UNITED REPUBLIC OF TANZANIA
VICE PRESIDENT'S OFFICE

INVESTMENT GUIDE ON WASTE MANAGEMENT IN TANZANIA

March, 2020

PREFACE

Management of municipal solid waste and wastewater is a pressing developmental challenge in the context of public health, environmental management and urban planning. However, there is a need to change the mind-set that perceive waste as a liability and instead appreciate it as a potential resource that can contribute towards socio-economic development while improving the environment and quality of life.

There is no reliable data for waste generation and waste disposal in the country, however, existing estimates indicates that the country generates about 12.1-17.4 million tonnes of solid waste per year (0.66-0.95 kg per capita per day) and more than 119 million m^3 of wastewater per year. The sector is confronted with continuously increasing waste volume; inadequate and poor waste management infrastructure; proliferation of unplanned settlements; limited budget allocation; and poor enforcement of laws and regulations. Consequently, significant proportion of the waste end up in the environment contributing about 40% of the national disease burden.

The challenges and barriers associated with waste management in the country are significant, but so are the opportunities. The purpose of this Guide is to offer a quick reference on investment information to prospective domestic and foreign investors so as to exploit investment opportunities in the provision of waste management services. The Guide is in line with the overall national investment policy and specifically it explores investment opportunities available in the waste management sector. It is meant to contribute in enhancing enabling environment for investment in the waste management sector.

It is often said that "it is a waste to waste your waste". In this context, the Government is determined to and shall make every effort to promote investment in the provision of waste management services to achieve relevant Sustainable Development Goals (SDGs). The Guide will be refined and updated regularly to facilitate informed investment decisions. Further, this Guide applies to Tanzania Mainland.

We welcome all prospective investors with the assurance of our gracious support and cooperation.

Mussa Azzan Zungu (MP)
Minister of State
Vice President's Office - Union and Environment

ACKNOWLEDGEMENT

The successful preparation of the investment guide on waste management has enlisted the assistance, participation and cooperation of various key stakeholders and experts and we would like to acknowledge their efforts.

We wish to express our gratitude to the National Team of expert for their contribution in information collection and develop this guide. The members of the team included the Vice President's Office; Ministry of Energy; Ministry of Finance and Planning; Ministry of Industry and Trade; National Environment Management Council; Tanzania Investment Centre; and Confederation of Tanzania Industries. We also appreciate stakeholders who were involved in reviewing this guide for their input.

Finally, we extend our appreciation to Ambassador Joseph E. Sokoine, Deputy Permanent Secretary-Vice President's Office and Mr. Faraja Ngerageza, Acting Director of Environment and Ms. Kemilembe S. Mutasa Acting Assistant Director-Division of Environment, Vice President's Office for overseeing and guiding the whole exercise of preparing this investment guide.

Eng. Joseph K. Malongo
Permanent Secretary
Vice President's Office

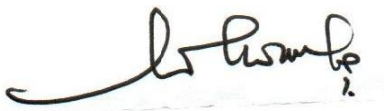
FOREWORD

I have great pleasure to present this investment Guide on waste management which is intended to be a quick reference to prospective investors who wish to invest in the waste management area. This guide is a response to a frequently asked questions on existing opportunities, procedures, legal and regulatory as well as fiscal environment for investing in waste management area in Tanzania.

Tanzania is an investor-friendly country which offers supportive policies, incentives and enabling environment for sustainable investment. It is also among the top ten recipients of Foreign Direct Investment in Africa, demonstrating to be a premier investment destination on the continent and has untapped voluminous and valuable waste resource.

Among others, Tanzania has the substantial volume of Municipal Solid Waste generated which is about 12.1 - 17.4 million tonnes per year (equivalent to 0.66-0.95 kg per capita per day) and more than 119 million m^3 of wastewater generated annually. Further, there is steadily increasing volume of waste with an estimated generation rate of about 5% per year and an atmosphere of political stability which influence socio-economic development.

In this regard, we welcome you all prospective investors to use this Guide to support government ambition to modernize and industrialize the waste management sector.



