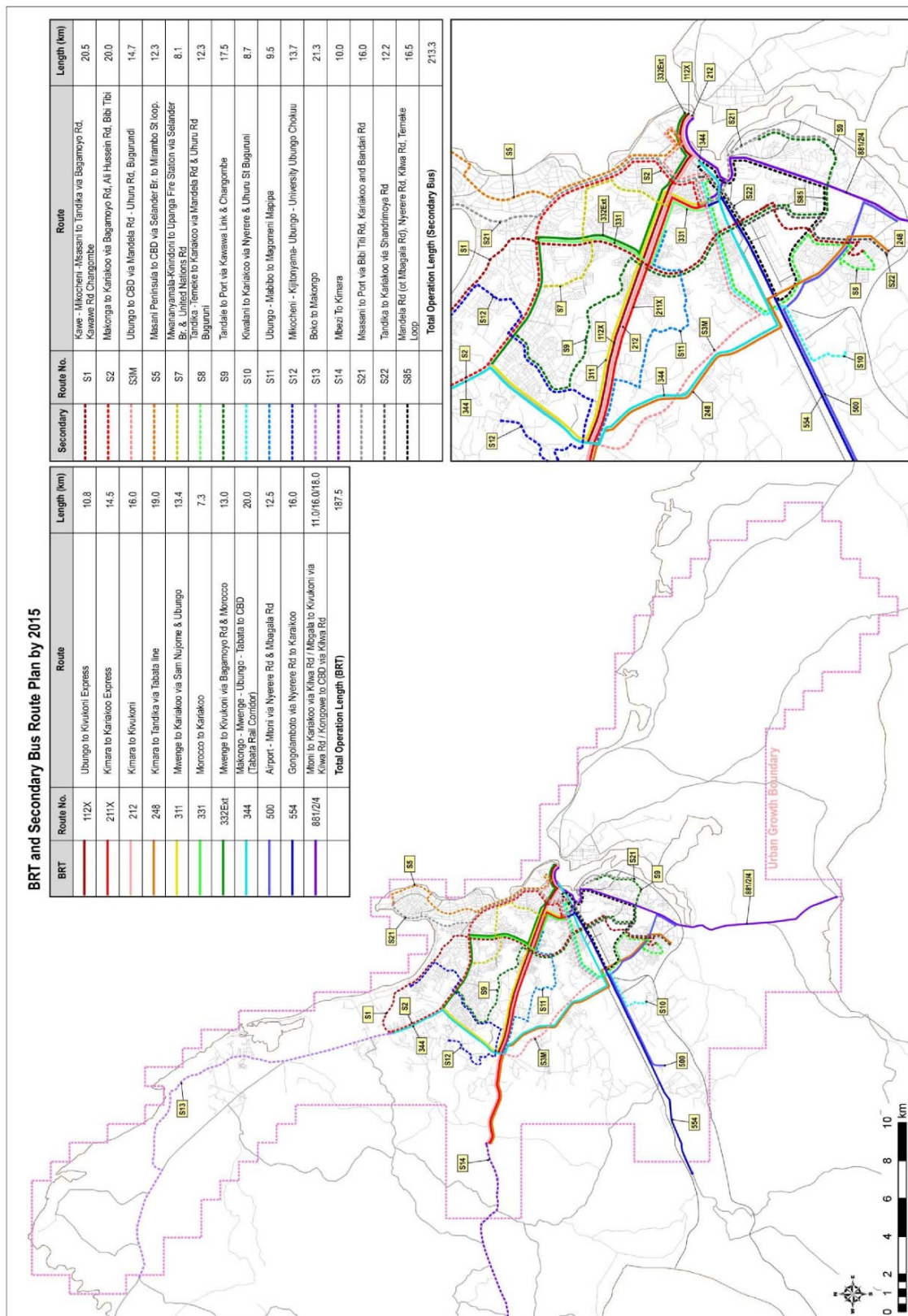


Source: DSM Transport Policy and System Development Master Plan, Final Report, June 2008, JICA

Figure 3.2.3 Proposed Satellite Centres

(4) Public Transport Plan

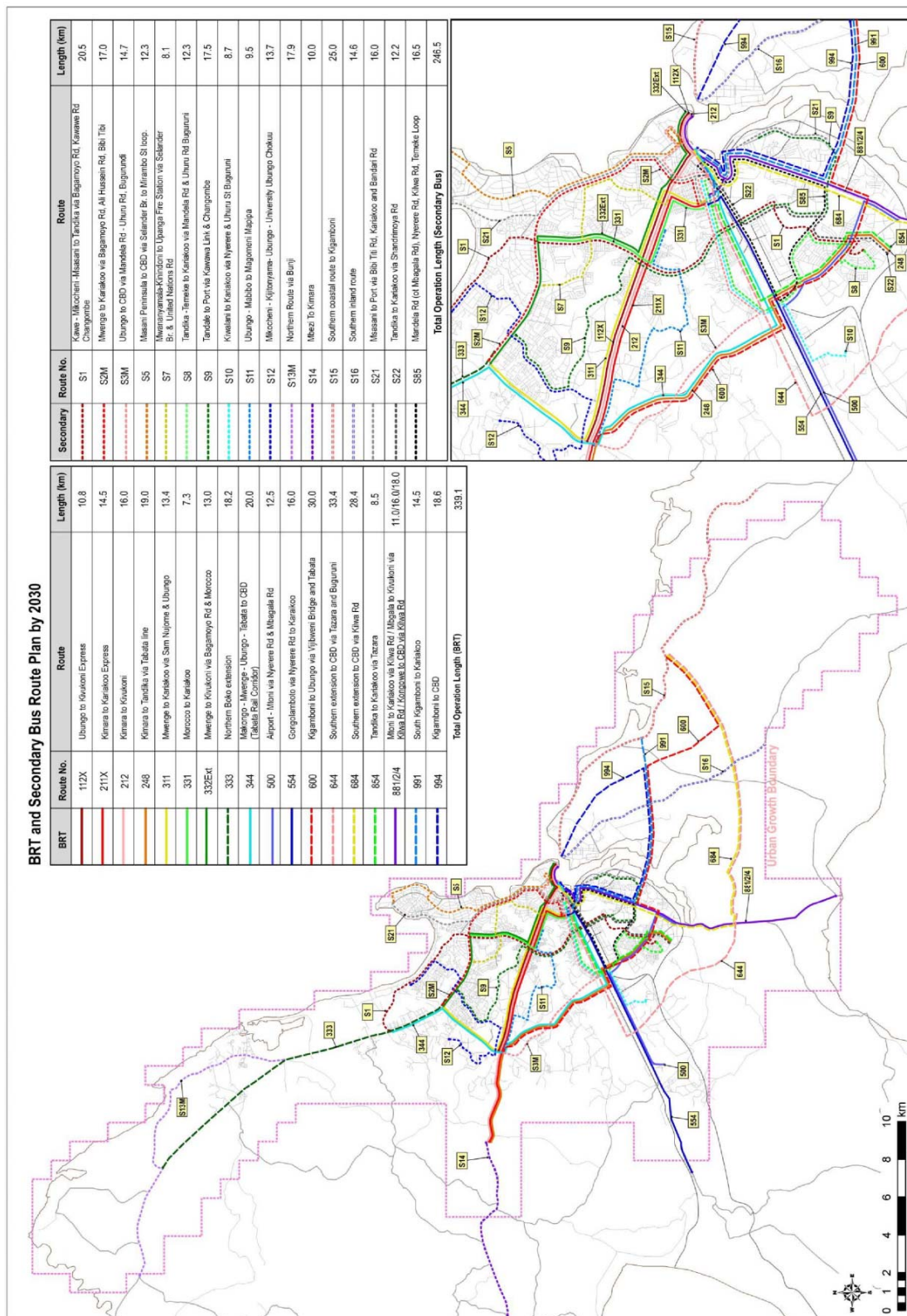
11 BRT routes with the length between seven and 20km, 187km in total, were suggested to be completed by 2015.



Source: DSM Transport Policy and System Development Master Plan, Final Report, June 2008, JICA

Figure 3.2.4 Proposed BRT and Secondary Bus Route Plan by 2015

Furthermore, seven routes were suggested to be added by 2030, with a total of 18 routes and the lengths of 339km were suggested to cover the whole area of DSM.



