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Report No: PAD00087

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT
ON A
PROPOSED CREDIT
IN THE AMOUNT OF EUR 361.1 MILLION
(US$385 MILLION EQUIVALENT)
FROM THE IDA SCALE-UP WINDOW

TO THE
UNITED REPUBLIC OF TANZANIA

FOR A

DAR ES SALAAM METROPOLITAN DEVELOPMENT PROJECT PHASE 2

November 29, 2023

Urban, Resilience and Land Global Practice
Eastern And Southern Africa

CURRENCY EQUIVALENTS

(Exchange Rate Effective October 31, 2023)

Currency Unit =	EUR
US$1 =	EUR 0.93769047
US$1 =	TZS 2,498.00

FISCAL YEAR
1st July – 30th June

Regional Vice President:	Victoria Kwakwa
Regional Director:	Iain Shuker
Country Director:	Nathan M. Belete
Practice Manager:	Catalina Marulanda
Task Team Leaders:	John Morton, Yonas Eliesikia Mchomvu, Emily Owen

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ABBREVIATIONS AND ACRONYMS

BRT	Bus Rapid Transit
CERC	Contingent Emergency Response Component
CIUP	Community Infrastructural Upgrading Program
CO2	Carbon dioxide
COVID-19	Coronavirus Disease
CPF	Tanzania Country Partnership Framework FY2018-2022
DarMAERT	Dar es Salaam Multi-Agency Emergency Response Team
DART	Dar es Salaam Rapid Transit Agency
DAWASA	Dar es Salaam Water and Sewerage Authority
DCC	Dar es Salaam City Council
DFID	Department for International Development of the Government of the United Kingdom
DLA	Dar es Salaam Local Authorities
DMA	Dar es Salaam Metropolitan Authority
DMDP 1	Dar es Salaam Metropolitan Development Project
DMDP 2	Dar es Salaam Metropolitan Development Project Phase 2
DRM	Disaster Risk Management
DSDP	Drainage and Sanitation Development Plan
ERR	Economic Rate of Return
ESS(s)	Environmental and Social Standards
ESCP	Environmental and Social Commitment Plan
EHS	Environmental, health and safety
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESRS	Environmental and Social Review Summary
FCDO	Foreign Commonwealth Development Office of the Government of the United Kingdom
FM	Financial Management
GBV	Gender Based Violence
GDP	Gross Domestic Product
GHC	Grievances Handlings Committees
GHG	Greenhouse gas emissions
GNI	Gross National Income
GRM	Grievance Redress Mechanism
GRS	Grievance Redress Service
ha	Hectares
ICR	Implementation Completion Report
IDA	International Development Association
IFR	Quarterly Interim Financial Reports
IPF	Investment Project Financing
ISR	Implementation Status and Results
IT	information technology

JICA	Japan International Cooperation Agency
km	kilometers
Km^2	square kilometer
LMP	Labor Management Procedures
M&E	Monitoring and Evaluation
MoF	Ministry of Finance
MTCO2e	Metric tons of carbon dioxide equivalent
NBS	Nature-based solutions
NDCs	Nationally Determined Contributions
NeST	National e-Procurement System of Tanzania
NOCP	National Open Competitive Procurement
NPP	National Procurement Procedures
NPV	Net Present Value
O&M	Operations and Maintenance
OSR	Own Source Revenue
PAD	Project Appraisal Document
PCT	Project Coordination Team
PDO	Project Development Objective
PIM	Project Implementation Manual
PIT	Project Implementation Team
PO-RALG	President Office – Regional Administration and Local Government
PP	Procurement Plan
PPA	Tanzanian Public Procurement Act
PPRA	Public Procurement Regulatory Authority
PPSD	Procurement Strategy for Development
PSC	Project Steering Committee
RCP	Representative Concentration Pathways
RAPs	Resettlement Action Plan
QII	Quality Infrastructure Investment Partnership
ROW	Right-of-Way
RPF	Resettlement Process Framework
SEP	Stakeholder Engagement Plan
SoP	Series of Projects
SOP	Standard Operating Procedures
SORT	Systematic Operations Risk-Rating Tool
SPC	Shadow Price of Carbon
SPD	World Bank Standard bidding documents
STEP	Systematic Tracking of Exchanges in Procurement
SuDS	Sustainable urban drainage
SUW	Scale-Up Window
TA	Technical assistance
TACTIC	Tanzania Cities Transforming Infrastructure and Competitiveness Project
TARURA	Tanzania Rural and Urban Roads Authority
TOR	Terms of reference

TSCP	Tanzania Strategic Cities Project
TURP	Tanzania Urban Resilience Program
TZS	Tanzania Shillings
UK	United Kingdom
ULGSP	Urban Local Government Strengthening Program – Tanzania
URT	United Republic of Tanzania

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DATASHEET

BASIC INFORMATION

Project Beneficiary(ies)	Operation Name		
Tanzania	DAR ES SALAAM METROPOLITAN DEVELOPMENT PROJECT PHASE 2		
Operation ID	Financing Instrument	Environmental and Social Risk Classification	
P180298	Investment Project Financing (IPF)	High	

Financing & Implementation Modalities

[ ] Multiphase Programmatic Approach (MPA)	[✓] Contingent Emergency Response Component (CERC)
[✓] Series of Projects (SOP)	[ ] Fragile State(s)
[ ] Performance-Based Conditions (PBCs)	[ ] Small State(s)
[ ] Financial Intermediaries (FI)	[ ] Fragile within a non-fragile Country
[ ] Project-Based Guarantee	[ ] Conflict
[ ] Deferred Drawdown	[ ] Responding to Natural or Man-made Disaster
[ ] Alternative Procurement Arrangements (APA)	[ ] Hands-on Expanded Implementation Support (HEIS)

Expected Approval Date	Expected Closing Date
20-Dec-2023	30-Apr-2030
Bank/IFC Collaboration	
No	

Proposed Development Objective(s)

To improve climate resilient urban infrastructure and services, and strengthen institutional capacity in the Dar es Salaam Region.

Components

Component Name	Cost (US$)

Climate-Smart Priority Infrastructure	295.00
Integrated Solid Waste Management Infrastructure and Services	55.00
Strengthening Urban Institutions	20.00
Project Management	15.00
Contingency Emergency Response	0.00

Organizations

Borrower:	The United Republic of Tanzania represented by the Ministry of Finance
Implementing Agency:	Presidents Office- Regional Administration and Local Government

PROJECT FINANCING DATA (US$, Millions)

Maximizing Finance for Development

Is this an MFD-Enabling Project (MFD-EP)?	No
Is this project Private Capital Enabling (PCE)?	No

SUMMARY

Total Operation Cost	**438.31**
Total Financing	**438.31**
of which IBRD/IDA	**385.00**
Financing Gap	**0.00**

DETAILS

World Bank Group Financing

International Development Association (IDA)	385.00
IDA Credit	385.00

Non-World Bank Group Financing

Other Sources	53.31
NETHERLANDS: Min. of Foreign Affairs / Min. of Dev. Coop.	53.31

IDA Resources (US$, Millions)

	Credit Amount	Grant Amount	SML Amount	Guarantee Amount	Total Amount
Scale-Up Window (SUW)	385.00	0.00	0.00	0.00	385.00
Total	**385.00**	**0.00**	**0.00**	**0.00**	**385.00**

Expected Disbursements (US$, Millions)

WB Fiscal Year	2024	2025	2026	2027	2028	2029	2030
Annual	20.00	100.00	100.00	70.00	40.00	35.00	20.00
Cumulative	20.00	120.00	220.00	290.00	330.00	365.00	385.00

PRACTICE AREA(S)

Practice Area (Lead)

Urban, Resilience and Land

Contributing Practice Areas

Transport

CLIMATE

Climate Change and Disaster Screening

Yes, it has been screened and the results are discussed in the Operation Document

SYSTEMATIC OPERATIONS RISK- RATING TOOL (SORT)

Risk Category	Rating
1. Political and Governance	Moderate

2. Macroeconomic	Moderate
3. Sector Strategies and Policies	Moderate
4. Technical Design of Project or Program	Moderate
5. Institutional Capacity for Implementation and Sustainability	High
6. Fiduciary	Moderate
7. Environment and Social	High
8. Stakeholders	High
9. Other	
10. Overall	Substantial

POLICY COMPLIANCE

Policy

Does the project depart from the CPF in content or in other significant respects?

[ ] Yes [✓] No

Does the project require any waivers of Bank policies?

[ ] Yes [✓] No

ENVIRONMENTAL AND SOCIAL

Environmental and Social Standards Relevance Given its Context at the Time of Appraisal

E & S Standards	Relevance
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	Relevant
ESS 10: Stakeholder Engagement and Information Disclosure	Relevant
ESS 2: Labor and Working Conditions	Relevant
ESS 3: Resource Efficiency and Pollution Prevention and Management	Relevant
ESS 4: Community Health and Safety	Relevant
ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Relevant
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Relevant

ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities	Not Currently Relevant
ESS 8: Cultural Heritage	Relevant
ESS 9: Financial Intermediaries	Not Currently Relevant

NOTE: For further information regarding the World Bank's due diligence assessment of the Project's potential environmental and social risks and impacts, please refer to the Project's Appraisal Environmental and Social Review Summary (ESRS).

LEGAL

Legal Covenants

Sections and Description
Section I.A.1(a) of Schedule 2 to the Financing Agreement: URT to establish, by not later than three months after effectiveness, and thereafter maintain throughout the period of implementation of the Project, a Project Steering Committee, with a mandate, terms of reference, composition, and resources satisfactory to the Association, to provide policy guidance and high-level oversight to the DLAs and the Project Implementing Entity in the carrying out of the Project.
Section I.A.1(c) of Schedule 2 to the Financing Agreement URT to establish within PO-RALG, by no later than three (3) months after the Effective Date, and thereafter maintain throughout the period of Project implementation, a technical working group for solid waste ("SW-TWG"), headed by a representative of PO-RALG and the Regional Administration of Dar es Salaam, with a representative of the DLAs, with a mandate, terms of reference, composition, and resources satisfactory to the Association.
Section I.A.3 of Schedule 2 to the Financing Agreement URT to, by not later than three six (6) after the Effective Date, procure the services of a project management consulting firm ("PMC") with qualification and experience and under terms of reference acceptable to the Association, in order to assist the DLIs the design, planning, implementation and supervision of Project activities.
Section I.C.1 of Schedule 2 to the Financing Agreement For purposes of carrying out the activities under Component 2 URT to : (a) through the DLAs, establish, in a manner and substance acceptable to the Association, an inter-municipal solid waste management institution (the "SWMI"), formally registered financially autonomous corporate body jointly owned by the DLAs; (b) promptly upon establishing it, ensure that the SWMI enters into a Project Agreement with the Association; and (c) the DLAs to transfer/assign to the SWMI: (i) within three (3) months upon the SWMI's establishment, all extant infrastructure facilities and affected to the provision of their mandated solid waste services as well as all regulatory powers; and (ii) within two (2) months upon their commissioning; all new solid waste infrastructure facilities under their mandate financed under the Project; all in a manner satisfactory to the Association.
Section I.D.1 of Schedule 2 to the Financing Agreement: URT to prepared and furnish to the Association, by no later than March 31 of each year, an annual work plan and budget for the Project for the subsequent fiscal year, all in accordance with the PIM and in such scope and detail as the Association shall have reasonably requested.

Conditions

Type	Citation	Description	Financing Source
Effectiveness	5.01.	URT to: (i) establish within PO-RALG the Project Coordination Team; and (ii) ensure that at least one (1) of the DLAs has established its respective Project Implementation Team, all in manner and substance satisfactory to the Association	IBRD/IDA
Effectiveness	5.01.	URT has prepared and adopted a Project Implementation Manual, in a manner and substance satisfactory to the Association.	IBRD/IDA
Disbursement	SCHEDULE 2, Section III	No disbursement under Category (2) until: (i) URT has signed the Co-financing Agreement with the Co-financier (i.e. Invest International); (ii) URT has established the SWMI; and (iii) SWMI has: (A) entered into a Project Agreement with the Association setting forth the implementation arrangements for its Respective Activities under the Project; and (B) established the SWMI-Implementation Task Team.	IBRD/IDA
Disbursement	SCHEDULE 2, Section III	No disbursement under Category (3) (CERC) until: (i) URT has determined that an eligible crisis and emergency has occurred; (ii) the Association has agreed with that determination; and (iii) URT	IBRD/IDA

		has adopted the CERC Manual and Emergency Action Plan in form and substance satisfactory to the Association.	

I. STRATEGIC CONTEXT

A. Country Context

1. **Tanzania's economy has steadily grown over the past decade and is in a period of post-pandemic recovery.** The country's gross national income per capita reached US$1,100 in 2019, crossing the lower-middle-income threshold of US$1,036.[1] The country has experienced strong economic performance with the gross domestic product (GDP) growing an average of 7 percent annually between 2012 and 2021,[2] which is higher than average for Sub-Saharan African countries (3.5 percent) and lower-middle-income countries (2.8 percent). The Coronavirus Disease (COVID-19) pandemic inflicted a shock on the Tanzanian economy after a decade-long period of stable growth, with major disruptions to export-orientated sectors such as tourism and manufacturing. Following the pandemic and facing the impact of current global economic challenges, Tanzania's economic growth rate increased only moderately to 4.6 percent in 2022, up from 4.3 percent in 2021. This was driven by the services sector led by trade, transportation, financial services, and tourism, with arrivals and receipts reaching pre-pandemic levels.

2. **Despite this steady growth, poverty reduction has been modest largely due to rapid population growth**. Tanzania's current total population is 61.7 million and is growing at about 3.2 percent annually.[3] This places Tanzania among the countries with the fastest population growth rates globally. Tanzania's poverty headcount ratio is high compared with peer countries: using the international extreme poverty rate of US$1.90 per day, poverty in Tanzania has remained stagnant with 49 percent of the population living below this threshold between 2011/12 and 2018.[4] Although the portion of the population living below the national poverty line[5] declined from 34.4 percent in 2007 to 26.4 percent in 2019, given the fast rate of population growth, the absolute number of people below this threshold grew from 13 million in 2007 to 14 million in 2019.[6] Tanzania's per capita income growth also remains modest due to the rapid rise in population, with an average change in Gross National Income (GNI) per capita of US$978 from 2012 to 2021, compared to US$1,647 in Sub-Saharan Africa.[7] Moreover, Tanzania's economic growth has been driven by the real estate, construction, information, and communication technology sectors, which employ less than 3 percent of the population[8]. Low levels of education and inadequate labor skills have constrained poor households' access to productive employment opportunities in fast-growing sectors and high fertility rates lead to a mounting supply of labor, with 19 million new potential workers anticipated to need jobs between 2015 and 2030.[9]

3. **Climate change is having a significant impact on the economy.** Tanzania is vulnerable to climatic hazards and has limited readiness to adapt and respond to negative climate change impacts.[10] Seventy percent of all natural disasters in Tanzania are linked to floods or droughts[11] and climate change projections indicate a high likelihood of increased heavy

[1] World Bank (2021). World Development Indicators, Washington DC (https://databank.worldbank.org/source/world-development-indicators). As of 2021, Tanzania's GNI per capita has reached US$1,140.
[2] United Republic of Tanzania National Bureau of Statistics, National Accounts of Tanzania Mainland 2015 – 2021.
[3] United Republic of Tanzania National Bureau of Statistics (2022). Population and Housing Census (https://sensa.nbs.go.tz/)
[4] World Bank Independent Evaluation Group (IEG) (October 2022). Approach Paper Tanzania Country Program Evaluation - Analysis of World Development Indicators
[5] In household Budget Surveys undertaken by the Government of Tanzania, the poor are defined as those whose consumption is below the national poverty line and who therefore were not able to meet their basic consumption needs; the extreme poor were not able to afford enough food to meet the minimum nutritional requirements of 2,200 kilocalories (Kcal) per adult per day. The national basic needs poverty line for 2018 was TZS 49,320 (US$21.2) per adult per month and the food poverty line was TZS 33,748 (US$14.5).
[6] World Bank (2019). Tanzania Mainland Poverty Assessment. Washington, DC: World Bank.
[7] World Bank (2021). World Development Indicators. Washington DC (https://databank.worldbank.org/source/world-development-indicators)
[8] World Bank (2021). Tanzania Economic Update: Raising the Bar - Achieving Tanzania's Development Vision (English).
[9] World Bank (2018). "Tanzania: Jobs Diagnostic." Washington, DC. License: Creative Commons Attribution CC BY 3.0 IGO.
[10] University of Notre Dame Global Adaptation Index, https://gain.nd.edu/our-work/country-index/rankings/ (accessed 08 November 2022)
[11] Irish Aid (2016). Tanzania Climate Action Report.

rainfall, droughts, and heat waves.[12] Flooding is the most serious natural hazard, impacting major cities. It is estimated that 463 km^2 of settlement area in Tanzania is exposed to high flood risk.[13] Due to Dar es Salaam's location, the unplanned development of its low-lying areas, and its insufficient drainage infrastructure, the region is affected by three drivers of recurring floods - sea level rise, river overflows, and heavy rains. Flooding is projected to become more frequent and more severe due to wetter conditions and sea level rise.

4. **Important progress has been made to expand economic opportunities for women, yet women continue to face interrelated economic and social barriers.** The proportion of the female population participating in the labor-force in Tanzania was 67 percent in 2000-01 and increased to 80 percent in 2019. However, women in 2021 were 29 percent less likely to have the same opportunities as men.[14] Wage-earning women earn 22 percent less than men.[15] Women are overrepresented in the informal sector and are less likely to register their business. Gender norms and beliefs detrimentally impact Tanzanian women's access to economic opportunities. They are perceived to be less credit-worthy than men, with only 60 percent of them having access to financial services.[16] Tanzanian women are burdened with a greater share of unpaid domestic work and childcare, and they experience high levels of violence- with 44 percent experiencing either physical or sexual violence by an intimate partner.[17] An increase in the proportion of women subject to violence reduces economic activities by up to 8 percent, principally in the form of decreases in female employment.[18]

B. Sectoral and Institutional Context

5. **Tanzanian cities are growing rapidly and are critical for economic growth.** The population in urban areas grew from 13.3 million to 21.5 million in the last 10 years, a 62 percent increase, which is twice as fast as in rural areas.[19] Tanzanian cities account for most of the country's physical, financial, and technological capital, and contribute approximately half of Tanzania's GDP. Dar es Salaam is Tanzania's largest urban agglomeration with a population of 5.4 million, a number that is expected to reach 10 million by 2050.[20] Dar es Salaam's centrally located international port provides Tanzania and six neighboring landlocked countries access to global markets. This, along with service sectors, contributes to its economic output, which accounts for 17 percent of national GDP.[21] Dar es Salaam however is not realizing its potential, as rapid urbanization is limited by infrastructure deficits, inadequate planning, recurrent impacts from floods, insufficient resources, and fragmented governance arrangements.

6. **Dar es Salaam's urbanization pattern is reducing mobility and livability and increasing greenhouse gas emissions (GHG).** Urban expansion has followed the main transport corridors and other trunk infrastructure, resulting in urban sprawl. This growth pattern is expected to continue, with the urban area projected to grow from an estimated 20 percent of its total area in 2022 to 37 percent in 2040.[22] *Ad hoc* expansion of the urban footprint has resulted in congestion, increased journey length and dependency on private cars. Between 2010 and 2020, energy consumption in the transport

[12] Trisos, C.H., I.O. Adelekan, E. Totin, A. Ayanlade, J. Efitre, A. Gemeda, K. Kalaba, C. Lennard, C. Masao, Y. Mgaya, G. Ngaruiya, D. Olago, N.P. Simpson, and S. Zakieldeen (2022). Africa. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 1285–1455, doi:10.1017/9781009325844.011.
[13] World Bank (2022). Understanding the Changes in Africa's Urban Exposure to Flood Hazards (unpublished)
[14] World Economic Forum (2021). Global Gender Gap Report 2021. Geneva, Switzerland. Tanzania had a score of 0.71 which is 82nd out of 156 countries.
[15] World Bank (2021). LSMS+ Program in Sub-Saharan Africa: Findings from Individual-Level Data Collection on Labor and Asset Ownership. https: //openknowledge.worldbank.org/handle/10986/35544.
[16] Financial Inclusion National Council. (undated). *National Financial Inclusion Framework 2018-2022 - Alliance for Financial Inclusion; Tanzania at a Glance*,
[17] IMF (2021). The Heavy Economic Toll of Gender based Violence: Evidence from Sub-Saharan Africa. IMF WP/21/277, Washington DC: USA
[18] Ibid.
[19] United Republic of Tanzania National Bureau of Statistics (2022). Population and Housing Census of Tanzania.
[20] Ibid.
[21] Ibid.
[22] ARUP international (2023). Opportunities Assessment for Urban Greening, Sustainable Urban Drainage and Erosion Control in Dar es Salaam

sector increased annual GHG emissions from 3.6 MTCO2e to 6.8 MTCO2e nationally.[23] The government of the United Republic of Tanzania (URT) is making efforts to reduce this trend by investing in public transport, including the extensive Bus Rapid Transit (BRT) network which began operation in 2016. Policymakers are also exploring linkages between the BRT and non-motorized transport and settlements.