Mr. Geoffrey I. Mwambe
Executive Director
Tanzania Investment Centre

LIST OF ABBREVIATIONS

ARU	Ardhi University
BICO	Bureau for Industrial Cooperation
BoT	Bank of Tanzania
BRELA	Business Registration and Licensing Agency
CBOs	Community Based organizations
COSTECH	Commission for Science and Technology
DIT	Dar es Salaam Institute of Technology
eGA	Electronic Government Agency
e-Waste	Waste electrical and electronics
FDI	Foreign Direct Investment
GCLA	Government Chemist Laboratory Authority
ICT	Information Communication Technology
LGAs	Local Government Authorities
MHA	Ministry of Home Affairs
MITI	Ministry of Industry, Trade and Investment
MLHHSD	Ministry of Lands, Housing and Human Settlement Development
MoE	Ministry of Energy
MoFP	Ministry of Finance and Planning
MoHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children
MoW	Ministry of Water
MSW	Municipal Solid Waste
MT	Metric Tonnes
MW	Mega watt
NEMC	National Environment Management Council
NGOs	Non-Governmental Organization
NSSF	National Social Security Fund
OSHA	Occupational Health and Safety Authority
PMO - LYEPwD	Prime Minister's Office – Labour, Youth, Employment and People with Disabilities
PO-RALG	President's Office - Regional Administration and Local Government
SDGs	Sustainable Development Goals
SIDO	Small Scale Industry Development Organization
SSRA	Social Security Regulatory Authority
TEMDO	Tanzania Engineering and Manufacturing Design Organization
TIA	Tanzania Investment Act
TIC	Tanzania Investment Centre
TIRA	Tanzania Insurance Regulatory Authority
TSCP	Tanzania Strategic Cities Project
UWSSAs	Urban Water Supply and Sanitation Authorities
VETA	Vocational Education Training
VPO	Vice President's Office
WSP	Waste Stabilization Pond
WTE	Waste-to-Energy

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1.0 TANZANIA AT A GLANCE

Tanzania is among the top ten recipients of foreign direct investment in Africa, demonstrating to be a premier investment destination on the continent. It ranks among the 20 fastest growing economies in the world.

Physiography: Tanzania constitutes of Mainland Tanzania and the islands of Zanzibar and Pemba, covering 945,200 km², which includes 54,337 km² of inland water. It is the world's 31st-largest country. It has a coastline of 800 km long.

Population: The population of Tanzania is currently estimated to be 54.20 million (2018 projections) with annual growth rate of 3.1% in 2018 According to 2012 population census about 29.61% of the population live in urban compared to 70.39% in rural areas.

Labour Force: The working age population comprises of 25.8 million persons (2014, ILFS), of whom 15.8 million (61.3%) resides in rural areas, 10 million (38.7 %) in urban areas.

Key economic sectors: The major contributing economic sectors to the national GDP in 2017 were agriculture (30.1%), construction (15.0 %), trade and repairs (11.0%), public administration (7.5%) and manufacturing (5.5%).

Water resources: According to 2017 NESR, the annual average available renewable water resources per capita is about 1,952 m³ which is above the lowest annual average of 1,700 m³ acceptable internationally. About 72.58% of the rural population have access to water supply as compared to 90% in urban areas. In addition, Water Supply and Sanitation Authorities (WSSAs) in 2016 indicates that, about 4,260,820 people have access to water supply through 375,757 domestic connections and 2,013 kiosks in the 23 regional headquarters equivalent to 86 % of urban population served with clean and safe water.

Energy: As of December, 2017, about 67.5% of the population have access to electricity. Demand for electricity has been rising, both for industrial and domestic use. Growth of demand for electric power ranges between 10-15 % per year. As a result, the installed power capacity must increase from 1,583.0 MW (April, 2014) to at least 10,000 MW by 2025 and transmission and distribution systems must also be expanded.

2.0 OVERVIEW ON WASTE MANAGEMENT IN TANZANIA

2.1 Institutional Roles in Waste Management

The Environmental Management Act of 2004 (Section 114-138) assigns Local Government Authorities with the responsibility of waste management particularly in relation to management and minimization of waste at source. Waste categories being referred to include solid waste; litter; liquid waste; gaseous waste; and hazardous waste.

The Act sets basic standards for the collection of waste including source separation and the use of appropriate waste containers. The Local Government Authorities are required to carry out regular studies into the management of wastes including waste quantity and composition to guide the development of appropriate methods for sorting, storage and disposal. They also have the prime responsibility for managing waste collection in both urban and peri-urban areas and for establishing waste transfer and final disposal facilities. The local authorities must also oversee and ensure that industries appropriately manage all waste generated from their activities.

The Local government Act No. 8 of 1982 section 55 gives the urban Local Government Authorities (LGAs) responsibility to manage waste in their area of jurisdiction including public latrines, septic tanks, dust bins and other waste receptacles, sewage and solid waste. Likewise, the Local Government Act No. 7 of 1982 gives the district authorities the mandate to manage waste and conserve environment.

The Water supply and sanitation Act 2018 section 20 gives the Urban Water Supply and Sanitation Authorities responsibility of development, provision and maintenance of water and sanitation works.

The environment management (Hazardous waste control and management) Regulations of 2009 assign the ministry responsible for environment the responsibility to oversee management of hazardous waste including licensing and transboundary movement.