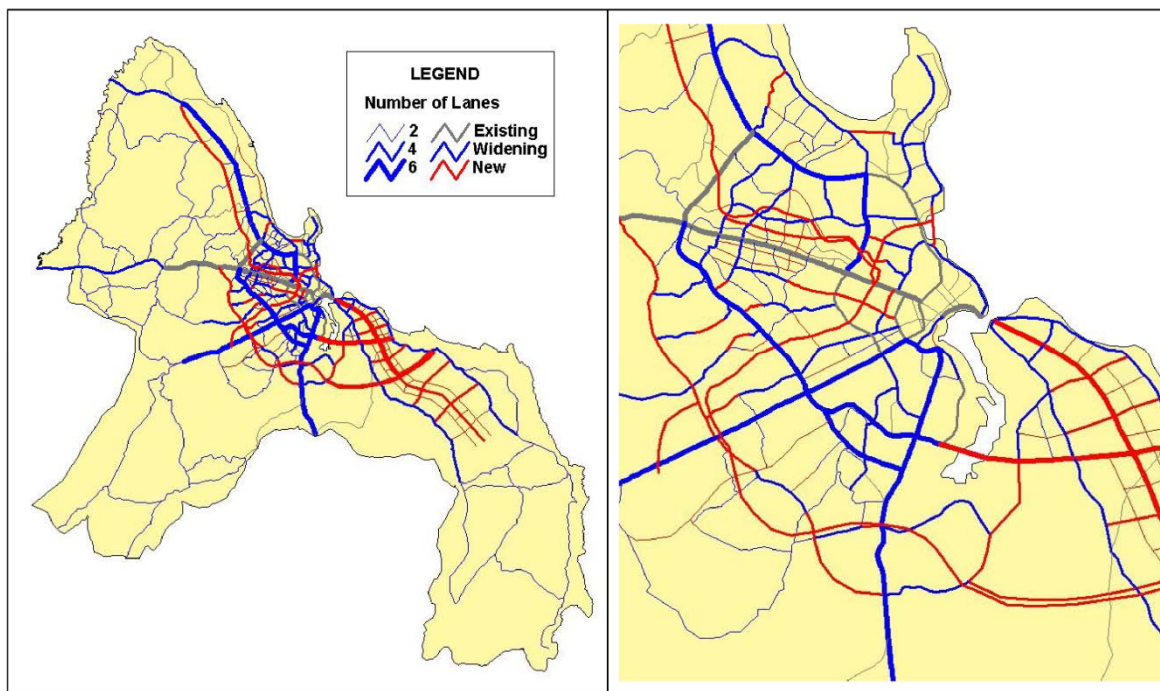
Source: DSM Transport Policy and System Development Master Plan, Final Report, June 2008, JICA

Figure 3.2.5 Proposed BRT and Secondary Bus Route Plan by 2030

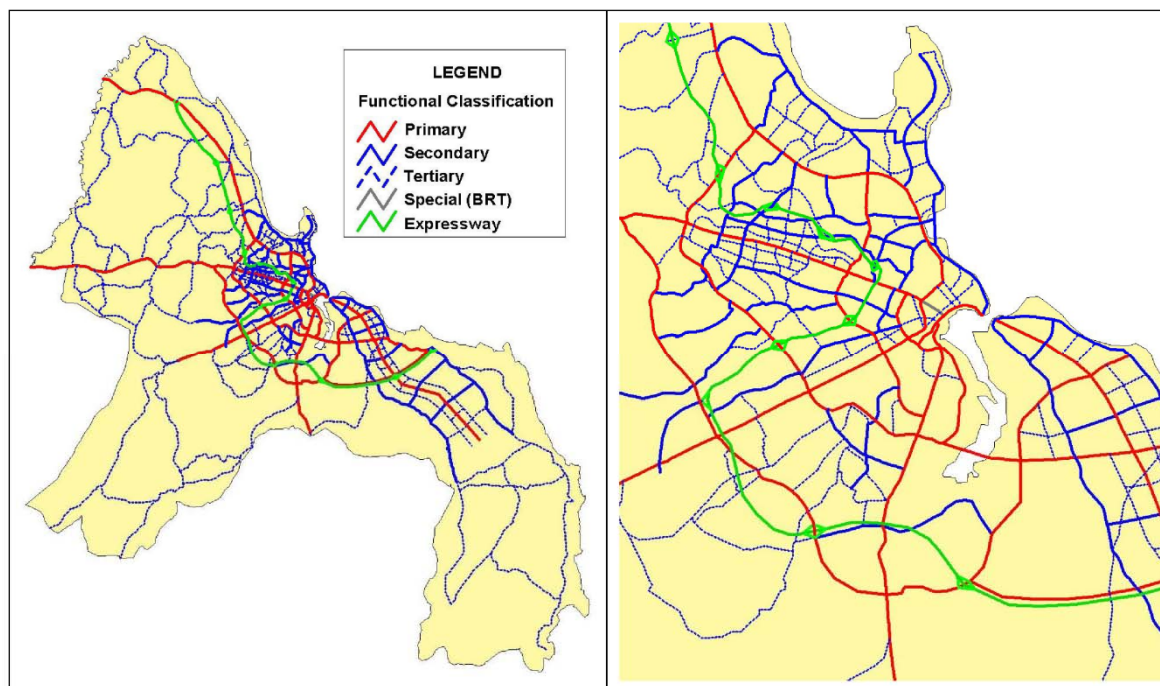
(5) Road Transport Plan

Seventy-one road transport projects with the total length of 933km including Mwalimu Nyerere Bridge (Kigamboni Bridge) and an expressway with the length of 68km were suggested.

Number of Lanes in 2030



Road Class in 2030



Source: DSM Transport Policy and System Development Master Plan, Final Report, June 2008, JICA

Figure 3.2.6 Proposed Road Master Plan (1)

3.2.2 Road Development Plan

(1) Project to be Undertaken by MOWTC / TANROADS

1) Plan and Status

Table 3.2.5 shows road development plans and status in DSM for decongestion of DSM City, which are mentioned in The Second Five Year Development Plan (FYDP II), 2016/17 – 2020/21 and data provided by TANROADS DSM in December, 2016. which are mentioned in The Second Five Year Development Plan (FYDP II), 2016/17 – 2020/21 and data provided by TANROADS DSM in December, 2016.

Table 3.2.5 Road Development Plan and Status in DSM by MOWTC / TANROADS

No.	Project	Status	Challenges	Cost Implication (TZS,Bill)	Remarks
1	Construction of DSM - Chalinze - Morogoro Express way, 200 km	Feasibility Study completed	<ul style="list-style-type: none"> ● Expedite completion of feasibility study ● Unfixed project financing 	-	<ul style="list-style-type: none"> • Authorized by MOWTC • See Page 3-17
2	Construction of Interchange at Ubungo, DSM	Under Procurement	<ul style="list-style-type: none"> ● Compensation for land and properties ● Failure to agree on dividing the contract and managing project risks 	222.70	-
3	Construction of Fly-over at Tazara, DSM	On-going	-	93.44	-
4	Construction of approach road to Mwalimu Nyerere Bridge (Kigamboni Bridge) is on progress at Uhasibu (Kurasini), DSM	On-going	<ul style="list-style-type: none"> ● Compensation for land and properties 	25.29	-
5	Construction of Fly-over at Chang'ombe (Kawawa - Nyerere), DSM	Project financing	<ul style="list-style-type: none"> ● Compensation for land and properties 	10.12	-
6	Gerezani road widening	Detailed Design completed	<ul style="list-style-type: none"> ● Design requirement changed by SGR plan 	-	<ul style="list-style-type: none"> • GoT should set aside fund for compensation in FY 2016/17.
7	New Bagamoyo road 2 – Mwenge - Morocco section	Interim Measures (Completed in 2015)	<ul style="list-style-type: none"> ● Delay in project financing approval from government of Japan 	5.00	-
8	Construction Selander bridge (Construction of Agakhani – Koko beach road 7km)	Detailed Engineering Design completed	<ul style="list-style-type: none"> ● Funds for feasibility study and detail design and compensation ● Do Feasibility and detail design studies 	297.60	<ul style="list-style-type: none"> • Authorized by MOWTC • Obtain financing from Korea • See Page 3-18.
9	DSM Outer Ring Road Namely: Bunju-Mbezi (Morogoro Road) – Pugu (34 km).	Detailed Engineering Design completed	<ul style="list-style-type: none"> ● Unfixed project financing 	694.37	<ul style="list-style-type: none"> • Authorized by MOWTC • See Page 3-19
10	Design of Seven (8) Major Interchanges - Mandela/Uhuru, Magomeni, Fire, Ali Hassan Mwinyi/United Nations, Ali Hassan Mwinyi/Kinondoni, Mwenge, Tabata/Mandela and Morocco	FS on-going	-	TOR was prepared and submitted to ADB for funding-	<ul style="list-style-type: none"> • See Page 3-20
11	Widening of Mwaikibaki road (Morocco – Kawe) to four lane dual carriage way, 4km	Design completed	<ul style="list-style-type: none"> ● Unfixed project financing 	-	-

No.	Project	Status	Challenges	Cost Implication (TZS,Bill)	Remarks	
12	Widening of Kilwa road (Mbagala – Kongowe)	Under design	● Unfixed project financing	-	• See Page 3-20	
13	Upgrading of Maji chumvi – Barakuda – Vingunguti to Bitumen standard	Design completed	● Unfixed project financing	-	-	
14	Strengthening/Widening of Pugu – Chanika Mbagala rangi tatu road	Under contemplation	● Unfixed project financing	-	-	
15	BRT (Projects)	Phase I (Morogoro road)	Completed	-	388,000.0	-
		Phase II (Kilwa road)	Under contemplation	● Remaining \$19million will be covered by the government	To be funded by ADB (\$141 million)	-
		Phase III (Nyerere road)	Under contemplation	● Unfixed project financing	To be funded by World Bank	-
16	Upgrading of Tegeta - Bagamoyo to four lanes	Under design	-	-	• See Page 3-20	
17	Strengthening and Widening of Mandela Road (Dar Port – TAZARA) to 6 lanes dual carriageway, (6 km)	Under procurement of consultant for the consultancy services	-	-	• See Page 3-21	
18	Strengthening and Widening of Nyerere Road (TAZARA - JNIA) to 6 lanes dual carriageway, 6 km	Under procurement of consultant for the consultancy services	-	-	• See Page 3-21	
19	Widening of Pugu Road (JNIA – Pugu) to 6 lanes dual carriageway, 8 km	Under procurement of consultant for the consultancy services	-	-	• See Page 3-21	
20	Widening of Kimara - Kibaha road (25.7 km) including Widening of Kibamba, Kiluvya and Mpiji Bridges to four lanes Dual carriageway	Under procurement of consultant for the consultancy services	-	-	• See Page 3-21	
21	Widening of Bandari road (1.2km) and upgrading of Dockyard (0.7km) and Mivinjeni (1.0km) roads	Under procurement of consultant for the consultancy services	-	-	• See Page 3-21	
22	New Kigamboni City Master Plan	Completed	-	-	• Authorized by MOLHSD • See Page 3-211	

Source: FYDP II and Data from TANROADS

a) Feasibility Study and preparation of RFP documents for DSM - Chalinze Expressway (128km)

The project involves carrying out a feasibility study and baseline design and preparation of RFP documents for the DSM - Chalinze expressway using GoT funds but under Public Private Partnership (PPP) programme.