7. **Dar es Salaam's urbanization is exacerbating climate change risks.** Urbanization is largely informal with many new developments expanding on the urban fringe and along rivers and into flood plains. Informal settlements are characterized by inadequate housing, lack of services and insufficient road and drainage networks. The expansion of built-up areas contributes to loss of greenspace and increased runoff during rainstorms, which is making floods more intense and is contributing to erosion that is reducing the capacity of rivers to absorb these floods. Settlements along riparian areas and flood plains are vulnerable to flooding and exacerbate existing flood risk by constraining river channels. In 2019 alone, the city experienced nine major floods: a single flood event in April 2018 cost between 2 and 4 percent of Dar es Salaam's GDP[24]. In 2021 and 2022 the city experienced water rationing due to unusually low rainfall in upstream areas used by the public water utility, Dar es Salaam Water and Sewerage Authority (DAWASA). The population then turned to more intensive use of depleted shallow groundwater, which is further impacted by salt-water intrusion. Urban heat is a growing concern for both public health and energy consumption, as the average maximum daily temperature is more than 5°C warmer than in surrounding landscapes, and temperatures are expected to rise in line with climate change projections.[25]

8. **Solid waste is the least developed urban service and is a significant source of GHG emissions.** From 2010 to 2020 annual emissions from solid waste in Tanzania increased from 4.8 MTCO2e to 6.4 MTCO2e.[26] Estimates indicate Dar es Salaam produces between 3,500 and 4,600 tons of waste per day.[27] Solid waste management services are the responsibility of the municipalities who contract private companies and community-based organizations for waste collection. Gaps in collection and disposal are leading to waste accumulating on private properties, public spaces, at collection points, and in drains and rivers, worsening flooding. It is estimated that less than 40 percent of the waste is collected and disposed, primarily at the main open dumpsite at Pugu Kinyamwezi on Dar es Salaam's southwest fringe, which is a growing environmental and health hazard.[28] A socioeconomic survey[29] undertaken by the project during preparation found that accidents at the dumpsite are an issue faced by informal recyclers operating at the site. The time to transport waste has also become increasingly long and costly due to traffic and poor road conditions during the rainy season, which has encouraged informal dumping of waste.

9. **Dar es Salaam's current governance structure is divided into five jurisdictions.** Currently Dar es Salaam is governed by four Municipal Councils –Kinondoni, Temeke, Ubungo, and Kigamboni, and the Dar es Salaam City Council (DCC),[30] collectively known as the Dar es Salaam Local Authorities (DLAs). The Regional Administration provides limited oversight of the municipalities. Other ministries and agencies are mandated to plan, construct and manage services such as water supply, environmental protection, protected areas, electricity, regional roads, and land management, with a portion of

[23] Climate Watch Data (2010 and 2020). Historical GHG Emissions. https://www.climatewatchdata.org/ghg-emissions
[24] World Bank. (2019). Wading out the storm: The role of poverty in exposure, vulnerability and resilience to floods in Dar Es Salaam.
[25] Estimated to be 5.8°C compared to rural areas based on urban heat index. Opportunities Assessment for Urban Greening, Sustainable Urban Drainage and Erosion Control in Dar es Salaam, ARUP international and the World Bank (2023).
[26] Climate Watch Data. (2010 and 2020). Historical GHG Emissions. https://www.climatewatchdata.org/ghg-emissions
[27] Based on review of literature and World Bank team estimates during project preparation.
[28] Department of Chemical and Mining Engineering University of Dar es Salaam. (2018). United Republic of Tanzania National Solid Waste Management Strategy.
[29] World Bank (June 2023). Waste Picker Baseline Survey at Pugu Kinyamwezi Dumpsite.
[30] The Dar es Salaam City Council has a limited mandate for coordination that is not implemented and plays the role of managing the solid waste dumpsite for Dar es Salaam. Since February 2021, Dar es Salaam City Council was combined with the Ilala Municipal Council, which has jurisdiction of the Ilala Municipality. The combined institution is now referred to as the Dar es Salaam City Council and has the legal mandate of both.

them providing deconcentrated staff in the individual DLAs. URT has explored metropolitan planning and governance arrangements as a solution to manage Dar es Salaam's growth in a more integrated manner. In 2020 URT approved the Dar es Salaam City Master Plan (2016-2036), which proposed the establishment of a higher-level Dar es Salaam Metropolitan Authority (DMA) to undertake planning and infrastructure coordination. To date, the proposed metropolitan governance reforms have not been pursued, and consequently metropolitan-level coordination of infrastructure and urban planning is lacking.

10. **The Dar es Salaam Metropolitan Development Project (DMDP 1) - P123134 was approved in 2015 as part of a Series of Projects (SoP) to address Dar es Salaam's complex urban issues, major infrastructure deficits and incremental policy reform to support improved metropolitan management**. The SoP framework allowed DMDP 1 to concentrate on addressing urgent issues including traffic congestion, flooding, and upgrading informal settlements, through low regret investments, while also equipping municipalities with climate-informed tools, and building capacity for service delivery, urban planning, and municipal finance. At the time of its closure on January 2, 2023, DMDP 1 had benefited 4.1 million people through constructing 207.8 km of roads, protecting 406 ha of urban land from flooding, and upgrading 152 low-income informal settlements, having a profoundly positive impact on quality of life for the city's poorest residents.

11. **The SoP provides a longer-term framework to directly address some of Dar es Salaam's top urban challenges, while complementing other investment projects and initiatives**. DMDP 1 supported preparation of a Corridor Development Strategy that promoted transit-oriented development and compact city principles for the first BRT corridor. DMDP 1 also improved stormwater drainage infrastructure within several of Dar es Salaam's watersheds, complementing the flood mitigation interventions financed through the Msimbazi Basin Development Project (P169425). Since the approval of DMDP 1, Dar es Salaam has developed important tools and has gained experience in infrastructure planning, service provision, land use planning and municipal finance. Development control tools have been introduced, land titling processes are being developed, and a digital own source revenue (OSR) platform is now operational. More remains to be done to integrate systems at the metropolitan level. Operations and maintenance (O&M) systems for urban services, for instance, have limitations, and there is lack of clarity over roles and responsibilities, and a lack of resources to maintain some of the DMDP 1 investments. These will continue to be addressed under the proposed DMDP 2.

12. **Information on the impacts of climate change on Dar es Salaam and tools for addressing them have expanded rapidly over the last ten years.** The compounding effects of climate change and urbanization are being observed and monitored and new tools and data are being developed in response to increasingly serious issues such as water scarcity, erosion, flooding and urban heat. These tools are supporting investments in water production in response to lower-than-normal rainfall in recent years and are shaping modifications to infrastructure design to accommodate future climate scenarios. Solutions are also being adopted to help reduce the interrelated impacts of urbanization and climate change, such as green infrastructure and nature-based solutions (NBS). The Dar es Salaam Multi-Agency Emergency Response Team (DarMAERT) has developed an emergency response system which is partially operational. Supporting Dar es Salaam in its efforts to adapt to a rapidly changing climate is a critical national priority, being supported by DMDP 1 and DMDP 2.

13. **DMDP 2 builds on the lessons and gains of DMDP 1 and Dar es Salaam over the last ten years.** The project adopts a strategic approach to address urban infrastructure needs, while adapting investments to the challenges of climate change and urbanization. DMDP 2 will rehabilitate roads to improve quality of life for residents through better access to public transport and services and reduced congestion, while reducing the energy intensity of the transport sector; and it will finance green infrastructure to reduce the impact of heat and flooding on infrastructure and people. The project will apply the experiences of urban upgrading and planning in Dar es Salaam to support area-based regeneration of commercial

centers, providing street lighting to improve security and increase trading hours, thereby enhancing livelihoods for women and youth. DMDP 1 identified the need but did not pursue major solid waste investments due to the necessity of first having consensus and government support for an institutional approach to the regional management of waste. URT is now committed to investing in an integrated solution for solid waste management, and a metropolitan institutional organization to manage this system.[31] DMDP 2 will support creation of more organized systems of service delivery in DLAs. It will continue to build capacity and foster cooperation among Dar es Salaam's urban institutions, such as solid waste management, flooding, and urban planning, while being flexible enough to accommodate a possible transition to a metropolitan form of governance during the project's timeline.

C. Relevance to Higher Level Objectives

14. **DMDP 2 is consistent with the development priorities of the Country Partnership Framework (CPF) for Tanzania for FY2018-2022 (**Report No. 121790-TZ; discussed by the Board in February 14, 2018).[32] It contributes to Focus Area 1 of the CPF: *Enhance Productivity and Accelerate Equitable and Sustainable Growth*, which highlights the role of cities in consolidating recent development gains in Tanzania and harnessing urbanization for economic growth. The project also supports Focus Area 2 of the CPF: *Boost Human Capital and Social Inclusion*, as it promotes livelihood opportunities for the poor by improving disadvantaged communities and physically connecting them to the rest of the urban area, as well as supporting internship programs for youth. Further, the project's objective of improving institutional capacity, which will include modernizing urban management systems, is aligned with Focus Area 3 of the CPF: *Modernize and Improve the Efficiency of Public Institutions*. The project's focus on improving spatial conditions to enable economic growth and productivity is also aligned with the World Bank's Africa Strategy objective of Creating Jobs and Transforming Economies, as well as the Government's Third Five-year National Development Plan (2021/22-2025/26) and Development Vision 2025, which envisions Tanzania becoming a middle-income industrialized country in the near term. The project's focus on addressing climate change impacts on the poor is also aligned with the World Bank's revised vision.

15. **The project is consistent with Tanzania's Nationally Determined Contributions (NDC) to the Paris Climate Agreement**.[33] In the latest NDC, Tanzania commits to reducing GHG emissions economy-wide between 30 and 35 percent by 2030 primarily through the energy, transport, forestry, and waste sectors. The project contributes to the NDC mitigation commitments by investing in renewable energy (solar streetlights), public transit, non-motorized transport, integrated solid waste management, and carbon sink enhancement and carbon sequestration through greening and landscape protection initiatives. Tanzania's NDC priorities for adaptation are: human settlements, infrastructure, disaster risk management and gender mainstreaming. The project is aligned with the NDC adaptation priorities, as it aims to help Dar es Salaam adapt to climate change, specifically flooding, increased heat and drought. The project will also utilize climate services to climate proof infrastructure and human settlements and will provide local governments and local communities (including women) with knowledge and tools to support disaster risk management (DRM) and emergency response. The project's focus on climate mitigation and adaptation in cities also aligns with the strategic directions of the World Bank Climate Change Action Plan 2021 – 2025 and Tanzania's National Climate Change Strategy (2013).

[31] July 2021. The need for a metropolitan institutional organization to manage this system has been identified in the Dar es Salaam Master Plan. The Master Plan also proposes multiple landfills sites, transfer stations to reduce transport costs, waste treatment technologies, sorting and composting facilities to reduce the long-term reliance on landfills. The government has already taken positive steps forward through the setup of a composting plant in Dar es Salaam serving public markets.
[32] A new CPF is currently being developed and is expected to be completed around March 2024.
[33] United Republic of Tanzania. Vice President's Office. (2021). Nationally Determined Contributions.

16. **Creating opportunities for women and girls.** Addressing gender inequality is a strategic priority of both the World Bank and URT is providing leadership to translate the gender priorities in the Five-Year Development Plan and Vision 2025 into action. The project aligns with the World Bank's 2016-2023 Gender Strategy. Pillar 2: *Removing Constraints for More and Better Jobs* is supported by female entrepreneurship activities under the project and internship programs for female graduates; and Pillar 4: *Enhancing Women's Voice and Agency*, related to gender-based violence (GBV) reduction is supported through gender-responsive design of markets and public spaces, and enhanced access to GBV support services. The project also adopts a proactive approach to engaging women and girls in climate change adaptation actions which is a NDC priority.

II. PROJECT DESCRIPTION

A. Project Development Objective (PDO)

17. **PDO Statement.** The project development objective is to improve climate resilient[34] urban infrastructure and services[35], and strengthen institutional capacity in the Dar es Salaam Region.[36]

18. **PDO Level Indicators.** The four PDO-level indicators are: i) Number of beneficiaries with access to improved urban infrastructure designed using climate information and tools; ii) Percentage of collected waste that is treated or disposed under sanitary conditions; iii) Number of local governments in the Dar es Salaam region that adopt and operationalize service improvements plans; and iv) Number of beneficiaries benefiting from reduced flood risk in Dar es Salaam region.

19. The PDO for the SoP is to improve the institutional and management capacity for metropolitan governance and service delivery; and create an enabling environment for economic development and job creation. DMDP 2 continues the work initiated under DMDP 1 and remains consistent with the SoP overarching objectives. The project will support metropolitan-level efforts to integrate and coordinate planning, infrastructure, and service delivery, and aims to establish a governance structure for solid waste management, a core metropolitan-level service. DMDP 2 will pursue the SoP objectives, while integrating a dimension that has become essential in the intervening years since its approval, namely climate resilience, which is included in the PDO for this second phase of the program. Strengthened urban management and service provision that is growing in a less carbon intensive trajectory and with the capacity to adapt to climate change, will make Dar es Salaam a more livable, productive, and competitive region with increasing economic growth and job generating potential.

B. Project Components

20. The project will finance the following components:

Component 1: Climate-Smart Priority Infrastructure (US$295 million equivalent - IDA)

21. This component will finance priority infrastructure identified by the DLAs to address flooding, congestion, and constraints on quality of life and livelihoods. Proposed investments are screened for: i) site suitability; ii) flood risk using the climate model; iii) synergy with DMDP 1 sub-projects; and iv) alignment with strategic plans and investments (i.e., BRT,

[34] Resilient is defined as the capacity to anticipate, withstand, and bounce back from climate shocks and hazards. In this document, climate resilience combines strategies to build resilience and adapt to climate change, with actions to reduce emissions. Details on the implementation of this concept can be found in Annex II.
[35] i.e., roads, transport infrastructure, drainage, parks, public spaces, markets, public buildings, municipal solid waste management.
[36] The five DLAs (Kinondoni, Temeke, Ubungo, Kigamboni & DCC) make up the metropolitan area, and are defined as the boundaries of the Dar es Salaam Region.

the Dar es Salaam Master Plan, and the Drainage and Sanitation Development Plan (DSDP)). The designs will incorporate information and tools to reduce GHG emissions and to consider the climate risks affecting the infrastructure itself and Dar es Salaam's growth more broadly.

22. ***Sub-Component 1.1: Resilient Transport Infrastructure.*** This sub-component will finance infrastructure to enhance access to public transport including feeder routes to the BRT, as well as extension of, improvement of, or access to daladala[37] routes. Financing will be provided to improve connectivity of communities to basic services and infrastructure (i.e., bus stops, markets, schools, and community centers), and to reduce congestion in key areas. The designs of the transport infrastructure will support low carbon development and will assess climate change risks systematically. Specifically, pedestrian and cyclist infrastructure, space for vendors, street tree planting and universal design features will be incorporated into the available right-of-way through a "Complete Streets"[38] approach, and with due account for road safety. Road rehabilitation will provide roadside drainage, utilizing a mix of "grey" and "green" infrastructure,[39] including landscaping and other measures to manage flooding, erosion and promote cooling while increasing rainwater infiltration and reducing runoff. Climate-informed flood risk modelling will be incorporated in road and bridge design, and drainage and culverts will be wide enough to accommodate projections for increased intensity of rainfall events. The sub-component will finance inter-alia: upgrading, rehabilitation, and reconstruction of roads, providing for non-motorized transport; reconstruction or construction of standalone pathways that support non-motorized transport, bridges and footbridges, roadside greening, grey and green roadside drainage systems, and erosion control infrastructure, solar street lighting, bus stands, bus stops and roadside services; and providing maintenance supplies and equipment.

23. ***Sub-Component 1.2: Resilient and Green Drainage Systems.*** This sub-component will build resilience to flooding. Incorporating a combination of traditional grey infrastructure with sustainable urban drainage systems elements,[40] investments will expand capacity of the drainage network while encouraging water retention, storage, and infiltration to attenuate flood peaks, increase groundwater recharge, provide water treatment and reduce erosion. The sub-component will rely on drainage master planning developed under DMDP 1[41] to identify priorities, and recent flood modelling and flood history to prioritize major trunk drainage investments and other investments to reduce flooding in key affected areas. It will also finance sustainable urban drainage features to relieve localized flooding and to demonstrate and promote investment in, for example rain gardens, green roofs and rainwater harvesting. The sub-component will finance, *inter alia*: (a) constructing stand-alone drains; (b) developing area-based drainage systems; (c) implementation of sustainable urban drainage features such as soakaways, sediment traps, tree-planting, green roofs, swales, berms, filter drains, rain gardens, ripraps, and other erosion control structures; and (d) providing maintenance supplies and equipment.

24. ***Sub-Component 1.3: Resilient parks, public spaces, riparian and coastal landscapes.*** This sub-component will support the development of parks and public spaces, and the protection and enhancement of riparian and coastal landscapes, including rivers, flood plains, wetlands, and beachfronts. These areas will be planned and designed to provide recreation and access to diverse groups (i.e., children, elderly, disabled, street vendors), and to reduce climate risks by providing drainage and flood protection and mitigating urban heat. The sub-component will finance *inter-alia*: (a) designing and constructing landscaped areas with trees, greening, recreational features, restrooms/utilities, cycling and walking

[37] "Daladalas" are public minibuses.
[38] Complete Streets is a road planning and design approach centered around people and sustainability instead of private motor vehicles. Complete Streets accommodate users of different abilities and modes of transport, and provide space for public transit, pedestrians, cyclists, e-mobility, drainage, and trees.
[39] Grey denotes standard engineering approaches using hard infrastructure such as concrete and pipes, whereas green infrastructure mimics natural systems.
[40] Sustainable urban drainage systems (SuDS) are drainage systems that copy nature, by managing precipitation and surface water where it falls. SuDS slows down surface water to allow it to be stored for reuse, evaporated, or transpired through vegetation, or naturally drain into watercourses and groundwater.
[41] President's Office – Regional Administration and Local Government. (2018). Drainage and Sanitation Development Plan (DSDP).

pathways, small service roads and a sustainable drainage systems; (b) carrying out protection works and landscaping of riparian areas and beachfronts; (c) developing climate risk-informed urban plans, cadaster and land demarcation, as well as implementing development controls for the protection of floods plains, riparian areas, parks and green open spaces; and (d) providing maintenance supplies and equipment.

25. ***Sub-Component 1.4: Area-based Urban Development.*** This sub-component will finance planning, design, and infrastructure improvements in targeted geographic locations across Dar es Salaam to promote compact growth and enhance economic productivity. This sub-component will focus on business districts, trade and production centers, as well as wholesale and retail food market areas. Urban upgrading of economic clusters will be based around public transport, and will include drainage improvements, traffic, parking and freight management to reduce congestion and support lower carbon movement of goods, services, and people. Bus stops and bus stands will be upgraded and modernized to improve daladala services. Public markets, many of which are adjacent or within low-income settlements and serve the urban poor, will be upgraded through gender-sensitive and inclusive design approaches that promote walkability, universal access, livelihood opportunities, and enhanced access to fresh and affordable food. Informed by DMDP 1, solar streetlights will be provided to increase personal security and expand trading hours.

26. The sub-component will finance *inter-alia*: (a) public markets; (b) bus stops stands; (c) public spaces including roads, sidewalks, bike paths, and pedestrian ramps, trees planting and landscaping, solar street lighting, public toilets, street furniture and signage, and areas for vendors and concessions; (d) "one-stop shops" for entrepreneurship services for females and marginalized vendors; (e) planning studies, detailed planning schemes, and designs, cadaster and demarcation systems; and (f) low carbon urban designs and compliance control/monitoring mechanism for improving the energy efficiency of Project-funded buildings.

Component 2: Integrated Solid Waste Management Infrastructure and Services (US$55 million equivalent IDA; €50 million, Government of the Netherlands)

27. Component 2 will establish an integrated solid waste management system for Dar es Salaam, providing infrastructure and institutional strengthening to allow for safe handling, transport and disposal of waste, as well as sorting and processing of recyclables, composting and resource recovery, with the aim of reducing reliance on landfills and GHG emissions. URT has established a technical working group to identify the most cost-efficient delivery of upgraded solid waste services. Based on a set of candidate sites, detailed site assessments and transport modelling, preliminary designs, and Environmental Social Impact Assessments (ESIA) and analysis of the contracting approach will be completed and will be followed by the detailed design of the infrastructure.

28. ***Sub-Component 2.1. Waste disposal.*** This sub-component will finance the construction of two or three sanitary landfills[42] designed to accommodate landfill gas capture and destruction technologies. The sub-component will also finance the closure of the Pugu dumpsite and several smaller sites. Where technically feasible, this will include landfill gas capture and flaring or energy generation. It will also finance a program to support the restoration of livelihoods of recyclers operating on these dumpsites and also support closure and environment improvement around waste accumulation points. This sub-component will finance*, inter alia*: (a) constructing solid waste landfills and related ancillary works; (b) closing

[42] The infrastructure including locations and number of facilities (landfills, transfer stations, recycling, and composting facilities) to be financed will be optimized to minimize the costs of operation to enhance sustainability while ensuring the suitability of the sites and facilities based on technical, environmental and social criteria.

dumpsites; (c) designing and implementing a livelihoods restoration program for informal waste recyclers operating on dumpsites; and (d) closing and sanitizing waste accumulations points.