2.2 Municipal Solid Waste (MSW)

Waste Generation

It is estimated that, the amount of MSW generated in the country is about 12.1-17.4 million tonnes 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.

Waste composition

The average composition of MSW includes garden and wood waste (30%), food waste (37%), papers (11%), plastic (7%), glass (4%), metal and tin (1%), textiles (2%) and ash (8%). Of which 50-70% is organic (biodegradable). In addition, other waste fractions that may be encountered include e-waste, used lead acid batteries and waste tyres.

Collection and transportation

On average, less than 50% of the waste is being collected while 3% is disposed through open burning and 30% by burying while 17% is haphazardly disposed into the environment. Majority of the households use poor standard waste storage containers ranging from salvaged drums/tins, paper bags, plastic paper bags, jute bags or sacks. The key actors in waste collection include Local Government Authorities (LGAs) (25%); community based organizations (CBO's) (20%); and private companies (55%).

Commonly, trucks used for collection and transportation include rear and side loaders, which are open and closed body types; while in some urban authorities they employ compactors, tractors and trailers and hand-driven pushcarts.

The common problems facing collection and transportation of MSW include high operational costs mainly due to poor choice of vehicles and the distance from the collection point to disposal site. Other factors are inaccessibility to some of the localities, poor condition of waste collection vehicles; improper planning of collection routes and frequencies; limited supervision; poorly motivated workers; and low public awareness.

Recycling

Recycling of MSW, which is largely informal, is about 5-10% of the total MSW generated and primarily involves plastics, paper, scrap metal, aluminium cans and glass. Very few households segregate waste at the household level. There is minimal waste segregation at source within the Central Business District areas, industries and institutions in most urban areas.

Main challenges are limited sorting of solid waste at source due to limited awareness and inadequate solid waste management facilities; and poor quality of recovered materials due to contamination as a result of mixing waste streams.

Piled waste plastic bottles awaiting recycling at one of the plastic recycling factories in Dar es Salaam

One of the waste collection truck of the Mbeya City Council procured through the Strategic Cities Project

Disposal

More than 90% of MSW in Tanzania is believed to be disposed in an unsatisfactory manner. Most of the MSW g enerated is disposed of in open and poorly operated dumpsites across the country, with exception of a few municipalities having improved landfills (with lining and leachate collection system) constructed by the Tanzania Strategic Cities Project (TSCP). These include Arusha, Tanga, Mwanza, Ilemela, Mbeya, Dodoma, Kigoma and Mtwara.

It is projected that by 2030 the urban areas in the country will generate about 26 million tons of waste annually. To accommodate this amount of waste, about 10.6×10^7 cubic meter of landfill space is required and in terms of area it would be approximately 200 hectares of land per year. This necessitate the need for diverting recyclable fractions of the solid waste to minimize the remaining amount requiring disposal and instituting sound disposal approach.

2.3 Municipal Wastewater

Municipal wastewater generation

The amount of wastewater generated in the country is about 119 million m^3 per year, which is an average load of municipal wastewaters of between 120 and 180 L per capita per day. The main sources are households, institutions, commercial areas, markets, industries and stormwater.

Domestic wastewater treatment

About 90% of the urban population depends on on-site sanitation systems (pit latrines and septic tanks). Emptying of septic tanks is carried out by cesspit emptiers mostly owned by private operators who are supposed to discharge their septage at municipal waste stabilization ponds and other wastewater treatment systems.

Storm water treatment

Most of the urban areas are served by open drains along the roads for collection of storm water. Generally, stormwater collected from the urban centres do not undergo any type of treatment before being disposed into water bodies. Such stormwater is a potential source of pollution of aquatic environment.

Municipal wastewater treatment and disposal

Only 10 out of more than 100 urban centres, have sewerage systems which serve less than 20% of the total urban population. These are Dar es Salaam, Arusha, Dodoma, Mbeya, Morogoro, Mwanza, Tabora, Moshi, Tanga, Songea and Iringa. Still, many of these sewerage systems are old and dilapidated, and require further improvement, repair or replacement to maintain their proper functioning. Most of the existing centralized sewerage system utilize Waste Stabilization Ponds (WSP) as wastewater treatment option. However, Tanga City Council has a sea outfall for discharging untreated municipal wastewater. In addition, there are few institutions which use constructed wetlands for treating wastewater. The treated and untreated wastewater is discharged into water bodies while storm water is not treated at all.

Untreated industrial wastewater flowing into Mikocheni River, Dar es Salaam.

Scenic view of the Waste Stabilization Ponds (WSPs) scheme in Mbeya

3.0 WHY INVEST IN WASTE MANAGEMENT?

The following are among the reasons why you should invest in waste management:

- **Untapped voluminous and valuable waste resource:** Only a small percentage of waste is being recycled (10%) with more than 50% of the waste uncollected, this leaves a large potential market for investment.