The service contract was signed between M/s Cheil of Korea and TANROADS on 22nd January 2015. The duration of work was initially until 21st August 2016. However, the consultant

submitted the draft feasibility study and affordability reports after the date, which has been reviewed by TANROADS and other stakeholders. The final feasibility study report was finally submitted in December 2016.

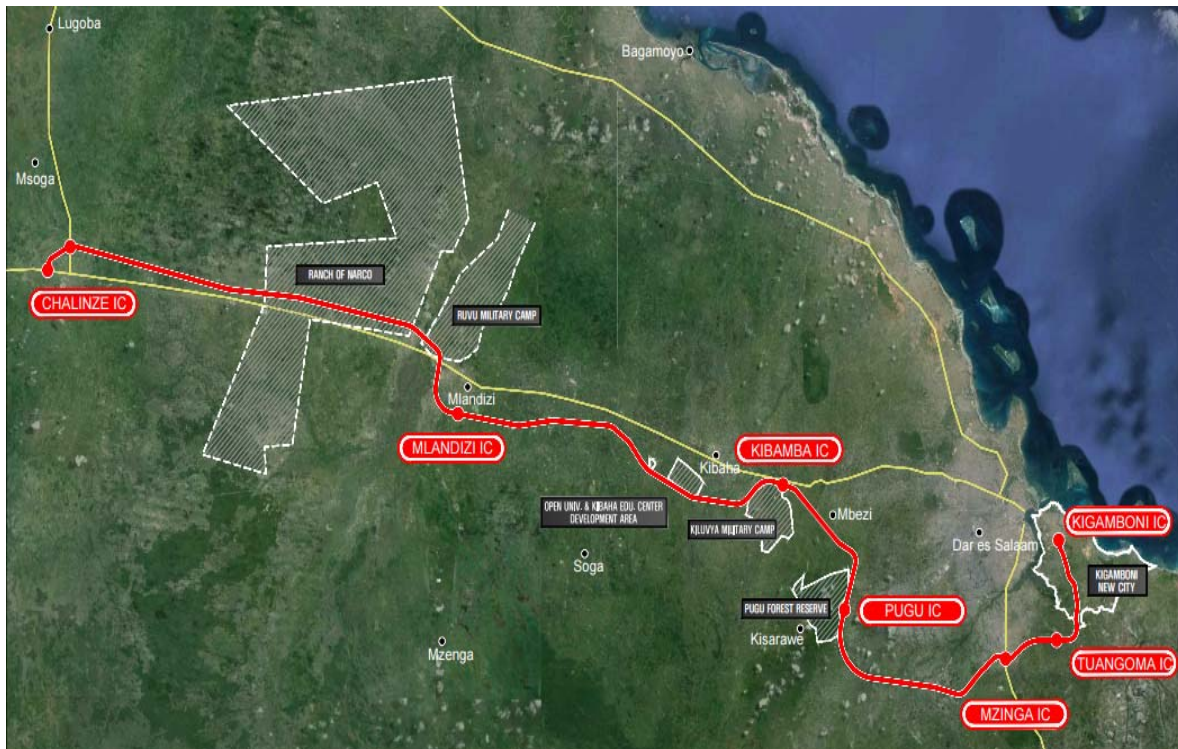


Figure 3.2.8 Proposed Plan



Figure 3.2.9 Project Location

b) Consultancy Services for Detailed Design of New Selander Bridge

The objective of this assignment is to carry out the detailed design and preparation of tender documents for the construction of the new bridge along Selander Bridge under Korean Government financing to reduce traffic congestion along Ali Hassan Mwinyi road.



Figure 3.2.10 Proposed Plan

c) DSM Outer Ring Road Namely: Bunju-Mbezi (Morogoro Road) – Pugu (34km)

- (i) **Feasibility Study, Detailed Engineering Design, and Preparation of Tender Documents for the Upgrading of Pugu - Kifuru – Mbezi Mwisho Roads (12.7km) to Six-Lane Dual Carriage roads**

The objective of this assignment is to carry out the Feasibility Study, Detailed Engineering Design and preparation of tender documents for the Upgrading of Pugu - Kifuru – Mbezi Mwisho Roads (12.7km) to six-lane dual carriage roads. The assignment will include an Environmental and Social Impact Assessment.

No activity was planned for this quarter.

- (ii) **Feasibility Study, Detailed Engineering Design, and Preparation of Tender Documents for the Upgrading of Mbezi Mwisho - Mpiji Magohe – Bunju Roads (21.3km) to Six-Lane Dual Carriage Roads**

The objective of this assignment is to carry out the Feasibility Study, Detailed Engineering Design and preparation of tender documents for the Upgrading of Mbezi Mwisho - Mpiji Magohe – Bunju Roads (21.3km) to six-lane dual carriage roads. The assignment will include an Environmental and Social Impact Assessment.

No activity was planned for this quarter.

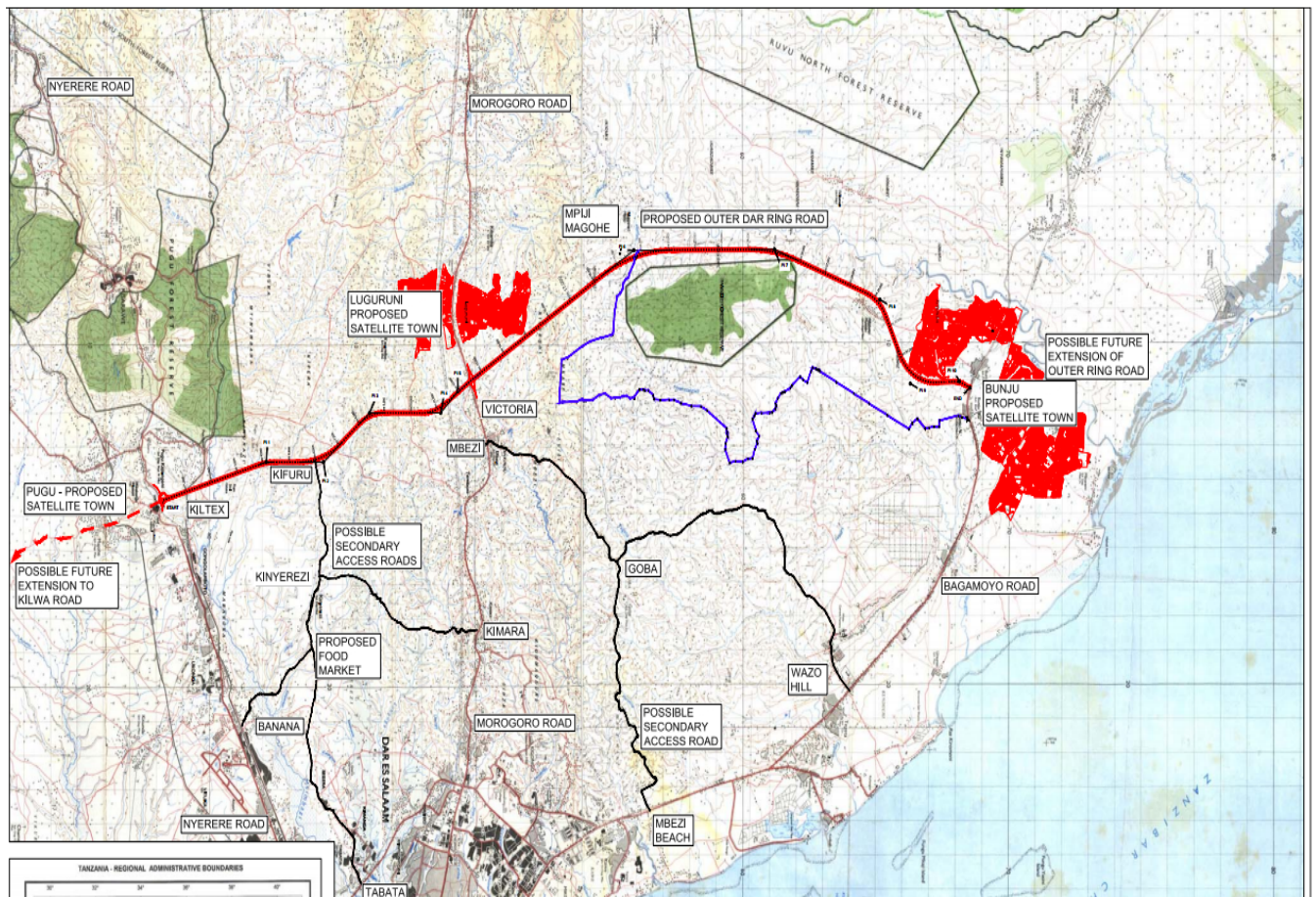


Figure 3.2.11 Proposed Plan

d) Feasibility Study, Detailed Engineering Design, and Preparation of Tender Documents for Improvement of Junctions/Intersections at Mandela/Uhuru, Magomeni, Fire, Ali Hassan Mwinyi/United Nations, Ali Hassan Mwinyi/Kinondoni, Mwenge, Tabata/Mandela and Morocco in DSM City

The objective of this assignment is to carry out the Feasibility Study, Detailed Engineering Design and preparation of tender documents for improvement of eight critical intersections in the DSM City.