29. ***Sub-component 2.2. Waste Transfer and Transport****:* This sub-component will finance a waste transfer and transport system, which will allow waste to be consolidated to larger containers for transport to the landfill. It will reduce costs and GHG emissions associated with waste collection. This sub-component will finance*, inter alia*: i) constructing solid waste transfer stations and ancillary infrastructure, and providing equipment for solid waste transfer and transport.

30. ***Sub-Component 2.3. Waste Recycling and Organic Waste Management:*** This sub-component will finance waste recyclable sorting and processing facilities and organic waste processing (composting, digestion, or similar technology) facilities to reduce the reliance on landfills and GHG emissions. It will include centralized facilities operated by the intermunicipal institution and community level programs and facilities to be promoted or managed by the DLAs. This sub-component will finance*, inter alia*: (a) centralized organic waste sorting, processing, recyclable sorting, and processing facilities; and (b) community-based and household-level facilities and programs for recyclable sorting and processing of organic wastes.

31. ***Sub-Component 2.4. Establishment of Intermunicipal solid waste management institution.*** This sub-component will establish an intermunicipal institution to manage the shared solid waste infrastructure on behalf of the five DLAs[43]. This intermunicipal institution will be responsible for: i) providing the shared services through private sector contracts; ii) providing capacity building to the DLAs; and iii) planning and establishing standards and tariffs for local government solid waste services. This sub-component will finance*, inter alia*: i) technical assistance for institutional strengthening and legal reform to support the development of an intermunicipal solid waste management organization for Dar es Salaam region; and ii) equipment and facilities for operationalizing the institution.

Component 3: Strengthening Urban Institutions (US$20 million equivalent IDA)

32. This component will support improved urban services, municipal finances, urban planning and emergency planning and response.

33. ***Sub-Component 3.1 Capacity Building for Resilient Urban Services.*** This sub-component will support DLAs to prepare and implement service improvement plans to expand the coverage, quality, and cost-effectiveness of urban service delivery (i.e., parks and recreation, urban roads, drainage, public markets, solid waste collection and cleaning). This sub-component will modernize and professionalize service delivery, O&M and asset management, and improve citizen responsiveness by financing digitization and information technology (IT) systems, preparation and implementation of Standard Operating Procedures (SOP), regulatory and by-law changes (i.e., to support rainwater harvesting in municipal buildings) and strategic plans (e.g., updating the DSDP and developing a greening strategy). Training and capacity development for staff of DLAs, ministries (i.e., PO-RALG, Tanzania Rural and Urban Roads Authority (TARURA), MOF), design firms and contractors, and job/internship programs for climate-resilient development, are also financed under this sub-component. This sub-component will finance *inter alia*: (a) strengthening strategic planning, developing guidelines and policies, carrying out institutional reorganizations and developing the capacity of human resources; (b) digitizing and

[43] The DLAs will remain responsible for waste collection and cleaning in the respective jurisdictions.

providing IT systems; (c) modernizing and strengthening professional service delivery; and (d) developing and implementing regulatory and by-law changes.

34. ***Sub-Component 3.2 Implementation of Own Source Revenue (OSR) Management System.*** Sustainability of OSR is vital for financing O&M to sustain the infrastructure and services provided under the project. Accordingly, this Sub-component will update OSR by-laws, and will build on the tools and IT systems established under DMDP 1. This sub-component will finance *inter alia*: (a) providing equipment, IT technical assistance and training to DLAs and its staff to improve management of billing and collection systems; (b) collecting service-users and taxpayers information; (c) enhancing monitoring and evaluation (M&E) tools, including internal controls, and expenditure management systems; and (d) implementing public awareness campaigns on the importance of tax payment compliance.

35. ***Sub-Component 3.3 Capacity Building for Resilient Urban Planning.*** This sub-component will support changes in by-laws and operationalizing tools as proposed under DMDP 1 for improved development controls at the local level to prevent encroachment including no-build areas, river corridors and wetlands. This sub-component will finance inter alia: (a) carrying out urban and spatial planning studies for development controls, including corridor development strategies for additional bus rapid transport lines, greenspaces and riparian areas; and (b) providing institutional support for the institutional planning and coordination functions under the Dar es Salaam Master Plan to support climate adaptation and mitigation.

36. ***Sub-component 3.4: Capacity Building for Emergency Planning and Response.*** This sub-component will finance inter alia: (a) updating emergency response plans for Dar es Salaam region; (b) strengthening fire safety and hazardous materials storage, contingency planning, firefighting, training and equipment; (c) improving and operationalizing the digital emergency management information systems; (d) providing emergency response and communications equipment; (e) developing an operations and organizational plan to enhance the human resources preparedness/capacity for emergency response; (f) developing and implementing a capacity building program for regional municipal and community disaster management committees; and (g) carrying out community disaster sensitization campaigns, training and emergency response planning.

Component 4: Project Management (US$15 million equivalent IDA)

37. This component will finance the direct costs of management and operation of the project to ensure smooth delivery and compliance with World Bank policy and guidelines. It will provide support to the PO-RALG Project Coordination Team (PCT) and Project Implementation Teams (PITs) in the five DLAs for continual project supervision, contract management, M&E, environmental and social monitoring, fiduciary management and auditing, and office operating costs. Given the large number of stakeholders and criticality of stakeholder engagement in both planning and implementation of the project activities, this component will also finance public communications activities, stakeholder coordination, impact assessments and beneficiary surveys to inform M&E, as well as preparation of the Implementation Completion and Results Report (ICR), and preparation of additional investments.

Component 5: Contingency Emergency Response (CERC, US$0)

38. Following an eligible crisis or emergency, the government may request that the World Bank reallocate project funds to support emergency response and reconstruction. When triggered this component will draw uncommitted grant

resources from other project components to cover emergency response. The initial allocation to the Contingent Emergency Response Component (CERC) is US$0. Activation of the CERC (and financing to be provided) will require the World Bank's no-objection upon: (a) declaration of an emergency by URT; (b) a request letter for CERC activation and the evidence required to determine the eligibility of the emergency as defined in the CERC Manual; (c) an Emergency Action Plan, including the emergency expenditures to be financed; and (d) to meet the environmental and social requirements as agreed in the ESCP and CERC Manual. PO-RALG will be responsible for the CERC, including preparing the CERC Manual to guide its activation and implementation arrangements (including but not limited to defining CERC activities, eligible expenditures, and arrangements for financial management, procurement, and compliance with ESF and Paris alignment), which will be approved by the World Bank.

39. **Total project costs**. Project financing for the investments is US$438 million including US$385 million credit from IDA and a proposed EUR 50 million (US$53 million at current exchange rates) grant from Invest International (Ministry of Foreign Affairs, Government of the Netherlands)- the amount of which will be confirmed once the design study for Component 2 is completed, and financing is approved by Invest International.

Corporate commitments

40. **Citizen Engagement: The project will develop, pilot, and expand a citizen feedback system for urban services.** A user-centric digital platform will be developed to serve as an interface with the public. This platform will enable citizens to report on issues such as burning waste, or delayed waste collection to the DLAs, and in return, the DLAs and the contracted service providers will be required to address the issues, with citizen feedback throughout the process. The platform will make citizen engagement an integral part of the system, while at the same time enabling the DLAs to track and monitor the quality of services. The data collected from the platform can also serve as a mechanism to promote accountability for responsible departments. The success of this intervention will be evaluated by measuring the percent of complaints that are resolved within the agreed timeframe.

41. **Gender: The project will focus on reducing economic barriers for women in urban areas.** Nationally, female entrepreneurs sell 46 percent less than their male counterparts[44] and the wage ratio of men to women in the informal sector is almost two to one.[45] A recent survey found that 40 percent of female vendors identified as victims of theft and robbery and over 40 percent have faced physical and sexual harassment or assault.[46] Safety and security risks in public undermines women's agency and economic participation.[47] Tanzanian women's economic potential is also inhibited by time constraints, as they spend almost four times as much as males on unpaid domestic work and childcare.[48] A survey of 200 "machinga" vendors working at Tegeta Nyuki and Shekilango markets conducted as part of project preparation found similar barriers. The survey found that women tend to occupy cheaper stalls and sell lower value goods than men, with less than 40 percent of women earning over TZS 100,000 per day, compared to 60 percent of men. About 45 percent of female vendors surveyed, reported that access to capital is a constraint to the growth of their business. Lack of childcare

[44] World Bank. (March 2022). Tanzania Gender Assessment.
[45] Steiler, I. and Nyirenda, C. (2021). Towards sustainable livelihoods in the Tanzanian informal economy: Facilitating inclusion, organization, and rights for street vendors (No. 2021/53). WIDER Working Paper.
[46] Pallangyo, W.A. (2021). The informal sector and the safety of female traders in Tanzania.
[47] In Dar es Salaam women are reliant on walking, and the unsafe and obstructed conditions of the walkways and lack of lighting, limits trading in the early morning hours and after sunset.
[48] A global study of 117 countries, which included Tanzania, suggests that women are more likely to work when childcare is available. See Besamusca, J., Tijdens, K., Keune, M. and Steinmetz, S. (2015). Working women worldwide. Age effects in female labor force participation in 117 countries. World Development, 74, pp.123-141.

and security were also cited as issues. To address some of the challenges that women vendors face in improving their economic prospects, the project will invest in a one-stop-shop for women services in one to two public markets. The markets and the one-stop-shop will be designed in collaboration with the women users to address the specific challenges they face, and a menu of options may include childcare services, lactation rooms, GBV services, access to finance and business skills as well as easy business and mobile money registration. Services will be rolled out based on prioritization of needs identified in the survey. The lessons from the pilots will be used to inform the scale up and replication to the other markets constructed under the project.[49]

42. **Climate:** Climate change adaptation and mitigation are cross cutting issues embedded in the physical interventions (Components 1 and 2), and the institutional strengthening (Component 3). Dar es Salaam is increasingly at risk of climate change particularly flooding and increased human exposure to extreme heat. The project directly responds to these issues through an integrated program of urban drainage solutions combining grey and green infrastructure, area-based upgrading in flood-prone areas including drainage, road improvements to accommodate drainage and landscaping to support urban cooling. The project is also designed to help improve living conditions through investment in low carbon urban infrastructure, including non-motorized transport, enhanced public transport accessibility, integrated solid waste management, solar street lighting, energy efficient buildings and carbon sequestration through tree planting. Through Component 3, the project promotes compact growth and transit-oriented development policies and supports the clustering of land uses and investments to encourage urban infill as an alternative to energy-intensive urban sprawl (Annex II provides a detailed assessment of the project's mitigation and adaptation contributions).

43. **Private Sector:** The project will encourage private sector participation through the solid waste system which proposes private sector operational contracts for most services including the new disposal, transfer and centralized recycling and composting facilities. The collection contracts are also done through private entities and Component 3 will upgrade the contracts to be more attractive to private sector contractors, increasing the quality and competitiveness of the market. Additionally, the area-based urban upgrading and roads investments will encourage private sector led commercial and residential development. Markets and roadside facilities will encourage development of small-scale traders and food service establishments.

C. Project Beneficiaries

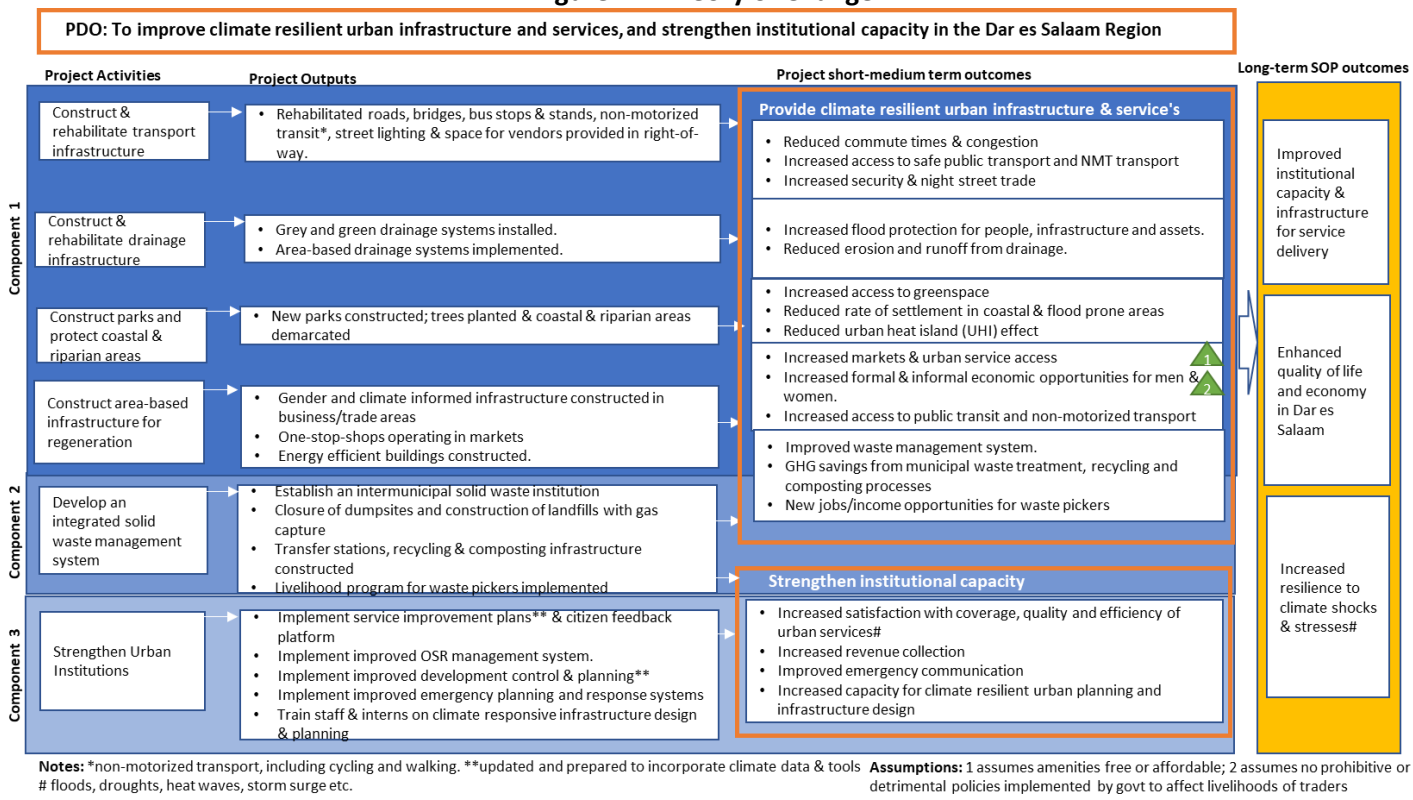
44. The project will increase access to urban infrastructure and basic services and economic opportunities and reduce damages from flooding for approximately 3.3 million people, including poor and vulnerable communities. The project will also benefit the entire population of the Dar es Salaam Region (an estimated 5.4 million) through the strengthening of institutional capacity for urban service delivery and emergency response. The five DLAs' capacity will be strengthened as well as the future intermunicipal solid waste management institution. Other entities will also benefit from participation in the project, including the Tanzania Rural and Urban Roads Agency (TARURA), Dar es Salaam Rapid Transit Agency (DART), the National Environmental Management Council (NEMC), Dar es Salaam Multi-Agency Emergency Response Team (DarMAERT), Dar es Salaam Water and Sewerage Authority (DAWASA).

[49] The impact of these activities on reducing economic barriers for female traders will be measured by an indicator which quantifies the percentage of female entrepreneurs reporting increased sales.

D. Results Chain

45. The assumption underpinning the project's theory of change (TOC) is that by investing in climate resilient urban infrastructure and services, and building institutional capacity, service delivery will improve, Dar es Salaam will be better prepared to handle future climate shocks, and quality of life and economic opportunities will improve for residents.

Figure 1.1 Theory of Change



E. Rationale for Bank Involvement and Role of Partners

46. **The project builds on a two-decade collaboration with the United Republic of Tanzania in the urban sector.** In addition to DMDP 1, this engagement includes the Tanzania Strategic Cities Project (TSCP) (P148974), which enhanced OSR collection in eight secondary cities; the Urban Local Government Support Project 1 and 2 (ULGSP) (P152303 and P070736) which piloted a Community Infrastructure Upgrading Program (CIUP) in Dar es Salaam; and the Second Central Transport Corridor Project (CTCP2) (P103633), which constructed the first line of the BRT. The project complements existing operations financed by the World Bank and other donors in Dar es Salaam. For instance, the project will improve multimodal transport connectivity, as it will construct the feeder routes and non-motorized transport links to connect to phases 1-6 of the BRT corridors which are being implemented under the World Bank-financed Dar es Salaam Urban Transport Improvement Project (DUTP) (P150937) and by other development partners. The Msimbazi Basin Development Project (P169425) addresses flood mitigation and redevelopment in the lower Msimbazi river floodplain, and DMDP 2 provides complementary investments surrounding the city center (Kariakoo and Upanga) and builds resilience to flooding in other river basins in Dar es Salaam.

47. **DMDP 2 is built on partnerships.** The project includes several contributing partners, most significantly the United Kingdom's (UK) Foreign Commonwealth Development Office (FCDO) and the Government of the Netherlands. In 2016, the UK Department for International Development-DFID (functions now incorporated into FCDO) and the World Bank established the Tanzania Urban Resilience Program (TURP) (P159779). TURP financed baseline assessments, flood modelling and opportunities assessments for green infrastructure, which helped identify proposed solutions from which DMDP 2 was developed. Additional baseline work was provided by the World Bank administered City Climate Finance Gap Fund, PROBLUE Trust Funds, and the Quality Infrastructure Investment (QII) Trust Fund supported by the Government of Japan.

48. **The Netherlands Ministry of Foreign Affairs is intended to be a co-financing partner for DMDP 2**. Invest International[50] will implement the public infrastructure funds on behalf of the Netherlands Ministry of Foreign Affairs. The Netherlands Ministry of Foreign Affairs has co-financed multiple infrastructure projects in Tanzania in the last 15 years. This includes the Msimbazi Basin Development Project (P169425) co-financed by the World Bank. In addition, the Netherlands Ministry of Foreign Affairs has provided the URT financing for two healthcare projects, a rural energy project and the rehabilitation of Kilimanjaro airport. Currently, Invest International is financing the development phase of the solid waste investments under Component 2 and intends to co-finance implementation under the project.

F. Lessons Learned and Reflected in the Project Design

49. **Institutional Strengthening and investments.** DMDP 1 was not able to achieve the anticipated institutional reform agenda as several goals were beyond the project's control. DMDP 2 is adopting a more pragmatic approach to the institutional component. For DMDP 2, the investments (Component 1 and 2) and technical assistance (TA) (Component 3) will be thematically linked and sequentially implemented to optimize design outcomes and capacity building opportunities. The project will also focus on building horizontal and vertical capacity and coordination to deliver emergency response, urban services and systems, to sustain the investments. One new intermunicipal entity for solid waste management will be established, as this is a critical component for managing the investments under the project.

50. **Solid Waste investments.** The project also benefits from over three decades of World Bank investments in solid waste management. Some of the key lessons from this engagement is the need for an integrated approach that includes collection, disposal along with resource recovery approaches that provide informal and formal job opportunities while reducing the long term dependence on landfills; siting of solid waste facilities based on social, environmental, technical and cost criteria; ensuring that there is an institution that can manage solid waste as a sustainable set of services with effective revenue generation to encourage cost recovery; taking advantage of the expertise and efficiency provided by the private sector to modernize services, and addressing the particular needs of informal recyclers displaced by dumpsite closure to improve their working conditions and provide livelihoods.

51. **Sustainability of investments**. O&M frameworks were not in place at the DLA level during DMDP 1, which led to challenges in terms of management of some of the assets. DMDP 2 under Component 3 will provide support to

[50] Invest International is a state-owned company established by the Government of the Netherlands: 1) to contribute to the future earning capacity of the Netherlands; and 2) to create impact on the Sustainable Development Goals. Its shareholders are the Netherlands Ministry of Finance and FMO Entrepreneurial Development Bank. FMO is a Dutch development bank structured as a bilateral private-sector international financial institution based in the Hague, the Netherlands.

organization, systems and capacity for O&M prior to handing over assets and will also support increased OSR to sustain the investments.

52. **Resettlement Action Plan (RAP) implementation**. RAP implementation was a challenge during implementation of DMDP 1 due to high staff turnover at the PITs and lack of understanding of resettlement and World Bank policies. Another key issue was that the amount of land to be acquired was underestimated at the design stage, and DLAs lacked funds for compensation payments, which caused significant time delays. Under DMDP 2, the staffing and capacity issue will be addressed as each PIT will have dedicated resettlement staff trained on World Bank Environmental and Social (E&S) standards and RAP implementation.