- **Projected increase in waste volume:** Steadily increasing volume of waste over the long-term horizon is envisaged due to population growth and momentous promotion for industrialization.

- **Low investment risks:** There is demonstrated trendy political stability and peaceful and smooth transition between governments over the years. Further, there is robust and effective legal framework that protects both local and foreign investor and offers an effective tax rate that is globally competitive.

- **Attractive incentives:** The Government offers attractive incentive package to investors, in addition to a pool of cheap and readily available labour force.

- **Persuasive engagement of the private sector:** Increasing the involvement of the private sector is a key priority for the Government.

- **Readily available and accessible credit and financial services:** any local or foreign business operating in Tanzania may obtain credit from domestic financial institutions.

4.0 INVESTMENT OPPORTUNITIES IN WASTE MANAGEMENT

4.1 Priority Areas

i) Waste collection

Key features and available potential

Waste collection and transport is of limited coverage and largely inadequate in all urban areas in the country. The average cost of waste collection is estimated at around USD 10-15 per ton, which is consistent with costs in other African cities. Increasing vehicle fleet and other related equipment to improve the coverage and efficiency in waste collection particularly in urban areas remains a priority.

The investment venture will, among others, involve procurement, establishment and operation of waste collection facilities as indicated in Table 1. It must be ensured that, the waste collected is transported to the designated areas/sites for disposal. **Table 1** presents indicative investment needs for improving solid waste collection in selected urban areas in the next 10 years.

Table 1: Investment opportunities in waste collection in selected urban areas

Municipality/ Council/Town	Investment opportunity	Indicative investment cost (million USD)
1. Dar es Salaam	a) Provision of waste collection facilities and equipment, to improve waste collection rate, including the following: • skip and side loaders • excavators • bulldozers • compactors • skip buckets • Road sweeping trucks • waste weigh bridge • Cesspit emptier • 4x4 vehicles for supervision b) Establishment of strategic solid waste collection points	10.4
2. Mwanza		3.5
3. Arusha		2.8
4. Mbeya		2.8
5. Dodoma		3.0
6. Morogoro		3.0
7. Tanga		2.5
8. Bukoba		2.5
9. Kigoma Ujiji		2.0
10. Tabora		2.0

Rationale

As Tanzania continues to experience increased rate of urbanization, effective waste collection would demand adequate and modern waste collection and transportation facilities. It is important to note that, in the recent past, people have been showing reasonable willingness to pay for waste collection services in their localities which may offer supportive investment enabling environment.

Support available

There is political support from regional and district authorities as well as technical support from PO-RALG, VPO and NEMC. In addition, credit and financial services is available from different financial institutions as well as tax and non-tax incentives administered by the Tanzania Investment Center (TIC).

Key challenges/risks

Challenges/Risks	Risk level	Mitigation measures
a) Maintenance cost of vehicles and trucks	Low	Establish contract agreements with manufacturers and suppliers
b) Unplanned settlements	Medium to low	Establish strategic waste collection centers

ii) Municipal solid waste recycling

Key features and available potential

Despite the fact that more than 30-40% of solid waste can be recycled, less than 10% is recycled. The materials that are usually known to be recycled are plastic and glass bottles, scrap metal, papers and aluminium cans. Other potential wastes include electronic waste (e-waste), lead acid batteries and used oil. Recycling plants are needed to capitalize waste recycling potential available in the country whose brief description is presented in **Table 2**.

Table 2: Potential investment opportunities in recycling of some of the components of MSW

Waste type	Plastics (PET and HDPE)	Paper Products	E-waste	Used Oil	Used Lead Acid Batteries
Annual generation rate	150,000 MT	400,000 MT	25,000 MT	25 million Litres	10,000 MT
Current recycling rate (%)	20-30%	20-30%	1-3%	2-5%	20-30%
Investment potential	Plastic recycling plants with a minimum annual capacity of 10,000 MT	Paper recycling plants with a minimum annual capacity of 10,000 MT	Recycling facilities with a minimum annual capacity of 10,000 MT	Used oil re-processing facility with an annual capacity of 30,000 MT (to produce low-grade industrial heating fuel)	Recycling plant of used lead acid batteries with an annual capacity of 3,600 MT
Indicative investment cost per facility	USD 1-2 million	USD 1-2 million	USD 1 million	USD 2-3 milliom	USD 300,000
Suitable localities	Dar es Salaam, Pwani, Mwanza, Arusha, Mbeya	Dares Salaam, Pwani, Mwanza, Arusha, Mbeya	Dar es Salaam, Pwani, Mwanza, Arusha, Mbeya	Dar es Salaam, Pwani, Mwanza, Arusha, Mbeya	Dar es Salaam, Pwani, Mwanza, Arusha, Mbeya

Rationale

Tanzania has substantial amount of untapped recyclable waste, readily available market for recycled products and relatively cheap labour force, all of which guarantee return on investment.