The consultant has commenced the traffic survey at the objective intersections since September 2017.

e) Feasibility Study, Detailed Engineering Design and Preparation of Tender Documents for the Widening of Mbagala Rangi Tatu – Kongowe including Mzinga Bridge to Four-Lane Dual Carriageway, 3.8km

The objective of this assignment is to carry out the Feasibility Study, Detailed Engineering Design and preparation of tender documents for the construction works for widening of Mbagala Rangi Tatu – Kongowe including Mzinga Bridge to 4 lanes dual carriageway. The assignment will include environmental and social impact assessment.

f) Consultancy Services for Feasibility Study, Environmental and Social Impact Assessment, Detailed Engineering Design and Preparation of Tender Documents for Upgrading of Tegeta - Bagamoyo to Four Lanes

The objective of this assignment is to carry out a feasibility study, Environmental and Social Impact Assessment, Detailed Engineering Design and Preparation of Tender Documents for Upgrading of Tegeta - Bagamoyo to four lanes.

The Feasibility and detailed design assignment is ongoing under in-house (TECU) design team.

g) Feasibility Study, Detailed Engineering Design, and Preparation of Tender Documents for the Strengthening and Widening of Mandela Road (Dar Port – TAZARA) to Six-Lane Dual Carriageway, 6km

The objective of this assignment is to carry out the Feasibility Study, Detailed Engineering Design and preparation of tender documents for the strengthening and widening of Mandela Road (Dar port – TAZARA) to six-lane dual carriageway.

The procurement of consultant for the services is ongoing.

h) Feasibility Study, Detailed Engineering Design, and Preparation of Tender Documents for the Strengthening and Widening of Nyerere Road (TAZARA - JNIA) to Six-Lane Dual Carriageway, 6km

The objective of this assignment is to carry out the Feasibility Study, Detailed Engineering Design and preparation of tender documents for the strengthening and widening of Nyerere Road (TAZARA - JNIA) to six-lane dual carriageway.

Procurement of consultant for the services is ongoing.

i) Feasibility Study, Detailed Engineering Design, and Preparation of Tender Documents for the Widening of Pugu Road (JNIA – Pugu) to Six-Lane Dual Carriageway, 8km

The objective of this assignment is to carry out the Feasibility Study, Detailed Engineering Design and preparation of tender documents for the strengthening and widening of Pugu road (JNIA - Pugu) to six-lane dual carriageway.

Procurement of consultant for the assignment is ongoing.

j) Feasibility Study, Detailed Engineering Design, and Preparation of Tender Documents for the Widening of Kimara - Kibaha Road (25.7km) Including Widening of Kibamba, Kiluvya and Mpiji Bridges to Four-Lane Dual Carriageway

The objective of this assignment is to carry out the Feasibility Study, Detailed Engineering Design and preparation of tender documents for the construction works for widening of Kimara - Kibaha road (25.7km) including Widening of Kibamba, Kiluvya and Mpiji Bridges to four-lane dual carriageway. The assignment will include an environmental and social impact assessment.

Procurement of the consultant is in progress.

k) Feasibility Study, Detailed Engineering Design, and Preparation of Tender Documents for the Widening of Bandari Road (1.2km) and Upgrading of Dockyard (0.7km) and Mivinjeni (1.0km) Roads

The objective of this assignment is to carry out the Feasibility Study, Detailed Engineering Design and preparation of tender documents for the Widening of Bandari road (1.2km) and upgrading of Dockyard (0.7km) and Mivinjeni (1.0km) roads.

TPA is coordinating the implementation of the project under the funding of TMEA.

l) New Kigamboni City Master Plan

New Kigamboni City Master Plan was authorized by MOLHSD in May 2010. The main objectives for the study which are outlined in the TOR for carrying out this project between the client and

consultant are:

- To facilitate the development of competitive urban services of oriented city to spur economic growth and promote tourism in DSM. The city of administrative, economic and social functions which is supplemented by a diversified industrial and commercial tourism base should ensure a variety of employment for its population.
- To create a character in the waterfront areas that will stimulate investment opportunities.
- To create ultra-modern residential development opportunities for various categories of residents. The city shall demonstrate a high quality in its human settlements incorporating highest environmental standards and should in effect be a pilot study demonstrating the best possible housing and urban living conditions in DSM.
- To improve public access to the beach areas and elsewhere through varied and flexible modes of transport aimed at avoiding the mistakes of present planning of overcrowding, pollution, traffic congestion and long journeys to and from work which are now common in DSM and other cities in the country.
- To formulate city development concepts, planning for the next 20 years.
- To create varied employment opportunities in the area from project design to actual functioning of the city (construction, industries, tourism, maintenance, etc.)



Figure 3.2.12 Excerpt of New Kigamboni City Master Plan Report

2) Project Location Map

Authorized project location map and planned project map are shown in Figure 3.2.13 and Figure 3.2.14.

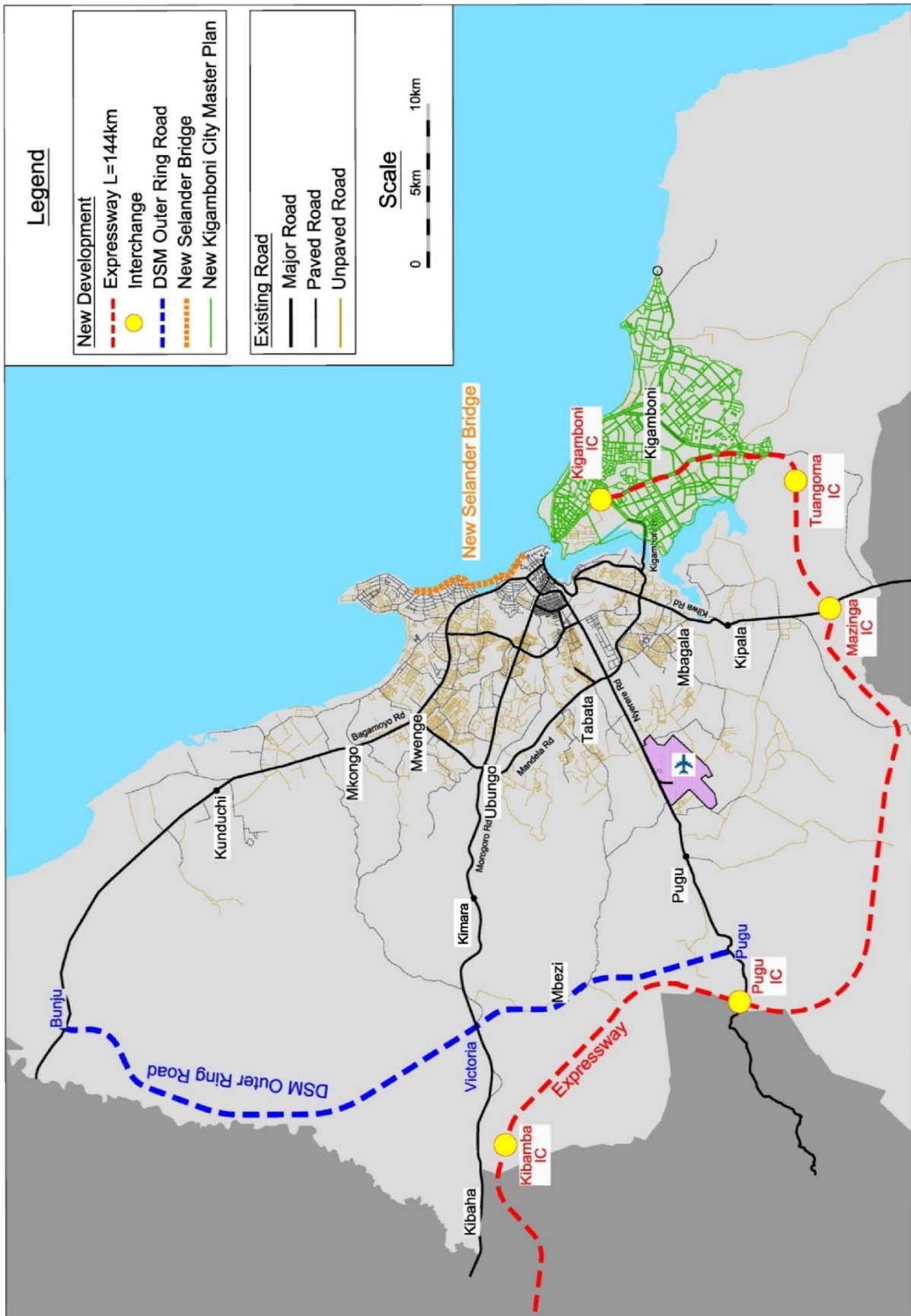


Figure 3.2.13 Authorized Project Location Map



Figure 3.2.14 Planned Project Location Map

3) Review of On-Going Projects

TANROADS have reviewed On-Going Projects for decongestion of Dar es Salaam Cityon road sector in the TRANSPORT Policy Review Paper, which was published at the 11th Joint Transport Sector Review (JTSR 2017) on November 2017, in the following matter.