III. IMPLEMENTATION ARRANGEMENTS

A. Institutional and Implementation Arrangements

53. **Implementing agencies.** The same implementing agency arrangements that worked well under DMDP 1 and Tanzania Cities Transforming Infrastructure and Competitiveness Project (TACTIC) (P171189) will be maintained. The main implementing agency, PO-RALG, will establish a PCT. With the exception of the road and drainage, sub-project investments will be managed and implemented by the DLAs through the PITs. The PCT will be responsible for implementation of the roads and drainage sub-projects. TARURA, as an agency under PO-RALG, will provide technical support on the road's investments.

54. **Project Coordination Team (PCT).** The PO-RALG PCT will be responsible for overall project management, coordination, and receipt of funds. They will also provide technical support to DLAs for municipal facilities (i.e., markets, open space) and functions (i.e., urban planning, accountability and oversight, financial management, procurement, OSR) that are currently under the mandate of local government authorities. TARURA will ensure the application of appropriate technical standards for road activities, and coordinate the O&M of the roads in line with its mandate.

55. **Project Implementation Teams (PITs).** The DLAs will have to establish PITs and will be responsible for implementation of the sub-projects, except roads and drainage. Three out of five of the DLAs were part of DMDP 1 and two additional DLAs (Kigamboni and Ubungo) will be added. The requirements for staffing and capacity for the PIT will be a condition for participation of each of the DLAs in the project and they will be required to maintain them throughout implementation. Implementation support will be provided by the consultants under Component 4, and the PO-RALG PCT, with a focus on maintaining and building capacity for the staff and PITs functioning throughout implementation.

56. **An intermunicipal solid waste institution will be established as part of the project.** An intermunicipal solid waste institution has been identified, with broad consensus, as the appropriate institutional structure to oversee Dar es Salaam's solid waste system and manage the facilities constructed under the project. The institution is proposed to be financially autonomous and owned and governed by the five DLAs. It will have a mandate to manage the shared facilities (transfer stations, recycling and composting and landfill facilities) and provide standards and Dar es Salaam wide planning coordination for the DLA executed services (collection and cleaning in respective jurisdictions). The solid waste investments will be contracted and constructed under the project through the PIT, and once completed, the works will be transferred to the intermunicipal institution for operation. An operational contract with a private company will be put in place under the institution to manage the day-to-day operation of the facility.

B. Results Monitoring and Evaluation Arrangements

57. **M&E of project results will follow standard World Bank practice.** The World Bank and the PCT have agreed on a results framework with indicators and the methodology for data collection, which will be used to track progress towards achieving the targets and the PDO, and to provide a sound evidence-base to support course correction in response to emerging issues. PITs are responsible for assigning M&E focal points, collecting and reporting on M&E information. The PCT has overall responsibility for M&E and preparation of semi-annual reports to be discussed with the World Bank. Dedicated resources are allocated for M&E under Component 4, including budgets for training, hiring specialist firms, impact assessments and surveys.

C. Sustainability

58. **The project design includes measures to help ensure sustainability.** The road upgrading will reduce the maintenance for these roads and will incorporate green drainage design that will help reduce the pooling of water on roads which makes paved roads in Dar es Salaam collapse after each major rain event. The use of well-designed green drainage systems will also reduce maintenance. Similarly, park infrastructure and markets will be designed to minimize maintenance and reduce costs. All buildings will achieve operating cost savings through energy efficiency and rainwater harvesting. An internship program is financed for male and female graduates and undergraduates to build national skills in sustainable design.

59. **Component 3 was designed to respond to the need for strengthening of local government systems to deliver services,** providing the local governments clear institutional structures and mandates for the management and O&M of the project investments, and support for professionalization of urban services to improve the quality-of-service delivery and financial sustainability. Technical capacity for managing assets will be provided through skills building and training, and OSR activities. The solid waste investments will require the establishment and strengthening of an intermunicipal institution that can professionally plan, operate and maintain the facilities for decades. The project will support the establishment of the institution, the contracting of its operation to a professional private company and developing the mechanisms to recover the costs of operation.

IV. PROJECT APPRAISAL SUMMARY

A. Technical, Economic and Financial Analysis

60. **The project benefits from the lessons and capacity built during implementation of DMDP 1**. There are effective and established working relationships between the World Bank team, PO-RALG and the local partners with proven success in sub-project implementation, and well-developed capacity to support the scale-up of green infrastructure innovations and the area -based investments under the program.

61. **Priority quick-win investments under Component 1 (roads) will be ready for implementation soon after approval.** The first packages for implementation will prioritize quick-win initiatives to rehabilitate existing roads, which are equivalent to about 30 percent of the total investment (i.e., approximately US$100 million). Priority will be given to roads with relatively low design complexity and limited resettlement, which meet the key transport objectives (i.e., support

public transport, connect communities to basic services, reduce congestion and encourage economic activity). Final designs are expected to be completed for procurement beginning in January 2024.

62. **Process for identification and preparation of additional investments:** A list of pipeline investments under the priority investments component has been identified by the DLAs with PO-RALG. These will be screened for incorporation in the project based on the project prioritization criteria, undergo technical design incorporating lessons learned from previous investments, additional transport, flooding analysis, consideration of area-based or complementary investments and using the discussed climate information and tools to ensure it meets the project objective and is consistent with the World Bank ESSs. The criteria and procedures will be outlined in the Project Implementation Manual (PIM) and will be subject to World Bank "no objections" on the screening and design process.

63. **Solid waste investments:** The development of the integrated solid waste management system under Component 2 will use the basic investment approach outlined in previous studies and the Dar es Salaam City Master Plan which involves multiple landfills, transfer stations, and recyclable sorting, processing and composting facilities. Potential sites for these facilities have been identified and will undergo a site suitability analysis and transport analysis to ensure technical, environment and social feasibility, and minimizes operational costs and GHG emissions. This optimization and subsequent design and environmental and social studies will be done through an ongoing study financed by the Government of the Netherlands[51] and is expected to be completed during calendar year 2024. Additionally, the proposed solid waste management institution to manage these facilities has undergone a legal, technical, financial viability pre-feasibility study with consensus on the chosen approach. A draft governance structure, human resource plan, business and financial plan for the institution has also been developed.

Alignment with the Paris Climate Change Agreement

64. **The project is aligned with the goals of the Paris Climate Change Agreement on both mitigation and adaptation.** The project invests in infrastructure and activities which are either consistent ("Universally Aligned") to the Paris Climate Change Agreement or have risks that can be mitigated to an acceptable level. The project responds directly to Dar es Salaam's climate exposure and vulnerabilities through strengthening infrastructure, services and institutions.

65. **Assessment and reduction of adaptation risks:** The project investments face a moderate to high risk of exposure to extreme precipitation, urban floods, drought and coastal flooding.[52] To minimize these risks to low level, the project has been designed with several risk reduction measures: i) a flood risk model, which considers the worst case (RCP8.5) climate change scenario for flooding, has been used for screening and site selection for all investments (Component 1 and 2); ii) climate informed hydraulic analysis will be applied to all drainage designs including those for roads, building and other infrastructure (Component 1 and 2); iii) roads have been designed with drainage (Sub-component 1.2); iv) NBS, expansion of open green areas, tree planting and demarcation and protection of riverine areas, floodplains and wetlands builds resilience to flooding, erosion and extreme heat (Sub-components 1.2, 1.3, 1.4, 3.3); v) building capacity, establishing guidelines and implementing green roofs and rainwater harvesting on buildings (Sub-components 1.3, 1.4 and 3.1); vi)

[51] The "Studies for Integrated Solid Waste Management in Dar es Salaam", Tanzania are being executed by the Dar es Salaam City Council and are beginning implementation in September 2023. The studies are financed under the Develop2Build program where the Ministry of Foreign Affairs of The Netherlands provides support to governments in development and procurement of infrastructure projects to ensure that they are technically, socially, financially, and economically ready for implementation. Invest International will prepare the investments and provide co-financing through under DMDP 2.
[52] For instance, flooding can impact the operational performance of municipal solid waste management, buildings, road, and drainage infrastructure; flooding and drought can impact parks, open spaces, and tree planting; and sea level rise can make urban areas uninhabitable in the long-term.

developing new tools and systems, and building local authorities and communities capacity in emergency planning and response (Sub-component 3.4); and vii) development and implementation of O&M policies and procedures to proactively reduce the impact of climate hazards (Sub-component 3.1).

66. **Assessment and reduction of mitigation risks:** Tanzania's total GHG emissions are negligible by international standards at only 0.2 metric tons of CO2 equivalent per capita.[53] The project is expected to have a low impact on GHG emissions and supports a low emissions pathway for Tanzania. Some of the infrastructure, buildings and services proposed under the project will generate GHG emissions, but the project has been designed to minimize any emissions increases. Furthermore, the project does not prevent a transition to lower carbon alternatives in the future.

67. **The project invests in an integrated solid waste management system for Dar es Salaam which is expected to generate less emissions than without the project.** The dumpsite closure with landfill gas collection and use of flaring; recyclable sorting; composting facilities; and waste transfer stations, waste collection and transportation services[54] are part of an integrated solid waste management system and are therefore Universally Aligned (Component 2). The new landfills do present a moderate risk of increasing emissions; however, the new landfills will be designed to include landfill gas collection systems that will use or flare the gas.

68. **The project will finance upgrading, reconstruction and maintenance of existing roads**. The urban mobility and road activities under the project are Universally Aligned- road rehabilitation is for the purpose of accommodating daladala routes and non-motorized transport, providing access to the BRT or existing daladala routes, providing access to services, providing solar lighting, and drainage improvements (Sub-component 1.1 and 1.4). The project also introduces "Complete Streets" policies and guidelines with the aim of increasing the share of non-motorized transport (Sub-component 3.1).

69. **The buildings financed under the project present a low risk to Tanzania's long-term emissions trajectory as they are Universally Aligned** (Sub-component 1.3, 1.4 and Component 2). Most of the proposed buildings, including public markets, bus stands, public toilets and park buildings, will generate low emissions as they will be open-air (i.e., no space cooling) and are not expected to require the use of energy-intensive equipment or water heating.[55] There are some buildings which present a moderate to high emissions impact, as they will likely require the use of such equipment, including recycling centers and landfill facilities. However, these buildings are Universally Aligned as the project mitigates risk by requiring all buildings financed under the project to achieve energy performance standards equivalent or better than EDGE level 1 certification. Technical assistance and capacity building support will also be provided to support certification of energy efficiency (Sub-component 3.3). Furthermore, in support of the country's low emissions pathway, the project introduces policies and area-based plans to encourage urban upgrading based on transit-oriented development and compact growth principles (Sub-component 1.4, Sub-component 3.3). The area-based upgrading and urban planning policies will be Universally Aligned and will entail non-motorized transport, public transport, flood management and protection, urban drainage, solar street lighting, parks and public spaces. Based on the study to be conducted, urban upgrading areas will be selected within the existing urban fabric, based around public transport, and will counteract private car use through introduction of measures such as pedestrianization of streets, and parking restrictions. Development controls and

[53] International Energy Agency. www.iea.org
[54] The project invests in waste transfer centers and rail transportation to reduce emissions from transportation.
[55] They will generate their power needs through on-site solar provision, or grid connection, which is currently comprised of: natural gas (48 percent), hydro (31 percent), petrol (18 percent), solar (1 percent), and biofuels (1 percent). https://www.trade.gov/energy-resource-guide-tanzania-renewable-energy

revegetation programs to protect wetlands and floodplains will protect existing carbon stocks, while tree planting, NBS and expansion of parks and greenspaces will support carbon sequestration (Sub-components 1.2, 1.3 and 3.3).

Financial and Economic Analysis

70. **Economic analysis**: A cost-benefit analysis using a with and without project scenario for investments on (i) roads, (ii) drainage, (iii) solid waste management, and (iv) markets confirmed that the proposed investments are economically viable. For the drainage sub-component, the main benefits are avoided damages from flooding and reduced income losses due to sickness; for road infrastructure they are reduction in vehicle operating costs and savings in travel time; for solid waste benefits they are environmental improvements through GHG emission reduction captured through the shadow price of carbon (SPC), public health benefits in terms of reduced days lost from sickness and reduced health expenditure; and for markets under the area-based development they are an increase in the land values due to the upgrading of the area. The analysis, using a 10 percent discount rate, indicates that the project is economically viable overall as well as for the individual subcomponents. Overall, the Economic Rate of Return (ERR) is 24 percent while the Net Present Value (NPV) is US$402 million. The project is also feasible under a sensitivity analysis which considers an increase in 20 percent of the costs and a reduction of 20 percent of the benefits.

Table 1: Results of Economic Analysis

	Roads	Drainage	Solid waste		Markets[56]	Aggregate[57]	
			Low SPC	High SPC		Base Case	Sensitivity Case
Net Present Value (US$ million)	$269.3	$48.7	$80.0	$124.2	$4.06	$402.0	$188.5
Economic Rate of Return (%)	27%	17%	26%	32%	21%	24%	16%

71. **Financial analysis:** A financial analysis was undertaken on the solid waste component, assuming locations of facilities, calculating transport and operational costs based on Tanzania prices for labor, fuel and operation. Based on this analysis overall costs in the system will initially increase by 28 to 52 percent in the first year of operation relative to the baseline and depending on the extent of upgrading of collection, the costs will be 56 percent to 75 percent higher than the baseline in 2036. The costs for the DLAs to execute mandates for waste collection will decrease in the short term (15 to 40 percent in the first year of operation) and gradually increase over time (in 2036 costs would range from 4 percent lower to 14 percent higher, than the baseline situation, depending on the pace of improvement of the collection systems). The public company will incur the remaining cost increases which will be taken on immediately upon operation of the system and increase moderately over time with increased waste collected and offset as recycling and composting systems begin to improve. Revenues from increased tariffs and improved collection supplemented by general revenues are anticipated to cover the additional costs.

[56] The analysis for markets is for a sample of four markets.
[57] Note that the aggregate cost-benefit analysis uses the low shadow price of carbon (SPC). The NPV and ERR for the aggregate analysis would be larger using the high SPC.

B. Fiduciary

Financial Management

72. The World Bank conducted a financial management (FM) assessment of the PO-RALG PCT in September 2023 for the project in accordance with the World Bank Directive: Financial Management Manual for World Bank Investment Project Financing Operations issued February 4, 2015, and effective from March 1, 2010; and the World Bank Guidance: Financial Management in World Bank Investment Project Financing Operations, issued and effective November 10, 2017.

73. **FM arrangements.** The financial management arrangements at PO-RALG including the implementing DLAs are adequate to provide, with reasonable assurance, accurate and timely information on the status of the project as required by IDA. The project will use the Report Based disbursement method and the quarterly Interim Financial Reports (IFRs) will be submitted to the World Bank within 45 days from the quarter end. The National Audit Office is mandated to audit all World Bank funded projects, including DMDP 2. Annual audit reports will be submitted to the World Bank by the end of six months from the financial year end.

74. **Risk rating.** The FM risks relate to ongoing government reforms, political interference, potential errors and delays in financial reporting. The FM risk rating is **Moderate (M)** after mitigation measures are implemented.

Procurement

75. **Procurement will be carried out in accordance with the following World Bank procedures:** i) the World Bank Procurement Regulations for IPF Borrowers Fifth Edition, September 2023; ii) Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by International Bank for Reconstruction and Development Loans and IDA Credits and Grants (dated October 15, 2006, and revised in January 2011 and July 1, 2016); and iii) other provisions stipulated in the Financing Agreements.

76. **Project Procurement Strategy for Development (PPSD) and Procurement Plan (PP).** According to the requirement of the Procurement Regulations, PO-RALG and DLAs have prepared a PPSD and a PP for at least the first 18 months of project implementation. The PPSD market assessment concluded that there is an adequate number of roads construction firms (local and foreign) that are likely to bid for the envisaged road and building construction works. Similarly, for design and supervision works, the market analysis revealed that there is a large pool of consulting firms (local and foreign) who are likely to participate in the selection process for the consulting services opportunities. Based on the market assessment, the PPSD identified optimum procurement strategies to meet the objectives of the project and established the selection methods for procurement of goods, works, non-consulting services, and consulting services. The initial PP has been agreed and eventually will be disclosed on the World Bank's external website. The PPs will be updated in agreement with the World Bank annually or as required to reflect the project's implementation needs.

77. **Advance Procurement.** The World Bank Procurement Regulations allow and encourage advance procurement as an approach that plays a critical role in facilitating efficient and timely project implementation and avoiding costly implementation delays particularly in infrastructure projects. Considering this, PO-RALG and DLAs are currently preparing

detailed designs for 30 percent of the investments, and it is expected that procurement processes for the resulting packages will be initiated beginning in January 2024.

78. **A procurement capacity assessment of PO-RALG and DLAs was carried out in September 2023.** The assessments reviewed the organizational structure for implementing the project, including functions, staff skills and experience, adequacy for implementing the project, and the interaction between the project's staff responsible for procurement activities and the relevant documents such CAG Reports, Internal Audit Reports, Public Procurement Regulatory Agency (PPRA) audit reports and IFRs for DMDP 1. PO-RALG has a good track record and experience in implementing World Bank-financed projects. Three participating DLAs (Kinondoni, Ilala/DCC and Temeke) were involved in implementing DMDP 1 which followed previous World Bank Procurement Guidelines, while two DLAs (Kigamboni and Ubungo) have no prior experience with World Bank operations. The assessment revealed that PO-RALG and DLAs have established all the necessary systems in place for adjudicating and managing procurement activities in accordance with the provisions of the Public Procurement Act (PPA) and its Regulations.

79. **The assessment of PO-RALG and DLAs revealed that:** i) most of the DLA staff who were involved in implementing DMDP 1 have been transferred which creates the need to strengthen capacity; ii) most staff have inadequate experience in managing procurement of large and complex works, goods, and consulting works in line with the new World Bank Procurement Regulations; iii) there is inadequate skills in contract management, disputes, and claims management; iv) there is an inadequate records management system; v) there is inadequate office space and office facilities; and vi) lack of awareness and low capacity of DLAs' staff and the local construction industry in Environmental and Social requirements. Other risks identified from the PPRA Audit Reports, Internal Audit Reports and ICRs were: i) some Tender Board members and PMUs have not attended training on the PPA and its Regulations; ii) inefficiencies in processing procurement activities; iii) delays in paying vendors; and iv) frequent staff transfers.

80. **Identified risks, mitigation measures, capacity building, and action plan are agreed upon**. The residual risk after implementation of the mitigation measures is 'Moderate'. Details of the mitigation measures to address the identified risks and action plan, as well as the procurement arrangements for the project, are presented in the procurement section of Annex I.

C. Legal Operational Policies

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Area OP 7.60	No

D. Environmental and Social

81. **Risks:** The project environmental and social risk is rated High. Environmental risk is substantial. Overall, the project will improve environmental quality in Dar es Salaam, including relieving traffic congestion resulting in improved air quality, as well as reducing flooding and improving sanitation and safety. The construction of parks and open space will increase accessibility to greenspace and recreation areas. Solid waste management will improve environmental sanitation by

providing waste collection and treatment services. The project will also have a positive social impact, improving living conditions through infrastructure such as roads, drainage, markets, and community parks in unplanned settlements. Community infrastructure (e.g., markets) will also increase access to urban amenities and jobs/revenues for traders.

82. The environmental risks and impacts, although important to manage, are not sensitive as the sub-projects are located in an area which is heavily impacted by existing activities; are predictable; and could be managed with readily available measures in the project design (improved roads safety and drainage capacity) and in the ESF instruments (Environmental and Social Management Framework (ESMF), ESIAs and ESMPs). The main environmental risks and impacts include: i) potential groundwater and air pollution from landfill construction and legacy pollution from the closure of dumpsites; ii) impacts associated with proposed construction activities located in densely populated urban areas; and iii) limited environmental, health and safety (EHS) capacity.

83. ESIA for landfills will be conducted to assess alternative sites, the impacts and risks, and propose adequate mitigation measures and monitoring plans. The project will close and rehabilitate existing dumpsites which will greatly improve conditions at the site and the surrounding areas, will minimize the risk of contact of people with waste, reduce odor and the generation of wastewater and leachate. Baseline information at these sites will be collected to assess the pollution caused by the existing dumpsites and mitigate potential legacy issues from the closure, and the closed sites should minimize impacts and be revegetated to improve aesthetics. The proposed technical assistance activities under Components 3 potentially have direct or indirect environmental and social impacts. These impacts/risks will be addressed in accordance with the project ESMF, following relevant World Bank guidance notes for technical assistance .

84. The Social risk of the project is High because the project activities may give rise to: i) involuntary resettlement associated with the loss of land, livelihoods and shelter, including temporary loss of income among formal and informal businesses; ii) social disruptions from temporary loss of access, including to places that provide public services; iii) loss of livelihood for the recyclers affected by the dumpsite closure; iv) risks associated to the construction of public markets, which may disrupt neighborhood social dynamics and increase citizen insecurity and traffic congestion; v) risks related to labor and working conditions; vi) community safety risks as a result of construction activities in congested areas; and vii) risk of sexual exploitation and abuse/sexual harassment (SEA/SH) at the workplace and in areas surrounding project works, which could increase the risk of sexually transmitted infections including HIV/AIDS, hepatitis, and other communicable diseases.