Support available

The ambition and priority by the Government on industrial-based economy offers supportive policies, incentives and enabling environment for effective development of recycling industry in the country. In addition, exclusive industrial zones have been designated by all Local Government Authorities (LGAs) which facilitates new investments. There is technical support from different government institutions such as MITI, SIDO, BICO, TIRDO and VETA. Further, global and national support for circular economy adds value to the investment climate in solid waste recycling.

Key challenges/risks

Challenges/Risks	Risk level	Mitigation measures
Supply of recyclable materials	Medium to low	• Establish contract agreements with LGAs, CBOs, NGOs and Local communities. • Establish strategic collection centers for recyclable waste.

iii) Industrial composting

Key features and available potential

There is substantial amount of organic municipal solid waste since the organic fraction ranges from 50-70% with less than 2-5% being currently composted. Municipal organic waste available for composting amounts to 3-4 million tonnes per year. There are plans to establish a pilot composting plant in Kinondoni Municipality (Dar es Salaam) with a capacity of 20-50 tonnes per day. Compost has significant market demand locally and internationally. Table 3 presents areas with potential investment in industrial composting.

Table 3: Potential investment opportunities in Industrial composting

Proposed Locality	Amount of municipal organic waste generated (MT per day)	Proposed capacity of mechanized composting facility (MT per day)	Indicative Investment cost (million USD)
Dar es Salaam	2,400	800	1
Mwanza	250	200	0.4
Arusha	300	200	0.4
Mbeya	250	200	0.4
Tanga	150	100	0.2
Dodoma	150	100	0.2
Iringa	100	80	0.2

Rationale

Investing in industrial composting has been proved to have positive contribution towards improving waste management while promoting organic farming which has environmental and health benefits. A combination of these factors, in addition to availability of market for compost as well as modest capital investment required, make investing in industrial composting ideal.

Support available

The national strategy and priority for industrial-based economy, availability of Investment incentives and presence of exclusive industrial zones that have been designated by Local Government Authorities provide supportive environment for investment. Furthermore, technical support is guaranteed from relevant MDAs such as MITI, SIDO, BICO, TIRDO and VETA.

Key challenges/risks

Challenges/Risks	Risk level	Mitigation measures
Supply of organic waste	Low	• Establish contract agreements with LGAs, CBOs, NGOs and Local communities. • Establish strategic collection centers for organic waste.

iv) Electricity generation with biogas

Key features and available potential

Biogas feedstock may involve the use of various organic wastes particularly agricultural, livestock, and forestry residues (about 15 million tonnes per year); 200,000 tonnes of volatile solids of sisal waste; and municipal solid waste (4.7 million tonnes per year). There is a potential of more than 500 MW, sustained yield of 24.3 million cubic meters of biogas per annum.

Tanzania is required to expand its current electricity supply systems in the coming years. In this regard, electrification is the dominant market for biogas in the country.

Table 4: Potential investment opportunities in electricity generation from biogas

Proposed Locality	feedstock	Amount of municipal organic waste (MT per day)	Proposed capacity of biogas facility (MW)	Indicative Investment cost (million USD)
Dar es Salaam	Municipal organic waste	2,400	2.2	5
Mwanza	Municipal organic waste	200	1.5	3
Tanga	Sisal residues and effluent	500	1	2
Kilimanjaro	Sisal residues and effluent	350	1	2
Morogoro	Sisal residues and effluent	300	1	2
Iringa	Forestry residues	300	1	2
Njombe	Forestry residues	300	1	2

Rationale

Due to projected increase in demand for electricity associated with industrialization and population growth, coupled with readily available substantial and diverse feed-stocks for biogas production makes investment venture in this field economically viable.

Further, electricity generation using biogas can greatly contribute towards climate change mitigation. It is worth noting that, existing biogas-to-electricity plants in the country demonstrate economic viability of this technology.

Support available

The government has been promoting and supporting alternative energy sources through different interventions to curb widespread deforestation and forest degradation. Further, there is credit and financial services to support investments as well as technical and institutional support from TANESCO, CARMATEC, TEMDO, VETA, DIT and SIDO.

Key challenges/risks

Challenges/Risks	Risk level	Mitigation measures
Supply of biogas feedstocks	Low	• Establish contract agreements with LGAs, CBOs, NGOs and Local communities. • Establish strategic collection centers for organic waste.

v) Thermal treatment of waste for electricity generation (Waste to Energy)

Key features and available potential

Municipal solid waste can be utilized to generate power through pyrolysis, gasification or incineration. The thermal treatment of MSW results in the generation of 500–600 kWh of electricity per ton of MSW combusted. Based on the municipal solid waste generated in the country, the potential to generate electricity is about 150-200MW.