Table 3.2.6 Review of On-Going Projects

Type	Description
1. Ring Roads	The project entails the upgrading of several feeder roads in DSM to bitumen standard towards alleviating congestion in Dar City including Ubungo Maziwa - External & Kigogo - Tabata Dampo, Kimara - Kilungule - External, Tegeta Kibaoni - Wazo Hill - Goba Mbezi (Moro rd), Tangi Bovu - Goba, Kimara Baruti : Msewe - Changanyikeni and Kibamba - Kisopwa (Kibamba - Mloganzila section). The projects are funded by GOT and Roads Funds and managed by Regional Manager's Office DSM.
2. TAZARA Flyover	The Government of Tanzania has secured funds from the Government of Japan for construction of the Flyover at TAZARA along Mandela Road JNIA junction so as to reduce traffic congestion. The Works contract was signed between TANROADS and Sumitomo Mitsui Construction Co. Ltd of Japan on 15th October 2015. The contract duration is 35 months. Up to end of June 2017, the works were in progress and the physical progress was 45.3%.
3. UBUNGO Interchange	The Government of Tanzania has secured funds from the World Bank for construction of the Ubungo Interchange along Morogoro road and Sam Nujoma Junction. A contract for construction was signed on 22nd February, 2017. The contract duration is 30 months. Up to the end of June 2017, the Contractor was mobilizing for commencement of Works.
4. Improvement of Eight (8) Critical Junctions	A contract was signed on 9th May, 2017 for feasibility study and detailed engineering design and preparation of tender documents of eight critical junctions in Dar es Salaam City namely Mandela/Uhuru, Magomeni, Fire, Ali Hassan Mwinyi/United Nations, Ali Hassan Mwinyi/Kinondoni, Mwenge, Tabata/Mandela and Morocco under AfDB financing.
5. Bus Rapid Transit (BRT-Phase II)	A Consultant has submitted Final Review of Reports and Bidding Documents which are currently under review by TANROADS. If found justifiable they will be submitted to TANROADS Headquarters Tender Board (THQ - TB) and AfDB for approval prior to tendering. Dar es Salaam BRT Phase II project is designed to take place along Kilwa Road (from the City centre to Mbagala Rangitatu area) including Sokpine Avenue, (from Zanaki Street to Gerezani round about), Gerezani (from round about to Nyerere-Msimbazi junction), Bandari Street (from Gerezani to Bendera tatu round about) and from South Kawawa Road up to Mgulani JKT round about which is along Kilwa Road. The total length of the proposed Phase 2 Road project is 20.3km.
6. Bus Rapid Transit (BRT-Phase III)	A no objection has been given by the World Bank for a Design Consultant (M/s Dohwa) to review Road Works & Buildings. Currently negotiations with the Consultant are on-going. Dar es Salaam BRT Phase III is designed to be constructed along Nyerere Road from the Azikiwe Street linking the existing route at city centre, Bibi Titi Road, Nkrumah up to Gongo la Mboto with other routes along Mandela Road (from Nyerere Road at TAZARA to Mandela -Uhuru Road junction), Uhuru Road (from Mandela -Uhuru Road junction to Uhuru - Shaurimoyo junction), Shaurimoyo Street to Lindi - Shaurimoyo junction) and Lindi Street (Lindi - Shaurimoyo junction to Lindi/Msimbazi Street junction) The total length of this Phase is 23.6km.
7. Bus Rapid Transit (BRT - Phase IV)	Procurement of Design Consultant is on-going. BRT Phase IV will include New Bagamoyo road under World Bank financing. Dar es Salaam BRT Phase IV system covers 26 Km from a section of Bibi Titi Mohamed Road from Azikiwe junction to Ohio junction, Ali Hassan Mwinyi Road, the New Bagamoyo Road up to Tegeta at DAWASA Daladala Bus Station); also, covers a spur on Sam Nujoma Road from its junction with New Bagamoyo Road to Ubungo junction.

Source: Joint Transport Sector Review Paper 2017

(2) Project to be undertaken by Local Government Authorities

1) Plan and Status

It was not possible to obtain information on the Road Development Plan from the related five MCs as of December 2016 since demarcation of jurisdiction was still not clear due to division of MCs from three (3) to five (5) except Temeke MC. Road Development Plan and status of Temeke MC are shown in Table 3.2.7.

Table 3.2.7 Road Development Plan and Status in DSM by Temeke MC

Project	Location	Status	Remarks
Mashine ya Maji Bridge	Buza Ward	Procurement stage	planned to be executed in FY 2016/2017
Mbozi road (1.521Km), bitumen standard	Chang'ombe Ward	Procurement stage	planned to be executed in FY 2016/2017
Chihota road (0.864Km), bitumen standard	Tandika Ward	Procurement stage	planned to be executed in FY 2016/2017
Kiburugwa road (1.926 Km), bitumen standard	Kiburugwa Ward	Procurement stage	planned to be executed in FY 2016/2017

Source: Temeke MC

2) Review of On-Going Projects

The on-going projects are maintenance works for the financial year 2015/2016 which are based on unpaved roads and most of them are almost at practical completion. These projects are located at the following wards: Buza, Mianzini, Chamazi, Tuangoma, Keko and Mbagala.

(3) DSM Metropolitan Development Project Undertaken by World Bank

DSM Metropolitan Development Project (DMDP) is *The Provision of Consultancy Services to Support Integrated Transport and Land Use Planning*, of which the overall objective is to develop an integrated land use and transport plan and guidelines for the detailed development and appropriate densification along the first line of the DSM BRT Corridor.

DMDP is being conducted in parallel with this DSM Urban Transport Master Plan and is composed of four (4) components:

Component 1

Priority infrastructure will finance improvements and constructions of priority roads and primary and secondary drainage systems;

Component 2

Upgrading in low-income communities will upgrade selected low-income communities in selected Municipal Councils through the improvement of basic services and strengthening said communities' capacity in undertaking such upgrading works;

Component 3

Institutional Strengthening, Capacity Building, and Urban Analytics will support (a) Development of Metropolitan Governance Arrangements and Systems; (b) Municipal Finances and Technical Capacity through Own Source revenue Collection and Development and Integration of GIS; (c) Improving the Integration of Transport and Land Use Planning; (d) Operations and Maintenance Systems; (e) Urban Analytics and (f) Urban Planning System;

Component 4

Implementation Support and Monitoring & Evaluation will provide support for Project management and supervision functions.

Regarding the road plan, Component 2 mentioned above is related with this DSM Urban Transport Master Plan. The upgrading work plan in Component 2 is summarized in Figure 3.2.15 and Table 3.2.8.