85. **Environmental and Social Institutional Arrangements and Capacity.** The overall project implementation and coordination and compliance function will be under the PO-RALG PCT, which has been engaged in environmental and social risk management in urban projects in Tanzania in the past (Urban Local Government Strengthening Program – Tanzania (ULSPG), TSCP, DMDP 1) and in the current urban operations (TACTIC (P171189), Msimbazi Basin Development Project (P169425)). With the exception of the roads sub-projects, implementation of infrastructure and solid waste sub-projects under Component 1 and Component 2 will be undertaken by the five DLA PITs with oversight and coordination by PO-RALG. The Kinondoni, Temeke and Dar es Salaam City Councils have in place functional PITs with dedicated staff for environmental and social standards and M&E. They also have experience dealing with complex projects in urban settings, including informal settlement upgrading under DMDP 1. Ubungo and Kigamboni Municipal Councils do not yet have functional PITs, and have limited experience in environmental and social risk management under the ESF. Capacity building with be strengthened through the Environmental and Social Commitment Plan (ESCP) and project implementation support from the World Bank.

86. **E&S Management:** All the project activities shall be undertaken in line with the requirements of ESF and in a manner acceptable to the World Bank. Therefore, the project will comply with requirements of all the ESSs (ESS 1 – ESS 10) with exception of ESS 9 which is not considered relevant. The Borrower will also adhere to national regulatory requirements for E&S applicable to the project activities. The application and compliance with the ESF and ESSs will be mandatory to all project's participants of the project from community and DLAs level to the national level. The project has prepared tools to manage potential environmental and social risks, including an ESMF which was disclosed by the United Republic of Tanzania on October 12, 2023, and by the World Bank on October 16, 2023; and a Resettlement Process Framework (RPF), SEP and ESCP which were disclosed by both the World Bank and the PO-RALG on October 12, 2023.[58] The project will also prepare Labor Management Procedures (LMP) to manage labor related risks during implementation. Furthermore, sub-projects ESIA, RAPs and site specific Environmental and Social Management Plans (ESMPs) will be prepared prior to construction.

87. The project will prepare a livelihood restoration plan for the recyclers that may be affected by the closure of the existing dumpsites. As project activities will be implemented mostly in densely populated areas, consultations during project preparation and implementation will be required. Robust and meaningful stakeholder consultations are required to ensure that the designed sub-projects meet the needs of the community members and are located at the relevant and required areas. Therefore, the application of ESS10 stakeholder engagement and disclosure of information is part of the project and included in the Stakeholder Engagement Plan (SEP), which outlines the characteristics and interests of the relevant stakeholder groups and timing and methods of engagement throughout the life of the project. The project level GRM, a Grievance Redress Mechanism (GRM) that exists at DLAs will be enhanced. PO-RALG prepared a guidance and trained PITs safeguards personnel on handling grievances. The project will further train staff to properly recognize, report and follow up on any issues or grievances related to gender and GBV. Community level Grievance Handling Committees (GHCs) will also be re-established.

V. GRIEVANCE REDRESS SERVICES

88. **Grievance Redress**. Communities and individuals who believe they are adversely affected by a project supported by the World Bank may submit complaints to existing project-level grievance mechanisms or the World Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed to address project-related concerns. Project affected communities and individuals may submit their complaint to the World Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of World Bank non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted to the AM at any time after concerns have been brought directly to the attention of World Bank Management and after Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's Grievance Redress Service (GRS), visit http://www.worldbank.org/GRS. For information on how to submit complaints to the World Bank's Accountability Mechanism, visit https://accountability.worldbank.org.

[58] https://www.tamisemi.go.tz/announcement/dmdp-document

VI. KEY RISKS

89. **The overall risk rating for the project is Substantial.** The project benefits from the institutional arrangements and implementation experience of DMDP 1, but it is still a multi-sectoral project spanning an entire region, requiring coordination among several institutions and integrated activities that collectively and independently are important in contributing to the overall project development objective.

90. **Institutional Capacity for Implementation and Sustainability Risks (High)**. Component 2 is high risk as it relies on the creation of an intermunicipal solid waste management organization to manage, operate and maintain the built infrastructure. To mitigate this risk, advisory services and capacity building will be provided to support the reform, and its establishment will be a legal condition of disbursement of the works under component 2. Based on the lessons from DMDP 1, change of PIT staff represents a risk. As there will be the addition of the two DLAs (Ubungo and Kigamboni), strong and continuous supervision and support is required to strengthen the overall capacity of the PITs.

91. **Environment and Social Risks (High).** Social risks are high because the project may cause involuntary resettlement, socio-economic disruption and community risk. These risks will be mitigated through analysis of alternative sites to avoid resettlement, preparation and implementaion of livelihood restoration plans, and RAPs. Particular attention will be paid to the restoration of livelihoods for recyclers. Environment risks include potentially polluting activities, particulary related to constrution and the landfill sites, and limited capacity for EHS. The environmental risks can be mitigated through the project design, the ESF instruments and alternative sites analysis. Further, the institutional arrangement for implementation includes dedicated Environment and Social specialists in the PCT and PITs who will closely monitor, supervise and support the implementation of the ESMF. Further, the project design and implementation arrangements have fully mainstreamed the mechanisms for monitoring ESF risks and mitigation actions.

92. **Stakeholders' risk (High).** Project delays occurred during Phase 1 as not all stakeholders were adequately engaged. The DLAs, subproject beneficiaries and project affected people are the primary stakeholders at the local level, but given the spatial extent and multi-sectoral nature of the project, close collaboration is also required with utilities (i.e., DAWASA, Dar es Salaam Rapid Transit Agency (DART)), infrastructure providers, other donors and developers. Consultations on the sub-project designs will mitigate this risk. A SEP has been prepared and adopted by implementing agencies.

VII. RESULTS FRAMEWORK AND MONITORING

PDO Indicators by PDO Outcomes

Baseline	Closing Period
Improve urban services	
Beneficiaries with access to improved urban infrastructure designed using climate information and tools. (Number)	
Sep/2023	Jan/2030
0	3,300,000
Collected waste that is treated or disposed under sanitary conditions (Percentage)	
Sep/2023	Jan/2030
0	80
Improve institutional capacity	
Local governments in Dar es Salaam that adopt and operationalize service improvements plans (Number)	
Sep/2023	Jan/2030
0	5
Strengthen climate resilient development in the Dar es Salaam Region	
Number of beneficiaries benefiting from reduced flood risk in Dar es Salaam. (Number)	
Sep/2023	Jan/2030
0	2,455,000

Intermediate Indicators by Components

Baseline	Closing Period
Climate-Smart Priority Infrastructure	
Length of linear drainage infrastructure constructed under the project designed using climate information and tools (Kilometers)	
Sep/2023	Jan/2030
0	307
Area of parks constructed (Hectare(Ha))	
Sep/2023	Jan/2030
0	63

Female entrepreneurs working in / around public markets reporting increased sales by 15% or more (Percentage)	
Sep/2023	Jan/2030
0	70
Buildings constructed or refurbished that are energy and resource efficient. (Percentage)	
Sep/2023	Jan/2030
0	100
Roads upgraded, rehabilitated, or reconstructed under the project designed using climate information and tools. (Kilometers)	
Sep/2023	Jan/2030
0	226
Non-motorized transport infrastructure rehabilitated or constructed under the project. (Kilometers)	
Sep/2023	Jan/2030
0	219
Project roads with reduced traffic fatalities (Percentage)	
Sep/2023	Jan/2030
0	90
Length of road or pathway illuminated by solar street lights (Kilometers)	
Sep/2023	Jan/2030
0	265
Beneficiaries with access to improved transport services within 2km (Number)	
Sep/2023	Jan/2030
0	1,800,000
Flood prone area provided with drainage system under the project (Hectare(Ha))	
Sep/2023	Jan/2030
0	945
Integrated Solid Waste Management Infrastructure and Services	
Capacity for disposal of municipal waste constructed under the project (Cubic Meter(m3))	
Aug/2023	Jan/2030
0	7,000,000
Capacity for waste sorting, recycling or composting established under the project (tons per day) (Text)	
Aug/2023	Jan/2030
0	360
Area of dumpsites closed under the project (Hectare(Ha))	
Aug/2023	Jan/2030
0	45

Percentage of informal recyclers supported under the project provided livelihoods (Percentage)	
Aug/2023	Jan/2030
0	80
Strengthening Urban Institutions	
Technical staff of government and private sector trained in design skills for infrastructure and planning with climate considerations (Number)	
Aug/2023	Jan/2030
0	450
➢Female (Percentage)	
0	25
Beneficiaries that participated in consultative forums to inform sub-project design. (Number)	
Jan/2023	Jan/2030
0	450
➢Females (Percentage)	
0	40
Coverage of Emergency Communication for Dar es Salaam (Percentage)	
Sep/2023	Jan/2030
50	90
Establishment of a intermunicipal institution to manage shared solid waste services in Dar es Salaam (Text)	
Aug/2023	Jan/2026
no	yes
Complaints to citizen feedback platform for municipal services that are resolved within the agreed timeframe (Percentage)	
Aug/2023	Jan/2030
0	60
Core data collection coverage of buildings in Dar es Salaam (Percentage)	
Sep/2023	Jan/2030
0	50
Internships provided to youth undergraduates and graduates through the project (Number)	
Sep/2023	Jan/2030
0	18
➢females (Percentage)	
0	50
Infrastructure and urban plans, strategies, by-laws and standards prepared/ updated to incorporate climate information and tools. (Number)	
Sep/2023	Jan/2030
0	7

Project Management	
Months that PCT is staffed with required professionals (% of total project time period) (Percentage)	
Sep/2023	Jan/2030
0	90
Months that PITs are staffed with required professionals (% of total project time period) (Percentage)	
Sep/2023	Jan/2030
0	80
Contingency Emergency Response	
CERC Operational Manual adopted (Yes/No) (Text)	
Sep/2023	Jan/2030
No	Yes

Monitoring & Evaluation Plan: PDO Indicators by PDO Outcomes

Improve urban services	
Beneficiaries with access to improved urban infrastructure designed using climate information and tools. (Number)	
Description	Measures the total number of the people living in the subwards where DMDP 2 infrastructure subprojects (informed by climate information and tools) are implemented, or where tangible benefits from subprojects are expected. This includes the beneficiaries with proximity to the infrastructure built under Component 1 (i.e. roads, markets, parks, drains) or direct access to services as a result of Component 2 (i.e., solid waste collection). This also includes those benefiting from reduced risks, such as flooding or water shortages, as a result of the project investments.
Frequency	Bi-annual
Data source	PCT, DLAs
Methodology for Data Collection	Project monitoring reports and subward population data as primary sources. Beneficiary surveys and impact assessments as secondary sources. Census.
Responsibility for Data Collection	PO-RALG
Collected waste that is treated or disposed under sanitary conditions (Percentage)	
Description	Measures the proportion of total waste collected by the Dar es Salaam local authorities that is sorted, recycled, composted, or disposed in a sanitary landfill facility built under the project.
Frequency	Bi-annual
Data source	DLAs and intermunicipal solid waste management company
Methodology for Data Collection	Project monitoring reports and data / records from the waste company/operators (i.e., weigh station data)
Responsibility for Data Collection	PO-RALG
Improve institutional capacity	
Local governments in Dar es Salaam that adopt and operationalize service improvements plans (number)	
Description	Measures the number of Dar es Salaam local authorities that adopt and operationalise plans that enhance institutional capacity for all urban services. i.e., local government reorganization, reform of tariffs and bylaws, professional of services, digitization. Operationalise is defined as plans in the implementation phase, with adequate resources and staffing.
Frequency	Bi-annual
Data source	DLAs
Methodology for Data Collection	Project monitoring reports and surveys/ interviews with DLA staff as primary sources. Beneficiary surveys, impact assessments, citizen feedback tools as secondary sources.
Responsibility for Data Collection	PO-RALG
Strengthen climate resilient development in the Dar es Salaam Region	
Beneficiaries benefiting from reduced flood risk in Dar es Salaam. (Number)	
Description	Measures the total number of beneficiaries of flood risk mitigation works. Measures the total area protected from from flooding as a result of drainage infrastructure constructed/rehabilitated under the project.Protected is defined as being located in the catchment of box culverts and pipe culverts with a 1 in 25 year return period, and 1 in 10 year return period for line drains and sustainable urban drainage, taking account of climate models.
Frequency	Bi-annual
Data source	DLAs
Methodology for Data Collection	Project monitoring reports, updated flood /climate models and DSDP, subward population data, beneficiary surveys (i.e., data on school attendance), impact assessments, and health data (malaria and cholera cases).
Responsibility for Data Collection	PO-RALG

Monitoring & Evaluation Plan: Intermediate Results Indicators by Components

Climate-smart priority infrastructure	
Length of linear drainage infrastructure constructed under the project designed using climate information and tools (Kilometers)	
Description	Measures the combined linear length of new or rehabilitated drainage canals, storm drains, drainage pipes and culverts constructed for the purpose of flood mitigation. Drains constructed along roads are only counted for one side of the road.
Frequency	Quarterly
Data source	PCT, DLAs
Methodology for Data Collection	Project monitoring reports
Responsibility for Data Collection	PO-RALG
Area of parks constructed (ha)	
Description	Measures the total combined area of parks constructed and planted under the project. This includes area covered by trees, green landscaping and permeable surfaces.
Frequency	Quarterly
Data source	DLAs
Methodology for Data Collection	Progress reports, deatiled design drawings/as-builts.
Responsibility for Data Collection	PO-RALG
Female entrepreneurs working in / around public markets reporting increased sales by 15% or more (Percentage)	
Description	Measures the impact of the project's gender-responsive interventions in public markets (i.e., one-stop-shop pilots). Calculates the proportion of female vendors (formal and informal) working in/around public markets that use the one-stop-shop services, and who report an increase in sales by at least 15% as a result of the one-stop-shop services.
Frequency	Bi-annual
Data source	DLAs, NGOs and services providers where one-stop-shops are established
Methodology for Data Collection	Surveys in markets and registers of one-stop-shop services. Beneficiary surveys and impact assessments.
Responsibility for Data Collection	PO-RALG
Buildings constructed or refurbished that are energy and resource efficient. (Percentage)	
Description	Measures the percentage of buildings that incorporate a minimum 20 percent reduction in energy consumption from Business as Usual (BUA), using a green building standard (i.e., Edge).
Frequency	Bi-annual
Data source	DLAs
Methodology for Data Collection	DMDP 1 or similar buildings for BUA examples. Energy audit tools using EDGE (or equivalent standard).
Responsibility for Data Collection	PO-RALG
Roads upgraded, rehabilitated, or reconstructed under the project designed using climate information and tools (kilometers)	
Description	Measures the combined linear length of roads upgraded, rehabilitated, or reconstructed under the project which have been designed and constructed using climate information and tools.
Frequency	Quarterly
Data source	PCT
Methodology for Data Collection	Progress reports
Responsibility for Data Collection	PO-RALG/TARURA
Non-motorised transport infrastructure rehabilitated or constructed under the project (kilometers)	
Description	Measures the linear length of pedestrian sidewalks, bike paths and lanes provided under the project which are within the road right-of-way (ROW) (only counts one side of the road), or independent of the ROW (i.e., paths along rivers, canals, beachfront).
Frequency	Quarterly
Data source	PCT, DLAs
Methodology for Data Collection	Progress reports, Dar es Salaam Non-Motorised transport Plan
Responsibility for Data Collection	PO-RALG/TARURA
Project roads with reduced traffic fatalities (percentage)	
Description	Measures the change in the number of traffic fatalities on project roads upgraded, rehabilitated, or reconstructed under the project. This is measured as a proportion of the total trips on the roads where data is available. i.e., comparing the total deaths/total trips at the baseline year, and at the end of each year of the

	project.
Frequency	Annual
Data source	PCT, DLAs, police
Methodology for Data Collection	Progress reports, police data
Responsibility for Data Collection	PO-RALG/TARURA
Length of road or pathway illuminated by solar streetlights (Kilometers)	
Description	Measures the linear length of roads, cycle paths, footpaths, standalone pathways and public spaces, where street lights have been installed, are operational and are being maintained, to provide illumination in the street / public space after sunset. When solar streetlights are provided on both sides of a road or path, only one-side is counted. This indicator is a proxy for increased economic activity (i.e. change in trading hours) and increased security, including for vulnerable groups, such as women, youth, disabled, children, the elderly.
Frequency	Quarterly
Data source	PTC, DLA, TARURA
Methodology for Data Collection	Progress reports, impact assessment, beneficiary surveys.
Responsibility for Data Collection	PO-RALG/TARURA
Flood prone area provided with drainage system under the project (Hectare(Ha))	
Description	Measures the coverage of the impact of drainage systems constructed in flood prone areas
Frequency	Quarterly
Data source	DLAs
Methodology for Data Collection	Progress reports
Responsibility for Data Collection	PO-RALG
Beneficiaries with access to improved transport services within 2km	
Description	Measures the number of beneficiaries living within the subwards within a 2km buffer distance from transportation infrastructure built or rehabilitated under the project including roads, footpaths, cycle paths/lanes, bus stops, bus stands, pedestrian overpasses, and bridges.
Frequency	Bi-annual
Data source	PCT, DLAs
Methodology for Data Collection	Progress reports, subward population data, impact assessment, beneficiary surveys.
Responsibility for Data Collection	PO-RALG/TARURA

IIntegrated Solid Waste Management Infrastructure and Services	
Capacity for disposal of municipal waste constructed under the project: Cubic Meter (m3)	
Description	Measures the combined capacity in m3 of the landfills constructed under the project.
Frequency	Bi-annual
Data source	DCC and intermunicipal solid waste management organization
Methodology for Data Collection	Technical reports, Project quarterly progress, data from waste company/operators.
Responsibility for Data Collection	PO-RALG
Capacity for waste for sorting, recycling or composting established under the project (tons per day)	
Description	Measures the capacity of the infrastructure provided under the project to support waste soting, recyling or composting.
Frequency	Bi-annual
Data source	DCC and intermunicipal solid waste management organization
Methodology for Data Collection	Technical reports, Project quarterly progress, data from waste company/operators.
Responsibility for Data Collection	PO-RALG
Area of dumpsites closed under the project (ha)	
Description	Measures the combined land area of formal and informal dumpsites for municipal solid waste which are closed under the project, and which have adopted technology for landfill gas emission reduction, or plan to within the

	next 2 years. Also includes small and informal dumpsites which the project cleans-up.
Frequency	Bi-annual
Data source	DCC and intermunicipal solid waste management organization
Methodology for Data Collection	Technical reports, Project quarterly progress
Responsibility for Data Collection	PO-RALG
Percentage of informal recyclers supported under the project provided livelihoods	
Description	Measures the proportion of recyclers affected by the project which are formally enrolled in the livelihood support activities financed under the project, who are able to support themselves and their dependents (i.e., with a job, business, income) to the same, or better level, as a result of the livelihoods program. To be measured at 12 months following the participants departure/ graduation from the livelihoods support program supported under the project.
Frequency	Bi-annual
Data source	NGOs, DCC and intermunicipal solid waste management organization
Methodology for Data Collection	Project quarterly progress
Responsibility for Data Collection	PO-RALG
Strengthening Urban Institutions	
Technical staff of government and private sector trained in design skills for infrastructure and planning with climate considerations (number) (minimum percentage female = 25%)	
Description	Measures the number of technical staff (i.e., engineers, architects, surveyors, urban planners, landscape architects or similar) from the DLAs, ministries and private sector (contractors and consultants) who are provided technical training under the project to support the climate ambitions of the project. The sub-indicator requiring 25% of the technical experts to be trained to be female is based on an average of the current status for engineering, architecture and urban planning in Tanzania ie., 12% of registered engineers, 27% of the Board of Tanzanian Town Planners, and 35% of the Architects Association Board are female.
Frequency	Bi-annual
Data source	DLAs and PO-RALG
Methodology for Data Collection	Gender disagregated records and sign-in sheets from trainings. Impact assessments, beneficary surveys.
Responsibility for Data Collection	**PO-RALG**
Beneficiaries that participated in consultative forums to inform sub-project design	
Description	Measures the number of male and female beneficiaries (including from marginalized and vulnerable groups) who participate in consultative forums under the project, and who provide input to the design of the sub-projects (i.e., parks, markets, area-based initiatives, drop kerbs and crossings for universal access). At least 40% of the participants in the consultative forums shall be female.
Frequency	Bi-annual
Data source	DLAs
Methodology for Data Collection	Gender disagregated records and sign-in sheets from workshops and community meetings, also listing organization and representation if applicable. Surveys with male and female participants.
Responsibility for Data Collection	PO-RALG
Coverage of Emergency Communication for Dar es Salaam (percentage)	
Description	Measures the increase of coverage of emergency communication systems to provide alerts and critical information in the event of a climate, natural or human induced disaster or health emergency in the Dar es Salaam region.
Frequency	Bi-annual
Data source	DARMAERT and DLAs
Methodology for Data Collection	Technical reports
Responsibility for Data Collection	PO-RALG
Establishment of a intermunicipal institution to manage shared solid waste services in Dar es Salaam	
Description	Measures the establishment of the intermunicipal institution to manage shared solid waste management services for the five DLAs. Established is defined as legal/formal set up of the institution/public company, with demonstration of budget allocation and basic staffing.
Frequency	Bi-annual