Table 5: Potential investment opportunities in Waste-to-Energy (WTE)

Proposed Locality	Amount of municipal solid waste consumed (MT per day)	Proposed capacity of WTE facility (MW)	Indicative Investment cost (million USD)
Dar es Salaam	2,000	70	400
Mwanza	900	30	250

Rationale

As demand for electricity in the country is projected to substantially increase due to economic development and population growth, the readily available municipal solid waste in major cities has substantive potential in generating electricity. This will help to improve waste management and contribute towards climate change mitigation.

Support available

It is the Government priority to increase electricity generation capacity for socio-economic growth and therefore, necessary support and facilitation is guaranteed towards this goal. Further, there is also Institutional and technical support from TANESCO, COSTECH, MoE, LGAs, TIC, NEMC and MITI as well as credit and financial services to support investment.

Key challenges/risks

Challenges/Risks	Risk level	Mitigation measures
Supply of municipal solid waste	Low	• Establish contract agreements with LGAs, CBOs, NGOs and Local communities. • Establish strategic collection centers for organic waste.

vi) Solid waste disposal (sanitary landfill)

Key features and available potential

Municipal solid waste is disposed mainly in crude dumpsites with only five (5) municipalities having improved landfills (lining and leachate collection system). Investing in sanitary landfills, through public-private-partnerships, is important to protect public health and the environment. More than thirty (30) urban centers are considered in need of sanitary landfills. **Table 6** presents some of these urban areas to provide a snapshot of actual needs in the coming years.

Table 6: Investment opportunities in construction and operation of sanitary landfills

Locality	Amount of municipal solid waste generated by 2050 (MT per day)	Minimum land area required for sanitary landfill (ha)	Indicative Investment cost (million USD)
Dodoma	1,200	100	4
Dar es Salaam	2,400	200	8
Simiyu	150	50	3
Shinyanga	100	50	3
Tabora	120	50	3
Moshi	650	50	3
Songea	140	50	3
Lindi	70	50	3

Rationale

In view of the substantial volume of municipal solid waste generated in the country which is projected to increase with time, availability of modern waste disposal facilities is a necessity. Further, readily available and designated land areas for establishing sanitary landfill by LGAs and Inadequate modern municipal solid waste disposal facilities across the country create viable investment opportunities. The existence of operational pilot sanitary landfills in some municipalities demonstrate demand for investment in this area.

Support available

There is Institutional and technical support from LGAs, NEMC, ARU, Ministry of Lands and human settlement development, TIC as well as access to credit and financial services.

Key challenges/risks

Challenges/Risks	Risk level	Mitigation measures
Lack of experience in establishing and operating sanitary landfills through partnership between LGAs and private sector	Medium to Low	Establish contract agreements with LGAs

vii) Municipal wastewater treatment

Key features and available potential

The amount of municipal wastewater generated is about 119 million m^3 per year. However, most of it (70-80%) is inadequately treated before being released into the environment. Investing in community-level and municipal wastewater treatment schemes is a necessity. Such schemes include constructed wetlands, waste stabilization ponds, activated sludge or any other affordable, efficient, effective and environmentally friendly technologies.

Rationale

There is generally inadequate municipal wastewater treatment facilities across the country. With projected increase in Municipal wastewater generation, there is high demand for investment in wastewater treatment. Further, global and national support for improving environmental management necessitates investment in this area.

Support available

Institutional and technical support from LGAs, MoW, NEMC, Urban Water Supply and Sanitation Authorities, Ministry of Lands and human settlement development and TIC is available as well as access to credit and financial services.

Key challenges/risks

Challenges/Risks	Risk level	Mitigation measures
Lack of experience in establishing and operating municipal waste water treatment facilities through partnership between LGAs and private sector	Medium to low	Establish contract agreements with LGA and UWSSAs

viii) Commercial hazardous waste incinerator

Key features and available potential

The country has very limited capacity for the disposal of hazardous waste generated by healthcare facilities, industry and agriculture. More than 10,000 tonnes per year of hazardous waste are generated in the country and undesirably mixed with general municipal waste. In this regard, investing in a dedicated hazardous waste incineration is of urgent need particularly in Dar es Salaam City where more than 60% of the industrial establishments in the country are concentrated.

Rationale

Substantial amount of hazardous waste is generated from various sources whose management is generally inadequate. Consequently, there is insufficient dedicated hazardous waste incinerators particularly for healthcare, agricultural and industrial waste. With projected increase in hazardous waste generation from industrial development and improved healthcare services, investment in this area is necessary.