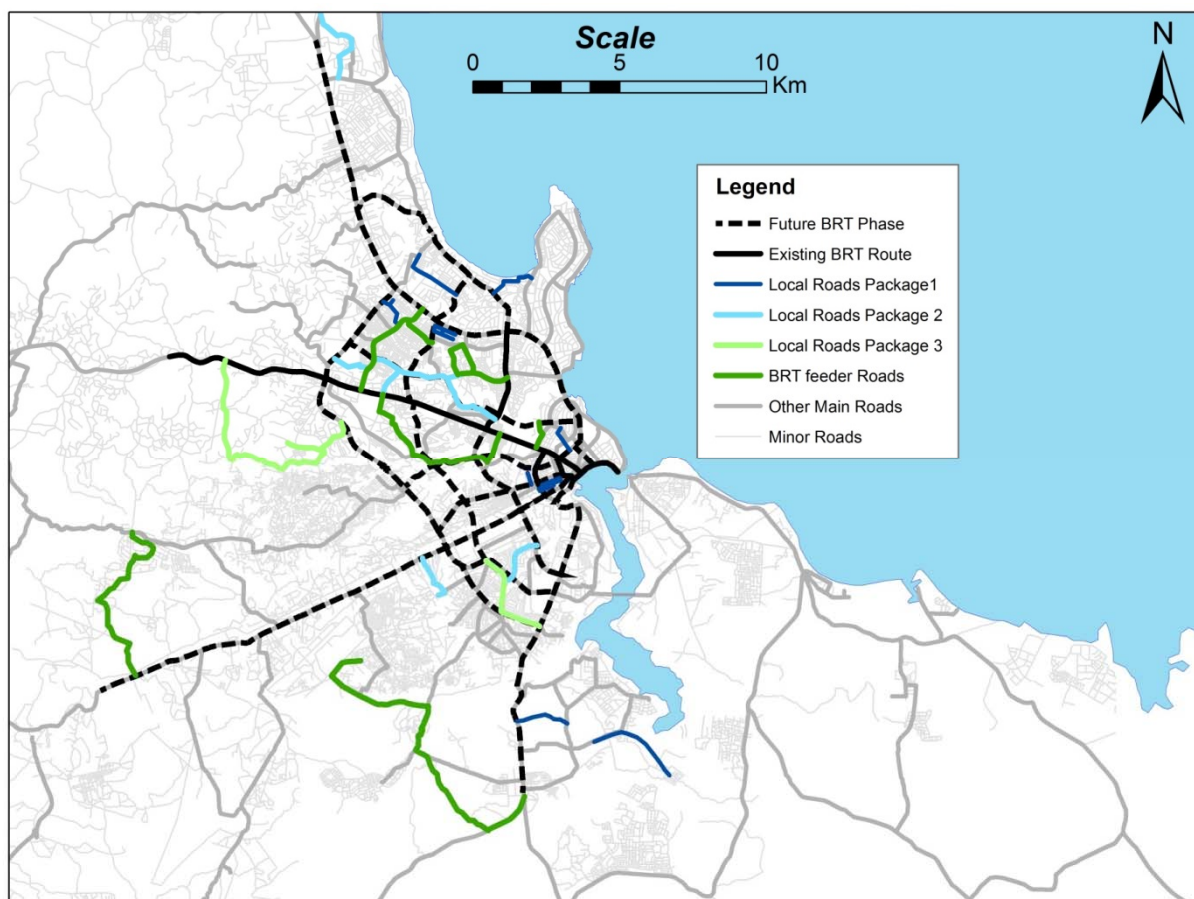


Figure 3.2.15 Upgrading Work Plan under DMDP

Table 3.2.8 Outline of Upgrading Work under DMDP

<p>■ DMDP Trunk Road Improvement</p> <p>The projects taking place under PO- RALG currently are the feeder roads (Local and Street Roads) and not Trunk Roads.</p> <ul style="list-style-type: none"> • Local Roads -65km • Street Roads - 145km
<p>■ Improvement</p> <p>The improvements which is made in these roads is Rehabilitation and Upgrading of Earth roads to AC (Asphalt Concrete)</p>
<p>■ Expected completion year</p> <p>The project began this year 2017 and is expected to be completed 2019.</p>
<p>■ Number of lane</p> <ul style="list-style-type: none"> • Temeke - Mbagala Road 3.5km) - four lanes • Chang'ombe Road (2.8km) - four lanes • Shekilango Road (4km) - four lanes • The rest of the roads have two lanes.
<p>■ Pavement type</p> <ul style="list-style-type: none"> • AC (Asphalt Concrete)
<p>■ Design Speed</p> <ul style="list-style-type: none"> • 50km/hr.

3.2.3 Public Transport Development Plan

(1) Railway

1) New MRT Plan by TRC

TRC ordered the feasibility study on the new railway line to GIBB South Africa (hereinafter GIBB). GIBB conducted the corridor analysis on 16 routes which have been listed by TRC, and four routes were selected as high priority routes as shown in Figure 3.2.16. Route B and C were specified as the Phase 1 projects, and planned commencement of the commercial operation of Phase 1 is set in 2023. Further commercial operation up to Phase 7 has been planned to commence in every three to five years afterwards. Route A, B and C were planned adopting MRT system because peak demand per hour per direction is estimated at more than 20,000 passengers. GIBB is conducting the preliminary design of Route B and C (Phase 1), but the study has been suspended since the middle of May 2017.



Source : DSM New Commuter Rail Project Feasibility Report Presentation prepared by GIBB

Figure 3.2.16 New Railway Route Map Planned by TRC

Passenger demand forecast in this study was taken from MP 2008, and methodology of the forecast is not described. According to the hearing, TRC is expecting the result of on-going JICA Study because the latest traffic survey has been conducted.

2) New Standard Gauge Railway (SGR) Project by TRC

TRC has implemented the SGR project from 12th April 2017 for 30 months. The contractor is a JV of Turkish and Portuguese companies in design and build scheme. The construction has just started and SGR alignment will be set by the end of August 2017 according to the contractor. Outline of the SGR project is summarized in Table 3.2.9.

Table 3.2.9 Project Outline of SGR

Items	Description
Overall SGR Route	Between DSM and Kigoma and Mwanza.
Project area of Phase 1	Between DSM and Morogoro
No. of Track	Single
No. of Stations	Six stations (DES, Pugu, Soga, Ruvu, Ngerengere, Morogoro)
Track structure	PC sleepers, Rail 120 lb/yd (Approx. 60kg/m)
Electrification/ Non-electrification	Electrification
Rolling stock	Under study
Electric	AC, 25kv
Depot/Workshop	Kwala station (90km from DSM)
Small depots	DSM, Pugu, and Morogoro stations
PC sleeper manufacturing plant	Soga station (53km from DSM)

Source : TRC

Regarding the train operation of SGR, TRC has a plan to operate both passenger and freight purpose on SGR, however, operation frequency and timetable for commuter rail has not been determined yet according to TRC.

3) Rehabilitation of Meter Gauge Railway (MGR) by TRC

Rehabilitation of MGR between DSM and Pugu was completed by March 2017 and further rehabilitation after Pugu has been conducted. Rehabilitation items are rail replacement from 56 Lb/60 Lb to 80 Lb and supplying the ballast. The financing of the rehabilitation was covered by the Government of Tanzania.

Rehabilitation of branch line between DSM and Ubungo has not been conducted.

4) TRC Plan

TRC is planning to procure four sets of Diesel Multiple Units (DMU). Off-peak train operation will be applicable by those DMUs in addition to the existing three round trips each.

5) PO-RALG Plan

PO-RALG has conducted the pre-feasibility study on the railway commuter transport in DSM contracting with COWI A/S. The subject of the study was TRC lines including modernisation and extension of the existing branch line bound for Ubungo station. However, there has been no progress after the submission of the final report.

6) The Current MP

The improvement of the existing railway line and new MRT were not proposed in the current MP.

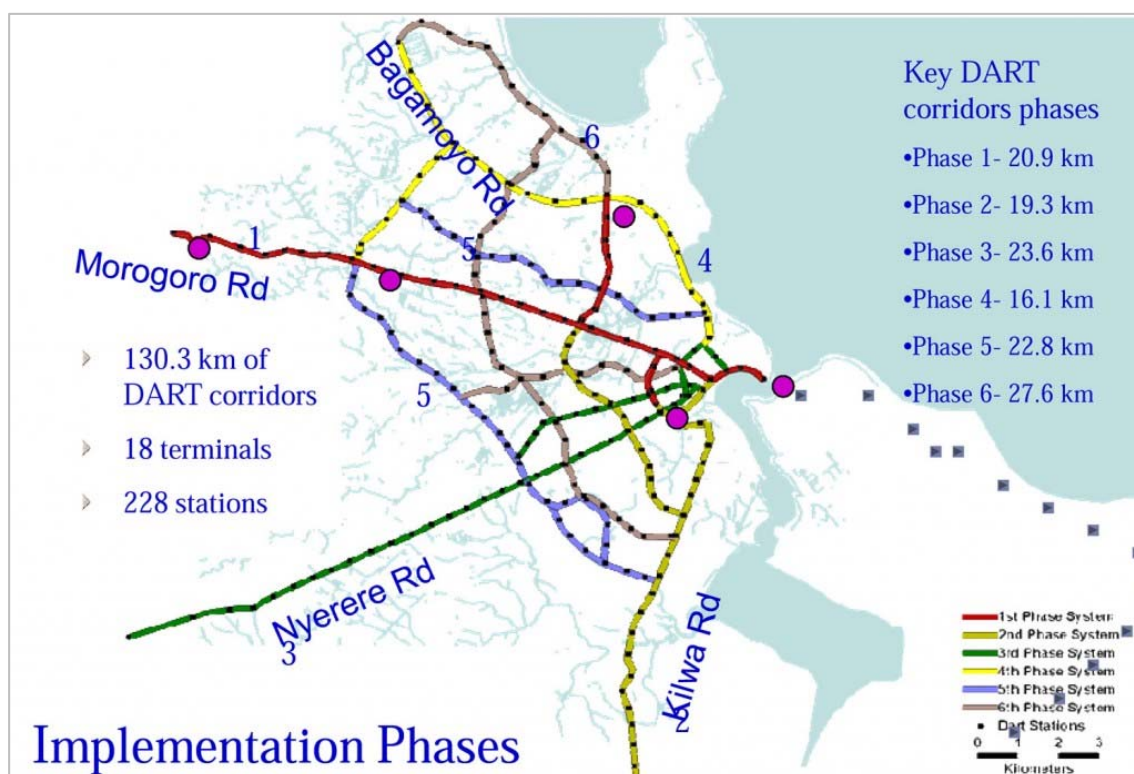
(2) BRT

Bus Rapid Transport (BRT) has plan from Phase 1 to Phase 6 shown in Table 3.2.10 Summary of BRT and Figure 3.2.17, BRT Route Map.