Data source	DLAs and technical working group on solid waste management
Methodology for Data Collection	Legal documentation for formation of public company/ institution and evidence of staffing/financing.
Responsibility for Data Collection	PO-RALG
Complaints to citizen feedback platform for municipal services that are resolved within the agreed timeframe (percentage)	
Description	The citizen feedback platform for municipal services is a user-centric digital platform to serve as an interface with the public, allowing citizens to make complaints regarding municipal services (i.e., uncollected solid waste in the street, blocked drains, vandalism in parks, broken streetlights). This indicator measures how the data collected from the digital platform is used to take action to improve the municipal service (i.e., close the feedback loop). This indicator measures the percentage of the complaints received which are resolved within a stipulated timeframe (i.e., the waste is cleared from the street, the drain is unblocked within 30 days).
Frequency	Quarterly once platform is operational.
Data source	DLAs
Methodology for Data Collection	Collected digitially from the platform
Responsibility for Data Collection	PO-RALG
Core data collection coverage of buildings in Dar es Salaam (percentage)	
Description	Measures core data collection for at least 50% of buildings in the Dar es Salaam region as a key data input to the TAUSI (or updated system) to record eligible taxpayers, including for property tax collection. The core data collection is intended to focus on areas benefiting from the DMDP 1 and 2 subprojects, and other planned, regularized and mid-high income areas of Dar es Salaam.
Frequency	Bi-annual
Data source	DLAs and PO-RALG
Methodology for Data Collection	Core data collection system and buildings surveys/ census data
Responsibility for Data Collection	PO-RALG
Internships provided to youth undergraduates and graduates through the project (Number)	
Description	Measures the number of paid internships provided under the project to build capacity of Tanzanian youth graduates and undergraduates in the disciplines of engineering, architecture, urban planning, surveying or similar, on design skills for infrastructure and planning with climate change considerations (i.e., NBS, low carbon alterative infrastructure). The internship program shall be a minimum of three (3) months fulltime duration. Youth in Tanzania is up to 35 years of age.
Frequency	Annual
Data source	DLAs, firms, contractors, national professional bodies and universities.
Methodology for Data Collection	Project quarterly progress, and reports from national professional bodies and universities, beneficary surveys
Responsibility for Data Collection	PO-RALG
Infrastructure and urban plans, strategies, by-laws and standards prepared/ updated to incorporate climate information and tools. (Number)	
Description	Measures the number of official/regulatory documents prepared under the project that incorporate climate information and tools and/or promote low carbon buildings, infrastructure, urban form, asset management, O&M practices , and incorporate climate adaptation measures.
Frequency	Bi-annual
Data source	DLAs, TARURA, DART, PO-RALG
Methodology for Data Collection	Project monitoring reports
Responsibility for Data Collection	PO-RALG
Project Management	
Months that PCT is staffed with required professionals (% of total project time period)	
Description	Measures the proportion of total months that the PCT has in place the staff for the required positions as outlined in the project implementation manual (PIM).
Frequency	Quarterly
Data source	PO-RALG/TARURA
Methodology for Data Collection	Project monitoring reports
Responsibility for Data Collection	PO-RALG
Months that PITs are staffed with required professionals (% of total project time period)	
Description	Measures the proportion of total months that the PIT has in place the staff for the required positions as

	outlined in the project implementation manual (PIM).
Frequency	Quarterly
Data source	DLAs
Methodology for Data Collection	Project monitoring reports
Responsibility for Data Collection	PO-RALG
Contingency Emergency Response	
CERC Operational Manual adopted (Yes/No)	
Description	Documents the completion and adoption of the CERC operational manual as per Bank requirements.
Frequency	Quarterly
Data source	PO-RALG and DLAs
Methodology for Data Collection	Description
Responsibility for Data Collection	PO-RALG

ANNEX I: Implementation Arrangements and Support Plan

A. Project Implementation Arrangements

1. **Implementing agencies.** The same implementing agency arrangements that worked well under DMDP and TACTIC project will be maintained. The main implementing agency is PO-RALG which will establish a PCT. The non-road and non-drainage subproject investments will be managed and implemented by the DLAs through the PITs. The responsibilities include sub-projects procurement, contract management, environment and social management, resettlement, M&E, and project reporting to PO-RALG. The PCT will perform these functions for the road and drainage sub-projects. PO-RALG has demonstrated its ability to effectively capacitate, coordinate and supervise DLAs, although strengthening E&S and M&E will be required. TARURA, under PO-RALG, will also provide technical support to the PCT on the road investments. A Project Steering Committee (PSC), to be chaired by the Permanent Secretary, PO-RALG will be established three months after effectiveness. It will include representatives from PO-RALG; Ministry of Finance; Ministry of Works and Transport-Works; Ministry of Works and Transport-Transport; Ministry of Lands, Housing and Human Settlements Development; Ministry of Water; Ministry of Energy; Vice President's Office responsible for Union and Environment; and TARURA. The PSC will provide policy guidance and high-level oversight in the carrying out of the project.

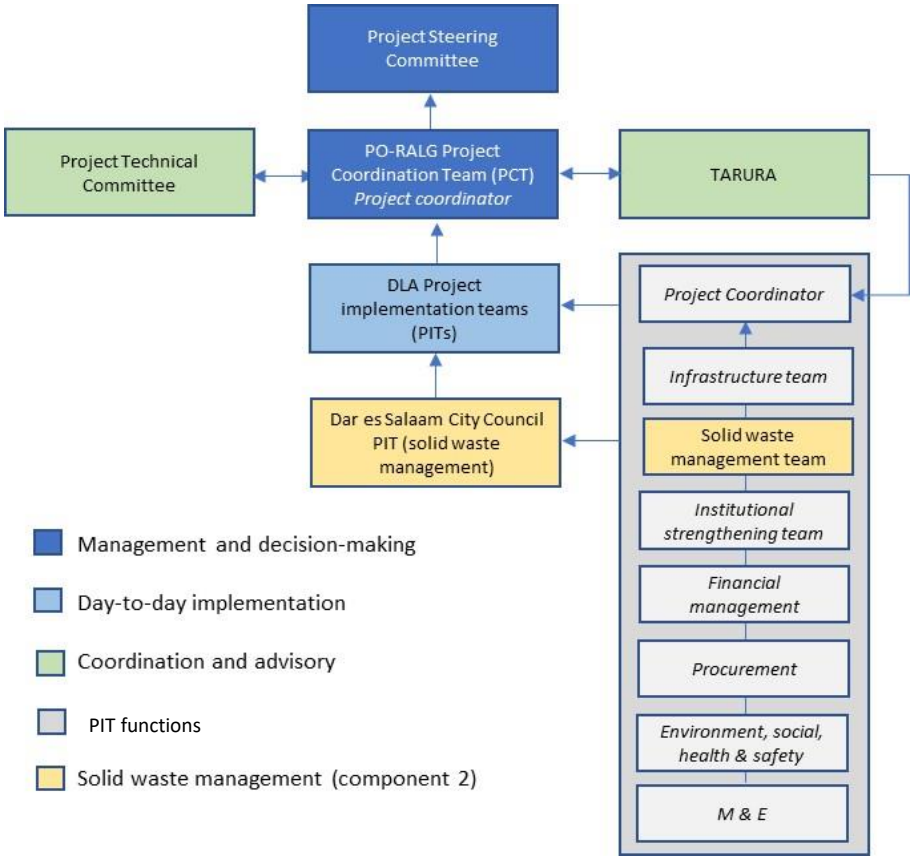
2. **Project Coordination Team (PCT).** The PO-RALG PCT will be responsible for overall project management, M&E, E&S oversight, coordination and receipt of funds, and supervision of the DLAs who will implement the works (See Figure 1.2 below). The PCT will be responsible for implementing the roads and drainage sub-projects, including all E&S and contractual requirements. The PCT will also provide overall technical oversight for all non-road municipal facilities (i.e., drains, markets, open space) and functions (i.e., accountability and oversight, financial management, procurement, OSR) that are currently under the mandate of local government authorities. PO-RALG will provide quality assurance, fiduciary support responsibilities for the project, although TARURA will be responsible for quality assurance and fiduciary duties relating to road investments under Component 1. TARURA will also ensure the application of appropriate technical standards for road activities, provide technical support, and coordinate the O&M of the roads from its own funds in line with its mandate. The project will include dedicated quality assurance and technical support consultants (with international and previous World Bank Project experience) to PO-RALG and TARURA for top-level support to ensure E&S management and works are carried out to high standards and on schedule. A PIM will be prepared by PO-RALG in collaboration with TARURA to guide its implementation as a condition of effectiveness.

3. **Project Implementation Teams (PITs).** The DLAs will have to establish PITs and will be responsible for implementation of the non-road and non-drainage sub-projects. Three out of the five of the DLAs were part of the DMDP project and two additional DLAs (Kigamboni and Ubungo) will be added. The requirements for staffing and capacity for the PIT will be a condition for participation of each of the DLAs in the project and they will be required to maintain them throughout implementation. Implementation support will be provided by the consultants and the PO-RALG PCT with a focus on maintaining and building capacity for the staff and PITs functioning throughout implementation. The composition of the PITs will include expertise in technical urban infrastructure (including civil engineers, transport planners, architects), urban management expertise (including urban planning and design, municipal finance), and project management unit expertise in fiduciary, environmental and social management that includes gender, community relations and grievance management, technical supervision, communications, and monitoring and evaluation.

4. **An intermunicipal solid waste institution will also be established as part of the project.** A public company has been identified, with broad consensus, as the appropriate institutional structure to oversee Dar es Salaam's solid waste system

and manage the facilities constructed under the project. The public company would be owned and governed by the five DLAs with a mandate to manage the shared facilities (transfer stations, recycling and composting and landfill facilities) and provide standards and Dar es Salaam wide planning coordination for the DLA executed services (collection and cleaning in respective jurisdiction). The solid waste investments will be implemented under the project by PO-RALG through the PIT of Dar es Salaam City Council and once completed the assets will be transferred to the public company for operation. A private sector operational contract will be put in place under the public to manage the day-to-day operation of the facility.

Figure 1.2 Implementation Arrangements



B. Procurement Risk Assessment and Arrangements

5. **Project Procurement Strategy for Development and Procurement Plan.** According to the requirement of the Procurement Regulations, PO-RALG and DLAs prepared a PPSD. Based on the PPSD a PP for at least the first 18 months of project implementation has been developed by each implementing agency. The PPSD market assessment concluded that there is an adequate number of roads construction firms (local and foreign) that are likely to bid for the envisaged road and building construction works. Similarly, for design and supervision works, the market analysis revealed that there is a large pool of consulting firms (local and foreign) who are likely to participate in the selection process for the consulting services opportunities. Based on the market assessment, the PPSD identified optimum procurement strategies to meet

the development objectives of the project and setting the selection methods to be used in the procurement of goods, works, non-consulting services, and consulting services. The initial Procurement Plan (PP) will be disclosed on the World Bank's external website. The PPs will be updated in agreement with the World Bank annually or as required to reflect the project's actual implementation needs.

6. **Systematic Tracking of Exchanges in Procurement (STEP) and National e-Procurement System of Tanzania (NeST):** The World Bank's STEP system will be used to prepare, clear, and update PPs and conduct all procurement transactions of the project. The PPRA has established a system (NeST) which has replaced the Tanzania National e-Procurement System (TANePS). The World Bank assessed the NeST and certified the system to be used in the World Bank projects in three phases. Thus, procurement activities under the project will use both STEP and NeST in processing procurement activities as agreed.

7. **Procurement Documents:** The World Bank's standard procurement documents (SPDs) shall be used for procurement of goods, works, and non-consulting services under the Open International Competitive Procurement approach. Similarly, selection of consultant firms shall use the World Bank's SPDs, in line with procedures described in the Procurement Regulations. While approaching the national market using National Procurement Procedures (NPP), the national standard bidding documents may be used with appropriate modifications acceptable to the World Bank and additional annexes to incorporate the World Bank's Anti-Corruption Guidelines, universal eligibility, and the World Bank's right to inspection and audit. Procurement procedures shall be consistent with the World Bank's Core Procurement Principles and contractual remedies set out in its Legal Agreement apply.

8. **National Procurement Procedures (NPP):** National Open Competitive Procurement (NOCP) procedures may be used when approaching the national market. The requirements for NOCP include the following: i) there is open advertising of the procurement opportunity at the national level; ii) the procurement is open to eligible firms from any country; iii) the request for bids/request for proposals document shall require that Bidders/Proposers submitting Bids/Proposals present a signed acceptance at the time of bidding, to be incorporated in any resulting contracts, confirming application of, and compliance with, the World Bank's Anti-Corruption Guidelines, including without limitation the World Bank's right to sanction and the World Bank's inspection and audit rights; iv) procurement documents include provisions, as agreed with the World Bank, intended to adequately mitigate against environmental, social (including SEA and GBV), health, and safety (ESHS) risks and impacts; v) contracts have an appropriate allocation of responsibilities, risks, and liabilities; vi) contract award information is published; vii) the World Bank has rights to review procurement documentation and activities; viii) there is an effective complaints handling mechanism and records of the procurement process are maintained. Standard bidding documents based on Tanzania's PPA and its Regulations, with required adjustments as required and cleared by the World Bank, will be used for NOCP. The internal auditors may use the World Bank's SPDs for NOCP.

9. Other procurement arrangements (other than NOCP), that may be applied by the Borrower (such as limited/restricted competitive bidding, request for quotations/shopping, direct selection), shall be consistent with the World Bank's Core Procurement Principles and ensure that the World Bank's Anti-Corruption Guidelines and Sanctions Framework and contractual remedies set out in its Legal Agreement apply. In all cases, the national procurement procedures to be used shall give due attention to quality aspects.

10. **Publication (advertising).** The borrower is required to prepare and submit to the World Bank a General Procurement Notice. The World Bank will arrange for its publication in United Nations Development Business online (UNDB online) and on the World Bank's external website. Specific Procurement Notices for all procurements under International Competitive Procedures and Requests for Expressions of Interest for all consulting services estimated to equivalent to US$300,000 and above shall be published in UNDB online and the World Bank's external website and at least one newspaper of national circulation in the borrower's country or in the official gazette or on a widely used website or electronic portal with free national and international access.

11. **Public procurement in Tanzania is governed by the Tanzanian Public Procurement Act (PPA), Cap 410 (as amended) and the Public Procurement Regulations, 2013 GN No. 446 of 2013 (as amended in 2016).** Under the Act, procurement functions are decentralized to procuring entities, with the PPRA continuing to provide oversight functions for public procurement. In addition, the act has definitions of fraud and corruption regarding coercive practices, collusive practices, and obstructive practices. The act has however introduced, among others, i) mandatory inclusion of local firms and experts in consultancy contracts; ii) domestic preference to both international and national competitive bidding; iii) a requirement to set aside contracts to be used for capacity building of local firms; iv) a requirement to set aside contracts below a set threshold to be awarded to local firms only; v) negotiations with the lowest evaluated bidder to reduce price in the case of goods, works, and non-consulting services; vi) fixed budget method for goods, works, and non-consulting services; and vii) established and approved procurement standards by the Government.

12. **The Act, PPA, Cap 410 has been reviewed by the World Bank and found to be satisfactory to a large extent, except for the following provisions:** i) there will be no preference accorded to domestic suppliers and contractors under National Competitive Bidding for goods, non-consulting services, and works; ii) there should be no mandatory requirements for inclusion of local experts and firms for the consulting assignments; iii) negotiations with the lowest evaluated bidder to reduce price in the case of goods, works, and non-consulting services where competitive methods have been used, shall not be allowed; iv) the fixed budget method shall not be used for goods, works, and non-consulting services; and v) procurement standards established and approved by URT may be used, provided that they are not restrictive. Furthermore, in accordance with paragraph 5.4 of the Procurement Regulations, the following shall be observed: i) the request for bids/request for proposals document shall require that bidders/proposers submitting bids/proposals present a signed acceptance at the time of bidding, to be incorporated in any resulting contracts, confirming application of, and compliance with the World Bank's Anti-Corruption Guidelines, including without limitation to the World Bank's right to sanction and the World Bank's inspection and audit rights and ii) rights for the World Bank to review the borrower's procurement documentation and activities.

13. **Procurement implementation arrangements:** The overall project implementation and coordination function will be undertaken by PO-RALG with technical coordination support from TARURA. The project will use the same arrangements with the single PCT at the PO-RALG across all urban projects in the mainland. The PCT at PO-RALG will be responsible for managing all procurement activities which are cross-cutting and those related to roads and drainage. It will also provide procurement support and build capacity for the participating DLAs. In addition, the PCT at PO-RALG will be responsible for: i) preparing and updating PPSD and PP; ii) providing technical and backstopping support to DLAs at critical stages in the procurement process including contract management; iii) reviewing procurement documents/reports from DLAs for submission to the World Bank for No Objection; iv) consolidating procurement reports for submission to the World Bank; and v) procuring on behalf of DLAs for cross-cutting activities to achieve economies of scale, including goods and consulting

services. Cross-cutting activities/items will include: i) cross-cutting training and capacity building activities; ii) the Mid-Term Review and impact assessment; and iii) any goods or equipment common to most of the participating DLAs.

14. **PO-RALG will also coordinate all non-road municipal facilities** (i.e., drains, markets, open space) and functions (i.e., urban planning, accountability and oversight, financial management, procurement, OSR) that are currently under the mandate of local government authorities. TARURA will ensure the application of appropriate technical standards for road activities and coordinate the O&M of the roads from its own funds in line with its mandate. The DLAs will be responsible for managing procurement actvities and contract management of the sub-projects under its' mandates (excluding roads and drainage). Each DLA will establish a full time PITs staffed with dedicated team of officers including procurement officers.

15. **Capacity Strengthening and Mitigation of the risks identified**, the procurement capacity of PO-RALG and DLAs needs to be strengthened. To ensure sustainability, PO-RALG and DLAs will prepare a capacity-building program for the PMUs, tender boards and technical departments' staff involved in contract management and supervision of works, which will articulate areas to be strengthened, capacity strengthening activities to be undertaken, and the duration of each activity. To strengthen PCT at the PO-RALG to effectively discharge its function, PO-RALG will recruit Project Management Consultant to provide technical assistance to DLAs to manage project activities. Furthermore, PO-RALG should second more Procurement Officers at PCT as part of the capacity building and succession planning.

16. **The overall project residual procurement risk was assessed** "Moderate" in view of the mitigation measures proposed in Table 1.

Table 1.1: Project procurement risks and mitigation measures

Risk	Mitigation Measure	Time Frame	Responsibility
DLAs staff have inadequate experience in managing procurement of and large complex works, goods, and consulting works, in accordance with World Bank procurement regulations and procedures.	Provide training on the World Bank Procurement Regulations and Procedures. Standardize procurement practices across the DLAs in terms of planning, bidding documents, bids evaluation, and contract management.	Throughout project implementation	PO-RALG and DLAs
Inadequate skills and knowledge in contract management, disputes, and claims management	Conduct trainings tailored for contract management, disputes, and claims management for the PMU and technical departments' staff.	Throughout project implementation	PO-RALG and DLAs
Inefficiencies in processing, approving, and managing procurement activities	Ensure procurements are processed as per the timelines in the procurement plans, including timely, Tender Board approvals, preparation of Terms of References and specifications by user and technical departments	Throughout project implementation	PO-RALG and DLAs
Inadequate storage and record management system	Establish a sound filing and records management system.	Throughout project implementation	PO-RALG and DLAs

Risk	Mitigation Measure	Time Frame	Responsibility
Lack of awareness and low capacity of the PO-RALG/DLAs staff and local construction industry to comply with ES requirements	Create awareness and conduct a training on ES for the project staff, potential contractors, and consulting firms. Further, contracts should have adequate provisions of ES requirements and effective contract management.	Throughout project implementation	PO-RALG and DLAs
Delays in paying contractors, consultants, and suppliers on time per the terms of the contracts.	Ministry of Finance (MoF) to expedite approving processes to ensure funds are released to be timely to the projects.	Throughout project implementation	MoF, PO-RALG and DLAs

17. **Procurement oversight and monitoring arrangements**. The World Bank exercises its procurement oversight through a risk-based approach comprising prior and post reviews as appropriate. The World Bank sets mandatory thresholds for prior review based on the procurement risk rating of the project. The requirement for a prior or post review shall be specified in the PP. The World Bank will carry out post reviews of procurement activities undertaken by the borrower to determine whether they comply with the requirements of the Legal Agreement. The World Bank may also use the services of the PPRA for carrying out post reviews for the project.

18. **Frequency of procurement supervision.** In addition to the prior review supervision to be carried out by the World Bank offices, the capacity assessment of the internal audit recommends one implementation support mission every six months to visit the field to carry out post review of procurement actions.