Support available

Institutional and technical support from VPO, MoHCDGEC, MITI, GCLA, NEMC, LGAs and academic institutions may be sought. Further, Government promotion on public private partnership initiatives guarantees necessary facilitation for investment.

Key challenges/risks

Challenges/Risks	Risk level	Mitigation measures
Lack of experience in establishing and operating commercial hazardous waste incinerator through partnership between LGAs and private sector	Medium to low	Establish contract agreements with LGA and private sector

4.2 Strategic Services

i) Financial services (credit facilities)

Key features and available potential

The private sector has become increasingly more active and is highly encouraged to invest in the provision of waste management services. Despite mounting awareness of the merits of proper waste management within the business community and wider civil society, financing of investments in waste management activities is still inadequate. The Government highly promotes, encourages and supports credit schemes customized to waste management investments.

Rationale

Waste management in the country is largely inadequate and therefore substantial needs exist for investment in provision of waste management services. However, there is inadequate provision of credit and financial services towards waste management. In view of Government promotion on public private partnership initiatives and investment needs in waste management, engaging in provision of credit and financial services is in high demand. Further, global and national attention for improving waste management offers supportive incentive for investing in this area.

Support available

Institutional and technical support from MoFP, BoT, TRA, financial institutions is available.

Key challenges/risks

Challenges/Risks	Risk level	Mitigation measures
Limited experience and interest in provision of financial services towards waste management investment	Medium to low	Establish partnership with multilateral and local financial institutions in provision of credit services.

ii) Information and Communications Technology (ICT) in waste management

Key features and available potential

Information and communication technology (ICT) has become an inevitable part to plan and design of modern municipal waste management systems. Some of the applications of ICT in waste management include projections on total waste generated and identification of high waste generation areas; reporting (web/mobile/social media) waste-related activities which need urgent attention; route and truck fleet optimization and real-time tracking for the waste collection; integrated asset management of waste infrastructure assets; and mapping of waste management infrastructure and assets. Investing in such ICT applications would enhance efficiency, resource optimization and

assist Local Government Authorities in improving the provision of waste management services.

Rationale

There is inadequate capacity in application of ICT in waste management which may help to enhance efficiency and quality of service. Government priority on modernizing waste management system and the need to diversify government revenue base assures for supportive facilitation on investment in this area.

Support available

Institutional and technical support may be sought from PO-RALG, LGAs, e-GA, academic institutions, COSTECH and TCRA.

Key challenges/risks

Challenges/Risks	Risk level	Mitigation measures
limited capacity in application of ICT in waste management	Low	Establish contract agreements with LGAs

5.0 FACILITATION, PROCEDURAL STEPS AND LEGAL REQUIREMENTS

New investors must follow specified steps in applying for entry, registration and business approval, and thus obtaining access to the fiscal incentives available to investment projects meeting the eligibility criteria.

5.1 Handling of Investment Project Proposals

Project proposals for investment on waste management have been received or channeled through different Government Ministries and Agencies, in most cases, seeking advice and assistance in realizing the intended investment goals. As a matter of procedure and on the basis of Government investment policy, all such investment proposals need to be transmitted to the Tanzania Investment Centre (TIC), accompanied with a brief appraisal of the investment proposal and recommendations on further steps.

5.2 Coordinating and Liaising Institution

Tanzania Investment Centre (TIC) is a one stop agency of the Government of Tanzania established under the Tanzania Investment Act No. 26 of 1997 to promote, coordinate and facilitate investment into Tanzania. The centre is a focal point for all investors and performs all liaison work for the Investor from enquires right up to project start up.

5.3 Minimum Investment

To qualify for and obtain Certificate of Incentives from the Tanzania Investment Centre (TIC), minimum fixed investment cost should be at least US$300,000 foreign owned and US$ 100,000 if locally owned. The centre shall assist all investors to obtain permits and authorization required by other laws to set up and operate investment in Tanzania.

5.4 Certificate of Incentives

i) Prepare and submit three copies of business plan

While lodging application for the certificate of incentives, a simple business plan is required containing the following information among other things:

- Investors profile
- Project Investment cost
- Sources of finance
- Employment generation
- Implementation schedule
- Environmental impact assessment, if any

ii) Additional documentations that should be accompanied during the application process include the following:

- 3 duly filled copies of TIC Application Forms
- TIC Application Forms are available at the Centre in Dar es Salaam
- A copy of the company's Memorandum and Articles of Association
- A certified copy of the Certificate of Company Incorporation
- Evidence of sufficient finance capital available to implement the project
- Evidence of Land ownership i.e. Land title, Lease agreement or equivalent
- covering letter to which the above are attached

5.5 Starting a business

Starting a business involves 9 steps and takes about 26 working days.