Table 3.2.10 Summary of BRT

BRT Phase	Road Corridor	Length (km)	Status
Phase 1	Morogoro, Kawawa North, Msimbazi, Street, Kivukoni Front	20.9	Under Operation
Phase 2	Kilwa, Kawawa South	19.3	Under Preparation
Phase 3	Uhuru Street, Nyerere, Bibi Titi na Azikiwe Street	23.6	
Phase 4	Bagamoyo and Sam Nujoma	16.1	No Feasibility Studies
Phase 5	Mandela Road	22.8	
Phase 6	Bagamoyo Road	27.6	

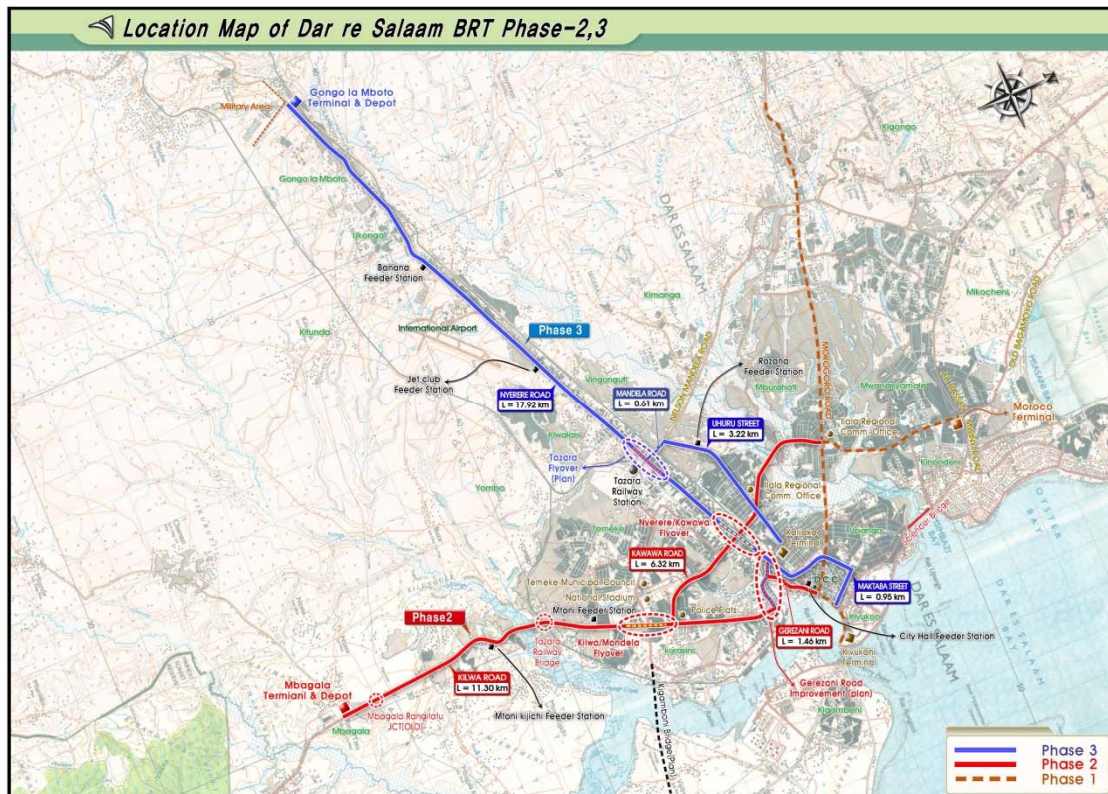
Source: DART



Source : DART

Figure 3.2.17 BRT Route Map

Detailed design of Phase-2 and Phase-3 was done in 2015. Figure 3.2.18 shows the location map of Phase-2 and Phase-3. With the development of BRT lane, the following components were planned in the report, shown in Table 3.2.11. Mbagala Terminal and Gongo la Mboto Terminal has also been planned and designed with car parking space for park and ride. Kariakoo Terminal has been planned on Phase-2 and Phase-3. Since Kariakoo Terminal has already operated in Phase-1, it will be a very important connection point of BRT lines.



Source : DART

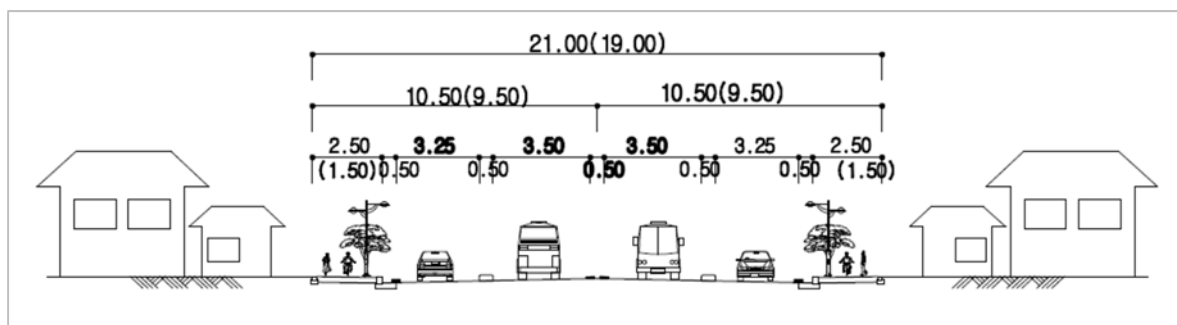
Figure 3.2.18 Location Map of BRT Phase-2 and Phase-3

Table 3.2.11 Major Component Works of Phase-2 and Phase-3

No.	Major Component	Phase
1	BRT Lane, Stations and Feeder Stations	Phase-2(l=19.3km), 29 Stations and 3 feeder Stations Phase-3(l=23.6km), 32 Stations and 3 feeder Stations
2	Kilwa/Nelson Mandela Flyover	Phase-2
3	Nyerere/Kawawa Flyover	Phase-2
4	Pedestrian Flyover	Phase-2 One(1)location Phase-3 Two(2)locations
5	Mbagala Terminal, Kariakoo Terminal and Depot	Phase-2
6	Gongo la Mboto Terminal, Kariakoo Terminal and Depot	Phase-3

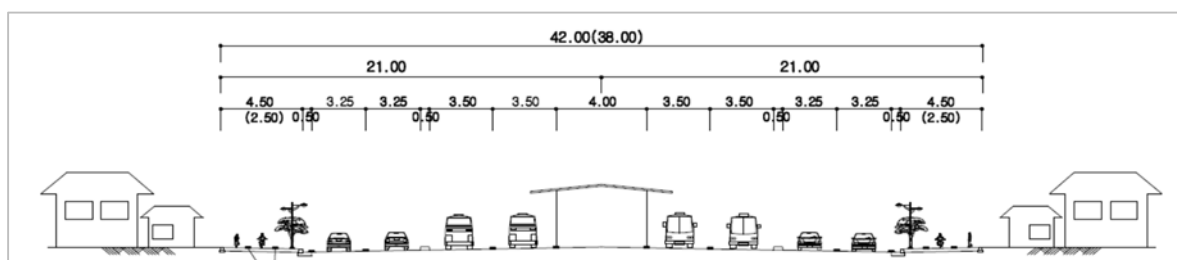
Source : DART

Figure 3.2.19 shows the typical cross section of phase 2 and 3. Basically, the BRT lane is located at the centre line each one lane and that of station sections have two lanes each as shown in Figure 3.2.20. It is the same concept as BRT Phase-1. BRT lane width is designed as 3.5m.



Source: DART

Figure 3.2.19 Typical Cross Section (Road Section)



Source : DART

Figure 3.2.20 Typical Cross Section (Station Section)

According to DART, Phase 2 Project was agreed to be funded by African Development Bank (AfDB) and Phase 3 and 4 Projects were agreed to be funded by World Bank (WB). Construction of Phase 2 and Phase 3 will be done at nearly the same time. The World Bank (WB) intends to implement the engineering design and construction works of Phase 4 Project. According to DART Agency, the construction of Phase 2 and Phase 3 will be done in 2020 and that of Phase 4 will be done in 2022.

Phase 5 and 6 have identified routes shown in Figure 3.2.17, but no feasibility studies have been done yet.

As shown in Section 3.2.1 “(4) Public Transport Plan”, 2008 Urban Transport Mater Plan proposed the BRT and bus route plan by 2015 and 2030. Though all phases (1-6) were supposed to be developed before 2015 in the plan, only phase-1 has been completed.

(3) Bus and Other Public Transport

Before the start of BRT operation, Micro Daladala was prohibited for the operation in the downtown area to solve traffic jams. At the time of the start of BRT operation, SUMATRA announced widely through media, at meetings and workshops about Micro Daladala not being allowed to operate in the downtown area and only BRT vehicles will be allowed to be in the BRT lanes.

From 2017 (not announced exactly when), Mini Daladala will be prohibited to operate in the downtown area along with Micro Daladala. People are requested to use BRT and Medium Daladala as much as possible to reduce traffic jams (*Note: Daladala is commuter bus, Micro is less than 15 capacity, Mini is 16-25, Medium is 26-45; information from SUMATRA*).

(4) Bus Terminal

According to DCC, three new inter-city bus terminal plans currently exist. The Ubungu Bus Terminal

will change to East Africa Commercial and Logistic Centre; see section 2.2.5 For the Regional Framework. In the future, the role of Ubungo Bus Terminal will shift to Mbezi Luis Bus Terminal, Boko DAWASA Bus Terminal and/or Kongowe/Vikindu Bus Terminal.

Inter-city Bus Terminal Plan

To de-congest the existing Ubungo terminal, which is already overwhelmed by upcountry-bound traffic, three terminals are planned.

The Mbezi Luis terminal will cater to southern highlands regions and their neighbouring countries; Boko Dawasa for Eastern and Northern zones plus their neighbouring countries and Kongowe/Vikindu for southern zone regions.

a) Mbezi Luis Bus Terminal

The construction of Mbezi bus terminal would have taken off in year 2016 if financial support was provided by the LAPF (Local Government Authority Pension Fund). Currently, DCC and LAPF are in discussion to acquire more land than the available as proposed by LAPF.

Mbezi Luis, sitting on 68,000m² will cater for buses plying between DSM and Mbeya, Rukwa and Iringa, Ruvuma and Njombe, Ruvuma and Mwanza, Shinyanga and Kagera, Mara and Geita, Simiyu and Dodoma, Singida and Manyara and Tabora, Kigoma and Katavi, and neighbouring countries of DRC, Burundi, Rwanda, Malawi, Zimbabwe and Zambia.

b) Boko DAWASA Bus Terminal

This project will be done by PPP scheme. Though some investors are interested in the project, there is no available detailed plan.