19. **Training and workshops.** The project will finance training and workshops, if required, based on an annual training/workshop plan and budget, which shall be submitted to the World Bank for its prior review and approval. The annual training/workshop plan will identify, among other things, i) the training/workshop envisaged; ii) the justification for the training/workshop; iii) the personnel to be trained, including staff in regional offices; iv) the duration for such training/workshop; and v) the estimated cost of the training/workshop. At the time of the actual training/workshop, the request shall be submitted to the World Bank for review and approval. Upon completion of the training/workshop, the trainees shall be required to prepare and submit a report on the training received.

C. Financial Management Risk Assessment and Arrangements

20. The World Bank conducted a financial management (FM) assessment of the PO-RALG PCT in September 2023 with regard to the project. The objective of the assessment was to determine: i) whether both entities have adequate financial management arrangements to ensure that project funds will be used for purposes intended, in an efficient and economical way; ii) project financial reports will be prepared in an accurate, reliable, and timely manner; and iii) the project assets will be safeguarded.

21. The FM review focused on the strength and use of PO-RALG PCT's financial management arrangements which were assessed as effective. There is a vastly experienced Project Accounting team at PO-RALG (and an effective Internal Audit Department that audits the World Bank projects on semi-annual basis as well as a properly constituted Audit Committee

that actively provides the relevant oversight. The residual FM risk is **Moderate** upon successful implementation of mitigation actions shown in the table below. This will be re-assessed during implementation.

Table 1.2: Risks and Mitigation Measures (PCT at PO-RALG)

Type of Risk	*Description of risk*	*Risk Mitigating Measures Risk*	*Residual Risk Rating*
Inherent Risk:			
Country Level	Despite the ongoing PFM reforms, key challenges remain in improving revenue forecasting and management; budgeting planning, execution, and monitoring; public procurement; accounting; internal controls and internal audit; as well as external audit and oversight.	The implementation of on ongoing core reforms under the Public Financial Management Reform Project (PFMRP; and NORAD) continues to strength PFM systems; Strengthening the Internal Audit function at both at the Central and DLA levels.	M
Entity Level	There may be a risk that implementing entities will face interference from the parent ministry in implementing the project and carrying out its duties.	The PO-RALG PCT has effectively managed and implemented World Bank financed projects.	**M**
Project Level	The risk of failure of the project to achieve the intended objectives.	PCT is well experienced in managing World Bank funded projects and the World Bank team also is dedicated to help guide the team towards successful implementation of the project.	**M**
Overall Inherent Risk			**M**
Control Risk:			
Budgeting	No material weaknesses noted in budget arrangements.	PCT has experience in preparing budgets and annual work plans	**L**
Accounting	Failure of the accounting team to deliver quality and timely reports due to increase in number of projects.	Experienced accountants available; Regular capacity building training to be undertaken during supervision missions.	**M**
Internal Control	There may be delays in submission of the quarterly/semi-annual and annual internal and external audit reports.	Regular capacity building training of internal auditors and inclusion in the project work plan.	**M**

		Timely implementation of recommendations of the internal audit reports to improve controls.	
Funds Flow	Delays in submission of IFRs and Withdrawal Application could affect disbursement of funds.	Implementation support and regular capacity building training of the accounting team	**L**
Financial Reporting	Risk of delay in submission of quarterly IFRs and annual financial statements as the PCT still use error prone Xcel software in preparation of financial reports	PCT expected to start using MUSE for financial reporting among other uses. Fiduciary training and continuous capacity building interventions.	**S**
Auditing	There may be delays in submission of the annual external audit reports	Early preparation and submission of draft financial statement to the CAG.	**M**
Overall Control Risk			**M**
Overall Risk Rating			**M**

Risk ratings: H – High, **S -** Substantial, M – Moderate, L – Low

22. **Budgeting arrangements**. Preparation of the Annual Work Plans and Budgets (AWPB) is participatory and based on the Medium-Term Expenditure Framework (MTEF). Budgets are approved before the new financial year begins and are monitored during project implementation using unaudited interim financial reports and quarterly physical progress report. The PCT is staffed with competent persons to carry out the preparation, review and consolidation of the annual work program and budget. The budget arrangements are assessed as adequate subject to effective functioning of the board.

23. **Accounting arrangements**. The PCT is required to maintain adequate financial records in accordance with accepted international accounting standards and practices and in accordance with Public Financial Act 2004 and its guidelines. The project shall maintain adequate financial records in accordance with accepted international accounting standards and practices as laid out in the Financial Regulations. The regulations describe the accounting system, policies, and procedures (i.e., the accounting records, supporting documents, computer files, chart of accounts; the accounting processes from the initiation of a transaction to its inclusion in the financial statements; authorization procedures for transactions; the financial reporting process used to prepare the financial statements). PO-RALG is implementing MUSE for financial management activities in all World Bank funded projects. These arrangements are sufficient to the World Bank.

24. **Staffing arrangements**. The experienced DLAs that implemented DMDP 1 have maintained the capacity and kept the trained accountants for this second project under the SoP**.** The PCT has seven accounting staff and have assigned two accountants to the project. The accountants are adequately qualified to look after and support the project. The existing

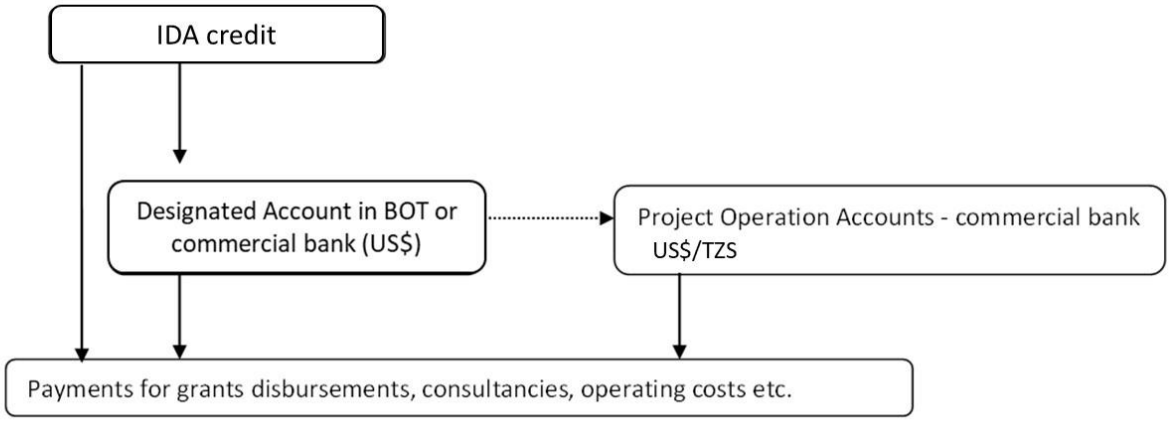
team consists of professionally qualified and experienced staff who have been working for other IDA projects. The two new DLAs, Ubungo and Kigamboni have each assigned two accountants who also have experience working on IDA projects. Training on FM and disbursement procedures is recommended for all accountants dedicated to the project, internal auditors, component coordinators and the overall PCT/PIT management as part of preparation of the project. This will benefit not only the new team members but also act as a refresher to the those who have done this before. The staffing arrangements are assessed as adequate.

25. **Internal controls**. Internal control system of the PCT is assessed as satisfactory with adequate segregation of duties, accounting and arithmetic controls, approval and authorization and other controls. The internal control systems are documented in a comprehensive in the Public Finances Act and the FM Procedures Manual which are sufficient.

26. **Internal audit**. The PCT will be audited by the PO-RALG/TARURA internal audit unit that has 31 staff (5 at the HQ and 26 in regional offices) of which 5 are qualified CPAs and 7 have master's degrees. These are well experienced and adequately qualified with all having a minimum of bachelor's degrees in accounting/financial management. The internal audit units use risk-based audit approach to carry out their work. They prepare annual audit strategy and work-plan and get the same approved by the Ministerial Advisory Board that oversees PO-RALG and TARURA's operations. Internal audit manuals are in place to guide the work of internal auditors. Some of the accountants and internal auditors have attended a training on the World Bank's Financial Management and Disbursement procedures and it is recommended that the rest also attend the training. There is a need to continually build the capacity of the internal audit function to enable them carry out the full range of internal audit functions. All implementing DLAs have suitably acceptable internal audit units and functional audit committees as established in accordance with the national laws. These units can provide value addition in project management, risks identification and mitigation strategies. Special tailor-made trainings will be recommended for the internal auditors to expand their knowledge so that they continually improve, not just for project activities, but for their respective organizations and URT in general.

27. **Funds flow arrangements.** PO-RALG shall have to open and maintain two sets of bank accounts: i) a US$ Designated Account (DA); and ii) US Dollars/Tanzania Shilling (TZS) project accounts for the purposes of smoothly implementing the project activities. The DA will be opened at the BOT while the project accounts will be opened and maintained at a commercial bank acceptable to the World Bank. Transfers from IDA credit will be made into the Designated Account based on application for withdrawal of funds. The DA can be used to make US dollars' payments. Transfers will also be made from the DA to the US$/TZS project accounts for convenience to settle project financial obligations. The project will use the IFR disbursement approach and can also take advantage of other disbursement methods such as the direct payment, letters of commitment and reimbursement. The DA and project accounts will be opened after the signing of the project but before it becomes effective. Details of the disbursement and banking arrangements will be captured in the Disbursement Letter (DL) which forms part of the Financing Agreement.

Figure 1.3 Flow of Funds Arrangement



28. **Financial reporting arrangements**. Quarterly Interim Financial Reports (IFRs) will be prepared at the end of each quarter and submitted to the World Bank not later than 45 days after the end of the quarter. The format and content of the IFRs will be agreed. The IFRs will include Sources and Uses of Funds Statement, Uses of Funds by Project Activity/Component and a Designated Account Activity Statement.

29. The annual financial statements would be prepared in accordance with International Public-Sector Accounting Standards (IPSAS). The IDA Financing Agreement will require the submission of audited financial statements to the World Bank within six months after the financial year end. The standard format that has already been agreed with Government shall be used for the project and will be communicated to the project team. A short training shall be conducted together with coaching during project implementation.

30. **External auditing arrangements.** The Offices of the Controller and Auditor General of Tanzania has the primary responsibility for auditing of all government entities and projects. In some cases, at the discretion of the CAG, the audit may be subcontracted to a firm of private auditors, with the final report being issued by the Auditor General, based on the tests carried out by the subcontracted firm. In case the audit is subcontracted to a firm of private auditors, IDA funding may be used to pay the cost of the audit. The audits are done in accordance with International Standards on Auditing. The external audit TOR have been agreed with URT. The project audit report together with the management letter will be submitted to the World Bank not later than six months after the end of the financial year. The project is required to make public disclosure the audited financial statements in a manner acceptable to the World Bank.

31. **Governance and anticorruption (GAC) arrangements**. The use of hotlines to report corruption and other forms of fraudulent activities is proposed given that they are not in use currently. There is also need for PO-RALG and the DLAs to strengthen the current arrangements of the Integrity and Complaints/Grievances Handling Committees which are meant to handle complaints.

32. **Financial Management Action Plan.** The action plan below indicates the actions to be taken for the project to strengthen its financial management system and the due completion dates.

Table 1.3: Financial Management Action Plan

SN	ACTION	DATE	RESPONSIBLE	NEXT STEPS
1.	Open a designated (DA) and project accounts (PA) and communicate the details of the bank account and signatories to IDA.	By effectiveness	PO-RALG	Understand the requirements from the MoF.
2.	Inform the CAG's Office of the signing of the project for their inclusion in the annual audit program	Immediately after signing of the Legal Documents	PO-RALG	N/A
3.	Training the Accounting; component coordinators; payment approvers and Internal Audit staff on World Bank FM guidelines and Disbursement Procedures. Training the internal audit teams for HQ and DLAs on risk-based auditing, project, and contract management; risk and fraud management.	By effectiveness Continuous	World Bank Project Implementing Unit	Planning the training session. Identifying the Institutions that provide each training and start planning.

33. **Effectiveness conditions and financial covenants.** There are no FM effectiveness conditions. Financial covenants are the standard ones as stated in the Financing Agreement on Financial Management, Financial Reports and Audits and the General Conditions.

34. **Supervision plan**. The FM Specialist will hand-hold the clients finance/accounting team during the first 6 months to ensure that capacity is well enhanced. Thereafter, supervision missions will be conducted twice per year based on the risk assessment of the project. The mission's objectives will include ensuring that strong financial management systems are maintained for the project throughout its life. Reviews will be carried out regularly to ensure that expenditures incurred by the project remain eligible for IDA funding. The Implementation Status and Result Report will include a financial management rating for the components. This will be produced by the World Bank Country Office Financial Management Specialist after an appropriate review.

ANNEX II: Project Contributions to Climate Change Mitigation and Adaptation

Risk, Exposure and Vulnerability

1. **Tanzania is highly vulnerable to climate change impacts and has low readiness to handle these impacts, ranking 145 out of 185 according to the ND Gain index.**[59] Seventy percent of all natural disasters in Tanzania are linked to floods or droughts[60] and climate change projections indicate a high likelihood of increased heavy rainfall, increased droughts and heat waves.[61] The ability of Tanzanian cities to adapt, mitigate, and learn from acute shocks and chronic stresses resulting from climate change is critical, as is the ability to prepare for and respond to rapid urban growth, which work in tandem to increase vulnerability of the population and urban assets. Flooding is the most serious natural hazard, which severely impacts major cities. Furthermore, mean sea level in coastal areas has increased by 150mm from 2000 to 2018, which, combined with increases in rainfall and stronger storms, poses major risks to the coastal population through storm surges and coastal flooding. Mean temperatures in East Africa have risen by between 0.7°C and 1°C between 1973 and 2015.[62] Temperatures for Tanzania are projected to increase by between 1.4 and 3.6 by 2080 above pre-industrial levels.[63] Urban heat is a growing concern for public health because even if global temperature increases are capped at a 1.5°C above pre-industrial levels, during their lives East African children born in 2020 will experience a three to five-fold increase in heat waves compared to people born in 1960. This heat is expected to be lethal causing an extra 50 heat related deaths per 100,000 population, and potentially hundreds of thousands of additional cases of mosquito-borne diseases and diarrhea each year.[64]

2. Dar es Salaam is vulnerable to flooding and urban heat and struggles with water availability. Dar es Salaam is acutely affected by three drivers of recurring floods - sea level rise, river overflows, and heavy rains. Exposure is widespread- at least 39 percent of Dar es Salaam's population, or 2 million people, have been impacted either directly or indirectly by floods[65, 66.] Dar es Salaam also experienced prolonged dry spells in 2021 and 2022, resulting in reduction in the water available from the upstream rivers used by the public water utility (DAWASA) and the concomitant rationing of water. Shallow ground water which is depleted and suffering from salt-water intrusion was at the time exploited as a means of adapting to the shortage.[67] While Dar es Salaam's coastal location brings a cooling effect, surface temperatures

[59] ND Gain index: https://gain.nd.edu/our-work/country-index/rankings/
[60] Tanzania Climate Action Report (2015).
[61] Trisos, C.H., et al. (2022) Africa. In: Climate Change 2022: Impacts, Adaptation and Vulnerability.
[62] Ibid
[63] Potsdam Institute for Climate Impact Research (PIK). Undated. Climate Risk Profile: Tanzania. https://www.pik-potsdam.de/en/institute/departments/climate-resilience/projects/project-pages/agrica/giz_climate-risk-profile-tanzania_en_final
[64] Trisos, C.H., et al. (2022) Africa. In: Climate Change 2022: Impacts, Adaptation and Vulnerability.
[65] Erman, A., Obolensky, M., & Hallegatte, S. (2019). Wading out the storm: The role of poverty in exposure, vulnerability, and resilience to floods in Dar Es Salaam. World Bank.
[66] Flood modelling has shown that flooding will become more common and more severe because of both urbanization and climate change World Bank, Flood risk assessment and scenarios dashboard for Dar es Salaam and Zanzibar city, Deltares, 2021.
[67] The shallow groundwater aquifer is the source of water typically used by those do not have access to the DAWASA water supply either due to lack of access or due to water shortages. In 2013 it was estimated that 10,000 boreholes were drilled into this aquifer and measurements indicate that the area within 2 km is suffering from saline intrusion. Mtoni Y, Mjemah IC, Bakundukize C, Van Camp M, Martens K, and Walraven K (2013) "Saltwater intrusion and nitrate pollution in the coastal aquifer of Dar Es Salaam, Tanzania;" Sappa G, Luciani G "Sensitivity of Dar es Salaam Coastal Aquifer to Climate Change with regard to Seawater Intrusion and Groundwater Availability" ACC-DAR project

in the urban area more than 5°C warmer than in surrounding landscapes.[68] Heat stress is worst across the city between December and February[69].

3. **Climate Change is increasing these vulnerabilities:** Climate change is projected to increase the amount and volatility of precipitation, with more prolonged periods of drought.[70] This is line with regional projections with global warming above 2°C resulting in more frequent heavy rainfall events, and projections that droughts will become more frequent and more intense across Tanzania[71]. Furthermore, sea level rise in Dar es Salaam is projected to increase by 20 cm to 24 cm in 2050 and 45 cm to 76 cm by 2100 based on RCP 2.6, 4.5 and 8.5 scenarios without adaptation[72], with associated devastating impacts from storm surges, coastal flooding and increasing saltwater intrusion into the shallow groundwater.

4. **Dar es Salaam's urbanization is exacerbating climate change risks.** The urban area is rapidly expanding and is expected to grow from 5. 4 million people to 10 million by 2050[73]. Urbanization with its concomitant growth of built-up areas, increased water demand, encroachment, and disposal of solid waste on flood plains and rivers and loss of green space is compounding changing rainfall patterns and intensity, increasing temperature and rising sea levels brought on by climate change. The built-up areas[74] are contributing increased runoff during rainstorms which is making floods more intense, and contributing to erosion that is reducing the capacity of rivers to absorb these floods. It also is reducing the replenishment of aquifers used for water supply. The sprawling low rise, densely packed urban form also absorbs and radiates more heat than surrounding vegetated areas, exacerbating heat.[75]

5. **Climate change presents an unfair burden on Dar es Salaam's poor, given they have the least adaptive capacity to deal with disasters such as heatwaves, floods and disease.** Quantitative studies on urban poverty and flooding have been carried out in Dar es Salaam, one of which found that poor and vulnerable households are over-represented among those affected by floods in Dar es Salaam and female headed households, which tend to have fewer resources to cope with disasters, are more likely to be affected.[76] Due to their fragile socioeconomic status and poor housing conditions, following floods the poor disproportionately suffer from water-borne diseases and lost or damaged assets and face barriers to recovery after shocks. A key factor is the lack of development control and affordable housing which has led to encroachment of informal and unserviced settlements into wetlands and river buffer zones. Furthermore, residents

[68] Estimated to be 5.8°C compared to rural areas based on urban heat index. Opportunities Assessment for Urban Greening, Sustainable Urban Drainage and Erosion Control in Dar es Salaam, ARUP international and the World Bank (2023).
[69] Pasquini, L, van Aardenne, L., Godsmark, CN., Lee, J and Jack, C. (2020). Emerging climate change-related public health challenges in Africa: A case study of the heat-health vulnerability of informal settlement residents in Dar es Salaam, Tanzania, Science of The Total Environment, Volume 747.
[70] World Bank Group. (2017). United Republic of Tanzania Systematic Country Diagnostic: To the Next Level of Development. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/26236 License: CC BY 3.0 IGO.
[71] Trisos, C.H., et al. (2022) Africa. In: Climate Change 2022: Impacts, Adaptation and Vulnerability.
[72] Ibid.
[73] "World Bank Group. (2017). United Republic of Tanzania Systematic Country Diagnostic: To the Next Level of Development. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/26236 License: CC BY 3.0 IGO."
[74] It is estimated that the built -up areas have made 19% of the area of Dar es Salaam impermeable to water, causing runoff that decreases infiltration, increases erosion and flood peaks, especially in the high-density areas where the % of impermeable areas increase to much higher levels. By 2040 the impermeable area is expected to increase to 37% due to urbanization. "Opportunities Assessment for Urban Greening, Sustainable Urban Drainage and Erosion Control in Dar es Salaam", World Bank, 2023, prepared by ARUP international.
[75] Pasquini, L, van Aardenne, L., Godsmark, CN., Lee, J and Jack, C. (2020). Emerging climate change-related public health challenges in Africa: A case study of the heat-health vulnerability of informal settlement residents in Dar es Salaam, Tanzania, Science of The Total Environment, Volume 747.
[76] World Bank. 2019. Wading out the Storm: The Role of Poverty in Exposure, Vulnerability and Resilience to Floods in Dar es Salaam.

of informal settlements are already suffering from high temperatures due to their high exposure and low adaptive capacity and will be disproportionately affected by further temperature increases and heatwaves.[77]

6. **Floods and prolonged droughts are a driver of growing climate-induced human migration including rural to urban and urban to urban migration**, putting further pressures on land, housing, services, jobs, and resources. As much as 4.2 percent of the population of Sub-Saharan Africa could be internal climate migrants by 2050.[78] Thus Tanzania may be experiencing large movements of climate change-induced migrants in the next 30 years, which would provide added stress in urban areas that will attract in-migration due to better livelihood opportunities.