Boko DAWASA Bus Terminal, spanning 63,000m², will serve Arusha, Kilimanjaro and Tanga regions and neighbouring regions of Kenya and Uganda.

c) Kongowe/Vikindu Bus Terminal

Kongowe/Vikindu terminal would cater to Lindi, Mtwara and Ruvuma regions. It was underway on whether the last terminal would be built at Kongowe or Vikindu; the former was already available for the project but was not spacious enough.

3.2.4 Port, Airport, Waterway and ICD

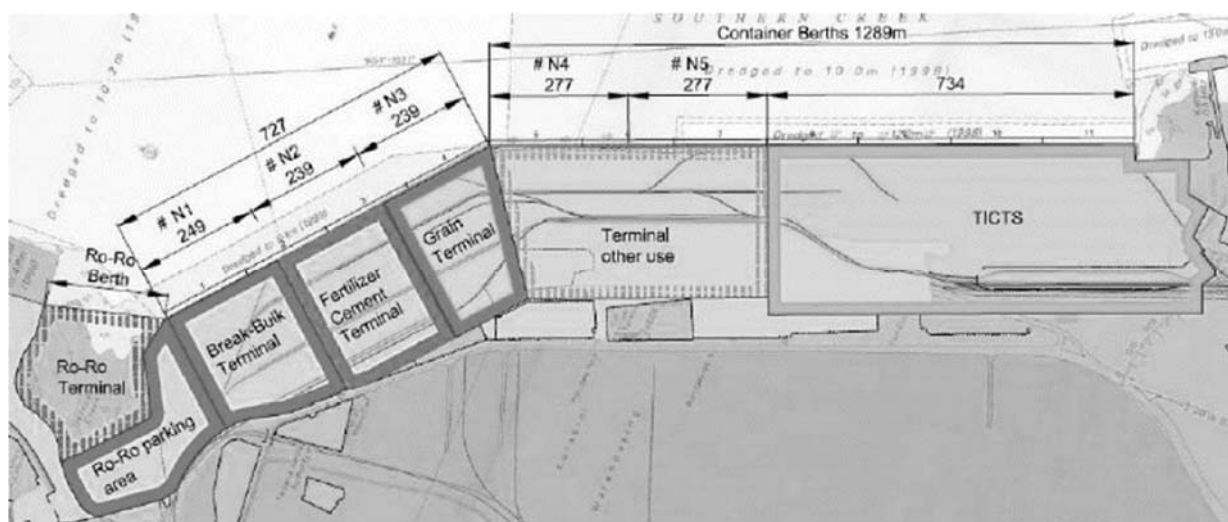
(1) Port

The total volume handled by the port of DSM reached 15 million tons in 2015, up from 13.1 million tons in 2013, and 10.4 million tons in 2011. On average, over the last five years, port volumes have been growing by 9 % per year, with liquid bulk and container volumes increasing even faster, bumping up against the operational capacity ceiling of the port. The latest forecasts suggest that the volumes through the port could increase to 38 million tons by 2030 in an unconstrained scenario. Transit trade through the port accounted for as much as 35% of total volume in 2015 or just over 5.1 million tons, with forecasts suggesting this could increase to 9.7 million tons by 2030. Fourteen percent of the trade of the six neighbouring landlocked countries transits through the port, a segment that has been growing at 16.5% annually.

The DSM Maritime Gateway Project (DSMGP) has been designed to mitigate spatial, operational, and physical constraints in the port, whilst also supporting necessary institutional reform and greater private sector participation, providing a significant enhancement in capacity to meet this growing demand.

The following improvements of DSM Port are now on-going and are supported by the World Bank:

- Deepening and strengthening of existing Berths 1 to 7, to between 13 to 15m below CD;
- Construction of a new multi-purpose berth at Gerezani Creek;
- Restoring the capacity of the grain silo, and supporting the installation of a conveyor system, and high speed bulk grab;
- Deepening and widening the entrance channel and turning basin in the port to the end of Berth 14, to between 13 to 15m below CD;
- Improving the rail linkages and platform in the port;
- Construction of the substructure and access for new dedicated container terminal at new Berths 12 to 14;
- (vii) Deepening and strengthening of existing Berths 8 to 11, to between 13 to 15m below CD; and
- (viii) Dismantling of the Kurasini oil jetty and relocation of the oil pipelines.



Source: KPA/Modernising of Berths 1-7 Final Report, April 2013

Figure 3.2.21 Berthing Arrangement in DSM Port

(2) Airport

The construction of Terminal 3 of the Julius Nyerere International Airport (JNIA) is now on-going, partially financed by the Government of Tanzania and ORET (ORET, the Dutch acronym for Ontwikkelings Relevante Export Transactions: Development-Related Export Transactions programme) Fund from Netherland's government. Upon completion of Terminal 3, the airport will be able to accommodate 7.2 million passengers. The new terminal, covering 70,000m² compared with existing 15,000m². Currently, the JNIA airport, being the primary airport in the country and receiving flights from all over the world, is operating beyond its capabilities and handles 2.5 million passengers annually against its initially expected 1.5 million people. Additionally, with its modern technology facilities with check-in desks for airlines, an innovative baggage system, and the latest security measures, the airport will have potential in becoming a transport and business hub of Africa and will help in promoting the Tanzanian tourism industry.

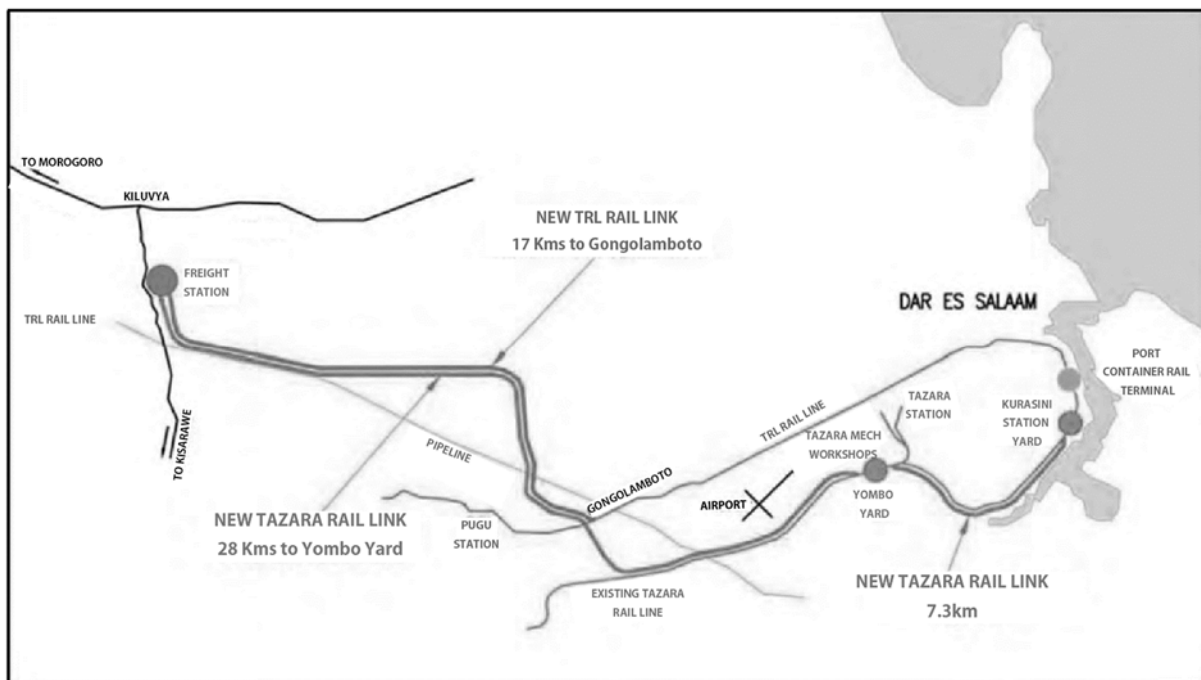
(3) ICD (Inland Container Depots)

A major constraint hampering port productivity has been the lack of space to store and process containers. The port was designed at a time prior to the introduction of large shipping container vans and was also designed for the direct transfer of small volumes of cargo direct from ship to rail and

road modes. As a consequence of changing technologies, the available space in the port footprint is now too small to cater to the volume of trade. This has been one of the primary reasons for the increasing congestion and added inefficiency and delay. To mitigate these problems, a number of Inland Container Depots (ICD) have been established by private operators where containers can be relocated away from the port and processed in accordance with government rules and regulations.

The Kurasini ICD is located 1.6km from the port and has an area of 6.5 ha while the Ubungu ICD is 16km from the port but on the primary long-distance road leading to the central and Uhuru trade corridors. Both these ICDs provide the full range of services required to process containers as well as stripping and stuffing containers for import and export cargoes. However, the continued growth in the container trade has increased the demand for additional off-port space and in 2010, a pre-feasibility study was completed for an additional site located at Kisarawe approximately 35km from the port.

Figure 3.2.22 shows the location and indicative linkages with the port. The basic concept of the scheme is to transfer the majority of the containers by rail from the port to Kisarawe where they would be processed. The ICD would be connected with the port by both rail gauges and would use shuttle trains to and from the port. Long-distance cargoes would be taken directly from the ICD to their onward destination while those for the local DSM market would use road transport. While the concept of the Kisarawe ICD scheme has been approved, no decision has yet been made for its implementation. Given the continuing constraints imposed by the rapidly increasing container trade, a decision on its implementation is now a priority.



Source: Feasibility Study for Kisarawe ICD, World Bank

Figure 3.2.22 Linkages with the Port