Climate Change Mitigation Context

7. **Rapid unplanned urbanization hinders the path towards a low carbon development trajectory.** Thirty five percent of the population currently lives in urban areas. The population in urban areas grew from 13.3 million to 21.5 million in the last 10 years, a 62 percent increase, which is twice as fast as in rural areas.[79] Tanzania's GHG emissions are very low by international standards at only 0.2 metric tons of CO2-e per capita.[80] The low-carbon status of the population in Tanzania is largely a consequence of poverty[81], however, URT's Third Five-year National Development Plan (2021/22-2025/26) and Development Vision 2025 are designed to reduce the poverty levels. Urban areas, as the engines for growth in the country, will be a big part of this transformation and the anticipated growth of urban areas will affect major sources of GHG emissions in the country including land use change and loss of forest cover, energy consumption, including transport; and waste generation.[82]

8. As incomes and population grow in cities, so too does demand for air conditioning and more energy intensive appliances.[83] Increasing consumption also leads to increased waste production with the country producing an estimated 12.1-17.4 million tons per year, and GHG emissions from waste increasing from 4.78 MTCO2e to 6.38 MTCO2e between 2010 and 2020.[84,85] Energy use for transportation grew substantially from 3.61 MTCO2e to 6.78 MTCO2e[86] between 2010 and 2020 and it is expected to increase as the middle class expands. A recent survey in Tanzania found that car ownership levels begin to rise significantly once monthly household income rises above US$500.[87] Urban sprawl is contributing to these emissions, as it increases the urban footprint, the length of journeys, and private car[88] dependency. Green spaces and flood plains are also decreasing in area with urban expansion, resulting in reduced carbon sinks.

[77] Pasquini, L, van Aardenne, L., Godsmark, CN., Lee, J and Jack, C. (2020). Emerging climate change-related public health challenges in Africa: A case study of the heat-health vulnerability of informal settlement residents in Dar es Salaam, Tanzania, Science of The Total Environment, Volume 747.
[78] World Bank. (2021). Groundswell, Acting on Internal Climate Migration, Part II. - *The simulations show under a low emissions scenario, 2.8 percent of the population of sub-Saharan Africa would be internal climate migrants and under a high emissions scenario, 4.2 percent would be internal climate migrants.*
[79] National Bureau of Statistics. (2012 and 2022). Population and Housing Census of Tanzania.
[80] International Energy Agency.
[81] World Bank. (2020). Poverty & Equity Brief. Sub-Sahara Africa, Tanzania. April 2020.
[82] World Resources Institute (WRI), 2018, FAOSTAT. GHG emissions by Sector, 2024 (MtCO2e) Land use change and loss of forest, is the largest source of emissions, contributing 72 percent of the nation's total emissions followed by agriculture. Energy (including energy consumption and transport) and waste are the 3rd and 4th.
[83] International Energy Agency (IEA). (2018). The Future of Cooling, IEA, Paris https://www.iea.org/reports/the-future-of-cooling, License: CC BY 4.0
[84] https://www.climatewatchdata.org/ghg-emissions?end_year=2020&regions=TZA&sectors=transportation%2Cwaste&start_year=1990
[85] The amount of municipal solid waste generated in the country is estimated to be about 12.1-17.4 million tons per year (0.66 to 0.95 kg per capita per day). On average, each person produces 241-347 kg of waste annually. Major sources include households (75%), industries and commercial areas (20%), institutions (0.5%), markets (3.5%) and street sweeping (0.5%). The national waste generation is growing at an estimated rate of about 5% per year. Tanzania Investment Guide for Solid Waste Management, 2020.
[86] https://www.climatewatchdata.org/ghg-emissions?end_year=2020&regions=TZA&sectors=transportation&start_year=1990
[87] Sagaci. 2020. On the Road. https://sagaciresearch.com/on-the-road/
[88] In Tanzania private cars are individual fuel-based transport.

9. Dar es Salaam's economy and its emissions are expected to increase. Dar es Salaam is Tanzania's largest urban agglomeration with a population of 5.4 million,[89] a number that is expected to reach 10 million by 2050.[90] The pattern of growth is sprawl, following the main road corridors in an ad-hoc manner, encroaching into countryside. This growth significantly changes the land use and is reducing the green area and its carbon sinks. Tree coverage across Dar es Salaam fell by over 5,500 hectares between 2001 and 2022, a 35 percent decrease representing an estimated 2.27 Mt of CO2 equivalent emissions.[91] In the future the total green area (trees/forest, riparian, grassland, shrubland, cropland, mangrove, and wetland) is projected to decrease by 21,500 ha between 2022 and 2040.[92]

10. Traffic in Dar es Salaam is heavily congested which is costly in terms of air pollution, quality of life for residents and economic efficiency. The development of the extensive BRT network since 2016 has started to alleviate congestion and cut travel times. During peak hours, a 20-kilometer journey is now about two hours faster.[93] Despite this achievement, the BRT and transport network more broadly is not fully integrated with the growing sprawl of urban settlements, services, commerce, and has not fully developed the supporting road networks including feeder routes and non-motorized transport (NMT) and therefore is producing more GHG emissions than needed. The solid waste management system is already a significant source of GHG emissions in Dar es Salaam. There is currently no sanitary landfill with the dumpsites emitting methane without control. Recycling rates are limited to informal, and community driven activities and composting is limited to one plant that receives a small portion of the market waste in Dar es Salaam.

Intent to Address Vulnerability and Mitigate Climate Change

11. **Climate Adaptation:** The project is designed to adapt to the climate change induced changes in precipitation patterns and temperature increases, and the resulting continual increase in flooding and heat wave frequency and severity. The project will respond to climate change risk and build resilience through a combination of investments in natural, engineering and planning solutions, and capacity development. To reduce exposure and vulnerability to flooding, the project invests in roadside and standalone drainage solutions, NBS, expansion of green areas, parks and protection of riparian areas and flood plains, with the intended goal of reducing runoff and erosion, managing, and storing excess stormwater. These initiatives are aimed at reducing erosion, expanding green spaces and the capacity of rivers to absorb flood waters, and encouraging replenishment of groundwater supplies. The solid waste activities also reduce litter in the urban environment and reduce the risk of blocking up drains and waterways. The project also adopts a preventive approach to urban encroachment around rivers and canals through boundary demarcation to help avoid new erosion and waste dumping in waterbodies from urban development. Planting of trees and parks will also reduce erosion and runoff and will offer shade and reduce the urban heat island (UHI) effect. Incorporation of green roofs and rainwater harvesting as part of the design of the buildings and public space will also store excess water and create a cooling effect in the urban environment. The project will also build on DMDP 1 and continue to capacitate government, the private sector, and the next generation of professionals (through internships) with the skills to design and implement green infrastructure to enhance resilience, while local communities and municipalities will be capacitated with knowledge and tools to support integrated disaster risk management (DRM) and emergency response. The purpose of

[89] United Republic of Tanzania National Bureau of Statistics. (2022). Population and Housing Census of Tanzania.
[90] Ibid.
[91] Global Forests Watch, https://www.globalforestwatch.org.
[92] ARUP international. (2023). Opportunities Assessment for Urban Greening, Sustainable Urban Drainage and Erosion Control in Dar es Salaam
[93] Krüger, F., Titz, A., Arndt, R., Groß, F., Mehrbach, F., Pajung, V., Suda, L., Wadenstorfer, M., and Wimmer, L.,. 2021. "The Bus Rapid Transit (BRT) in Dar es Salaam: A Pilot Study on Critical Infrastructure, Sustainable Urban Development and Livelihoods" Sustainability 13, no. 3: 1058.

these adaptation and resilience investments is to reduce the direct and indirect impacts of climate change on human health, livelihoods, and economic development.

12. **Climate Mitigation:** The project is designed to help improve living conditions whilst contributing to climate mitigation through investments in low carbon infrastructure and supporting institutional and capacity building support. To help Dar es Salaam's carbon footprint, the project encourages compact growth by adopting an area-based approach to planning and investment in catalyst projects (i.e., public markets, bus stands, urban design improvements, landscaping, and parks) in prime locations for urban infill and regeneration. The project aims to improve public transport by upgrading feeder routes that connect to the BRT, and roads which extend the daladala network, and encourage non-motorized transport by following a locally adapted "Complete Streets"[94] approach which include pedestrian paths, bike paths, trees, landscaping, and space for vendors. The project's investment in integrated solid waste management including recycling, composting and interventions to reduce methane emissions from landfills and dumpsite; solar street lighting; and energy efficient buildings will avoid future emissions. Tree planting and landscaping efforts will sequester carbon, while landscape protection initiatives in riverine and floodplain areas will promote carbon storage. The project will also build capacity across government and the private sector to plan, design, implement and manage green infrastructure investments.

Climate Co-Benefits - Climate Relevant Activities by Sub-component

13. **Climate change adaptation and mitigation are cross cutting issues embedded in all project components** including through the physical interventions in Components 1 and 2, and the institutional strengthening under Component 3. The vulnerability context outlined above indicates that Dar es Salaam is increasingly at risk of climate change particularly due to expected changes in rainfall patterns and increased temperatures coupled with lack of development controls and environmental degradation that results in flooding, times of limited water availability and increased human exposure to extreme heat.

14. **The project's investments are climate-informed using tools with information on projections.** The project's investments take advantage of updated climate information and tools in the prioritization, siting, and design process. A hydrological and hydraulic model and flood risk assessment and scenarios dashboard has been prepared for Dar es Salaam, and serves as baseline for project prioritization, selection of investments and engineering designs. Climate change scenarios are used (moderate and extreme for 2050 and 2075) in conjunction with urbanization scenarios to assess the impact of the interventions under Component 1 and 2. The model has also helped identify areas with high levels of flood exposure which evaluates the potential impact on proposed investments, such as roads. Geospatial data and flood risk modelling, considering different climate scenarios, has helped inform the project pipeline, avoid investment in high-exposure areas, and has helped to identify areas requiring investment in drainage and NBS. The same climate change projections and data are also used in the hydrologic and hydraulic models developed for the purposes of the engineering design of interventions at the site and area level. This has informed the design of bridge dimensions and road right of ways, roadside drains, stand alone and area drainage systems, areas to protect in riparian areas and flood plains and the drainage associated with the other interventions (solid waste facilities, markets, public buildings, parks and open spaces, and area-based amenities). The solid waste interventions, in particular the transport system and

[94] Complete Streets is a road planning and design approach centered around people and sustainability instead of private motor vehicles. Complete Streets accommodate users of different abilities and modes of transport, and provide space for public transit, pedestrians, cyclists, e-mobility, drainage, and trees. JICA has prepared local guidelines for Dar es Salaam with modified space standards based on Complete Streets.

resource recovery measures, will consider estimates of the GHG emissions as part of the choice of locations and technologies and in the design.

15. Table 2.1 outlines how the relevant project activities would address the vulnerabilities to climate change and natural disasters discussed above as well as potential contributions to GHG mitigation.

Table 2.1: Specific Project Activities to Address Climate Change and Vulnerability

Component	Climate-Relevant Activity
Component 1 Climate-Smart Priority Infrastructure (US$295 million)	***Sub-component 1.1: Resilient transport infrastructure (US$165.1 million)*** **Adaptation activities:** • Climate-informed flood risk modelling will inform the road and bridge design. • Drainage will be designed based on climate projections to reduce the impact of flooding in flood prone roads. • Sustainable urban drainage systems designed to reduce impact of urban runoff on flood volume and intensity, erosion, and groundwater depletion. • Bridges and culverts will be sized to accommodate climate change projections. • Enhanced resilience of communities and improved emergency services access will be provided in flood-prone neighborhoods through upgrading of access roads and construction of new pedestrian/cyclist bridges. • Street trees planted within the ROW to provide shade to encourage walking and reduce urban heat. • Shaded bus stands. • Improving roads in flood-prone areas will reduce travel disruption during increasingly regular heavy rain events will lower GHG emissions through minimizing congestion times. **Mitigation activities:** • Roads and bus stands to upgrade or expand bus public transport routes. • Roads will have dedicated non-motorized transport paths and sidewalks whenever the right of way allows for it. • Roads providing improved access of a community to public transport (bus or bus rapid transit) routes that accommodate non-motorized transport. • The upgrade of local and feeder road network that connect to the bus rapid transport. • Urban roads in residential and commercial areas that incorporate non-motorized transport facilities. • Foot bridges to improve access of communities. • Solar street lighting. • Roads and bridges in flood-prone areas will reduce travel disruption during increasingly regular heavy rain events which will lower GHG emissions by minimizing congestion times.
	Sub-component 1.2: Resilient and green drainage systems (US$61.7 million) **Adaptation activities:** • All green and grey drainage infrastructure sited and designed based on climate informed modelling.

Component	Climate-Relevant Activity
	• Construction of major "stand-alone" drains or area-based drainage networks using a combination of grey and green drainage infrastructure (NBS). • Construction of water detention, retention, and infiltration basins. • To mitigate urban heat, attenuate floods and encourage groundwater infiltration, NBS and sustainable urban drainage system features including water detention, retention, and infiltration basins, soakaways, sediment traps, tree planting, green roofs, swales, berms, filter drains, riprap and other erosion control structures. • Rainwater harvesting in public buildings. **Mitigation activities:** • Green roofs and tree planting and vegetation to reduce urban heat and reduce demand for space cooling. • Carbon sequestration through tree planting and landscaping to support drainage functions.
	Sub-component 1.3: Resilient parks, public spaces, riparian and coastal landscapes (US$5.5 million) **Adaptation activity:** • Drainage infrastructure for parks, and extent of flood plain or riparian zones designed based on climate informed modelling. • Protection of flood plains, wetlands and riparian areas will build regional resilience to flooding. • New open green spaces will be created and planted and will include flood control, stormwater attenuation and SuDS to enhance resilience of neighboring communities to flooding, increase rainwater infiltration, reduce erosion, and store water for reuse. • Planting of trees, landscaping and greening to provide urban cooling functions, and respite from heat for vulnerable urban communities (i.e., street sweepers, homeless, street vendors). **Mitigation activities**: • Protection of flood plains, wetlands and riparian areas will ensure the protection of existing carbon sinks. • Tree planting will support carbon sequestration. • Paths for cycling and walking and utilization of the river corridors and parks for non-motorized transport and will support low-carbon transport modes as alternative to private vehicle use. • The parks will have solar street lighting. • Energy efficient building standards will be applied to park buildings.
	Sub-component 1.4: Area-based Urban Development (US$62.7 million) **Adaptation activities:** • Improving roads and local drainage networks in flood-prone areas will reduce socioeconomic impacts of flooding.

Component	Climate-Relevant Activity
	• Providing trees, green roofs, and careful building siting to optimize shade and urban cooling in urban areas. • Water conservation measures (rainwater harvesting and/or green roofs) on all buildings. **Mitigation activities:** • Spatial clustering and co-location of investments in geographically targeted centrally located areas around bus stands and bus stops to reduce transport time through compact city growth. • Pedestrian friendly design and car-free streets and enhanced public transport access encourages low-carbon transport choices (walking, cycling, public transit). • Improved traffic circulation, traffic and freight management in business and trade areas to reduce congestion and vehicle idling times, reducing emissions and localized air pollution. • Energy efficient standards will be adopted for any building upgraded or constructed. • Provision of solar street lighting along streets and public spaces. • Providing trees, green roofs, and careful building siting to optimize shade and urban cooling to improve energy efficiency. • Urban planning and technical assistance to encourage mixed-land use and densification (i.e., floor area ratio changes) in area-based investment areas around public transport infrastructure.
Component 2 Integrated Solid Waste Management Infrastructure and Services (US$55 million from IDA, and US$53.02 million from Netherlands)	This component includes the following four sub-components: • Sub-component 2.1. Waste Disposal: US$78 million (US$40 million IDA; US$38 million Dutch Grant) • Sub-component 3.2. Waste Transfer and Transport: US$19 million (US$9.5 million IDA; US$9.5 million Dutch Grant) • Sub-component 3.3. Waste Recycling and Composting: US$10 million (US$5 million IDA; US$5 million Dutch Grant) • Sub-component 3.4. Establishment of the Intermunicipal Solid Waste Institution: US$1 million IDA **Adaptation activities:** • Climate-informed flood model used to ensure appropriate siting of solid waste infrastructure. • Improved solid waste collection reduces risk of drains and channels becoming blocked, reducing flood risk. • Public awareness and litter collection campaigns reduces illegal dumping and reduces risk of waste blocking waterways. **Mitigation activities:** • The component is estimated to contribute to the reduction of over 2.1 tons CO2-e over the lifetime of the investment. Over 1.4 million tons of CO2-e is projected to be reduced from sanitary landfill and dumpsite closure. Other SMW activities such as waste transport, recycling, etc., add to 0.7 million tons of CO2e.

Component	Climate-Relevant Activity

	• A waste transfer and transport system with locations of transfer stations to reduce travel distance for waste collection and minimizing the number of trips for transport (by using larger capacity trucks or train). This will reduce emissions from waste collection and transport. Greenhouse gas emissions modelling has shown this will reduce emissions relative to the current transport system by 21,664 tons CO2-e over ten years.
	• Waste disposal:
	  ○ Construction of 2-3 sanitary landfills designed to accommodate landfill gas capture and destruction. The captured landfill gas shall be used productively, or where utilization is not economically viable, flared.
	  ○ Closure of two dumpsites with landfill gas capture and destruction. The captured landfill gas shall be used productively, or where utilization is not economically viable, flared.
	  ○ The landfill gas recovery and use systems are designed to control methane emissions from the landfill body and as part of that minimize leakages from relevant landfill gas management facilities. Monitoring of the methane collected from the system and destroyed is a core element of the operation of the system.
	  ○ Relative to the baseline situation of utilization of the current dumpsite, the closure of the dumpsite and introduction of new landfills with the landfill gas recovery facilities mentioned above will reduce 1.4 million tons CO2-e of greenhouse gas emissions over 10 years.
	• Decentralized, community-based recyclable collection and sorting programs in targeted communities.
	• Centralized sorting facility for selective collection program in targeted sectors and neighborhoods, estimated to reduce 13,810 tons of CO2-e over 10 years.
	• Composting and diverting organic waste selectively collected from markets to reduce emission of landfill methane.[95] It will replicate a current composting facility, using the compost for parks or sold for use in farms and gardens.

Component 3 Strengthening Urban Institutions (US$20 million)	This component includes four sub-components: • Sub-Component 3.1 Capacity Building for Resilient Urban Services (US$6.5 million) • Sub-Component 3.2 Implementation of Own Source Revenue Management System (US$3 million) • Sub-Component 3.3 Capacity Building for Resilient Urban Planning (US$5.8 million) • Sub-component 3.4 Capacity Building for Emergency Planning and Response (US$4.7 million). **Adaptation activities:** Capacity building, technical support, institutional restructuring and enhanced OSR to support municipalities to reduce flood risks, build resilience to drought and heat extremes by: • Strategic planning for parks and green spaces.

[95] A collection system for market waste will be implemented with construction of a composting facility or expansion of existing facilities (one exists in northern Dar es Salaam).

Component	Climate-Relevant Activity
	• Improved operation and maintenance of green spaces and parks. • Updating drainage strategy to include NBS and sustainable urban drainage. • Improved operation and maintenance of drainage infrastructure (i.e., detention ponds, siltation traps, channels). • Improved O&M of urban roads and drains for erosion control and avoid silt and waste blocking up waterways. • Establishing by-laws and guidelines for incorporation of rainwater harvesting and green roofs in municipal buildings. • Area-based planning for redevelopment to increase thermal comfort through bioclimatic design principles. • Urban planning and implementation of development controls in strategic areas for adaptation including flood plains, wetlands, and riparian areas to reduce flood risks. • Improved emergency response capacity. **Mitigation activities:** • Support establishment of by-laws and guidelines for energy efficiency buildings. • Improve coverage of waste collection services across Dar es Salaam. This will reduce informal burning of waste which also reduces GHG emissions. It is estimated the improvements in collection coverage will reduce greenhouse gas emission by 807,000 tons CO2-e over 10 years. • Support to certification of energy efficiency certification[96]. • Building technical and planning capacity to support compact growth and transit-oriented development and Complete Streets. • Institutional development in support of implementation of the Dar es Salaam Master Plan. (The Dar Master Plan supports a polycentric system of transit-oriented sub-centers, corridor development strategies based around BRT lines, and compact growth policies to reduce emissions).
Component 4: Project Management (US$15 million)	**Adaptation and mitigation activities:** This component will finance the direct costs of management and operation of the project to ensure smooth delivery and compliance with World Bank policy and guidelines and monitoring and evaluation. This component will also finance an internship program to train and build the capacity of the next generation of engineers, architects and urban planners in climate resilient, low carbon infrastructure and design.

[96] This would also support the buildings constructed or reconstructed/retrofitted under component 1 to meet energy efficiency standards equivalent to the global EDGE certification and to incorporate rainwater harvesting.