	Procedural step	Indicative Timeframe	Regulatory Authority
1	Apply for clearance of the proposed company name	1 day	BRELA
2	Obtain a notarized declaration of compliance	1 day	Notary
3	Apply for company incorporation and obtain the certificate of incorporation	4 days	BRELA
4	Apply for taxpayer identification number (TIN)	1 day	TRA
5	Obtain taxpayer identification number (TIN)	1 day	TRA
6	Apply for a business license	6 days	MITE or LGA
7	Apply for the VAT certificate	4 days	TRA
8	Register for the workmen's compensation insurance	1 day	WCF and TIRA
9	Obtain Social Security registration number	7 days	SSRA

5.6 Taxes

The taxes involved in investment projects are: (i) Corporate tax (30% for both resident and non-residents); (ii) Withholding tax (for dividend payments, pension, insurance premium, royalties, transport and disposal of assets); (iii) Income tax rates for individuals (the marginal rate ranges from 18.5% to 30%); (iv) Income tax rate for non- resident individuals (a flat rate of 20% applies); (v) Taxable value of employment benefits (generally all benefits are taxable); (vi) Capital gains tax (the gain/loss upon sale realization is included in business income; (vii) Taxed at the general rate); (viii) Skills and development levy (6% of the gross emoluments paid to employees); (ix) Regulatory Agencies levies depending on service/product line; and (x)

District Authorities levies which vary depending on the operations and produced products and services.

Value Added Tax (VAT): VAT is consumption tax charged at a single rate of 18%. Registration is compulsory for any business, which has a turnover of more than 40mn TZS per annum. Applicants for VAT registration should complete form No. VAT 101. A taxpayer is required to submit monthly VAT returns along with the payments to the nearest regional VAT office by the last working day of the month following the month of business.

Capital goods and deemed capital goods for investment do not attract VAT up front as the VAT is deferred to allow investor relief of tax up front. VAT deferment on any capital goods is open to all VAT registered and non-registered traders.

VAT refunds are made either within 30 days or 6 months from the due date depending on the type of taxpayer. Regular repayment traders like exporters can claim their refunds within 30 days while other traders can get their refunds after six (6) months. There are various goods and services that are either zero rated, such as exports or VAT exemption, such as health supplies and tourists services. The TRA desk at TIC will provide the list of goods and services falling under these categories as well as those with special relief.

Personal income taxes: An individual who is resident in and has a permanent home in Tanzania is subject to income tax on his worldwide income. Non-residents are normally subject to income tax on income accrued in or derived in the Tanzania at a rate of 15% of the gross amount payable. A person is normally regarded as resident if he has a permanent home in Tanzania or was present in Tanzania during the year of income for 183 days or more. A person will also be regarded as resident if he was present in that year of income and in each of the two preceding years of income for periods averaging more than 122 days in each such year of income.

Employee benefits: A variety of employee benefits are taxable. These include housing, vehicles and interest-free loans provided by the employer. The contribution to the National social Security fund (NSSF) is 20% of the employee's gross pay with both the employer and the employee sharing the burden (10% each). This contribution is tax-deductible for both.

Skills and development levy: The skills and development levy is payable by any employer who employs four or more persons; the rate is 4.5% of the gross wage. In addition, the levy is tax-deductible. Furthermore, employment in agriculture is exempt from the levy.

6.0 INVESTMENT INCENTIVES

The Tanzania Investment Act (TIA, 1997), transferred all the tax incentives to Income Tax, 2004, East African Community Customs Management Act, 2004, Value Added Tax Act, 1997 as revised in 2006. Fiscal and non-fiscal incentives offered to investors include the following:

- Access to various services related to permits, licenses and approvals in the TIC One Stop Facilitation Centre.
- The recognition of private property and protection against any non-commercial risks.
- VAT Deferment granted on project capital Goods such as Plant & Machinery. However the persons has to carry on an economic activity, keeps proper VAT records and file returns, has no Tax outstanding and VAT payable in respect of each unit of the Capital goods is twenty million Shillings or above.

A number of tax incentives are granted to both local and foreign investors in order to encourage investment as shown below.

Item	Duty	VAT
All capital goods	0%	Relieved
Corporate Tax	30%	
Listed Company to DSE	25%	
Withholding tax on dividends	10%	
Withholding tax on interest	10%	

Annexes

Annex 1: Useful Contacts

Executive Director, Tanzania Investment Centre Shaaban Robert Street, Plot 9A,B P. O. Box 938, **DAR ES SALAAM.** Tel: +255-22-211 6328-32 Email: geoffrey.mwambe@tic.co.tz	Permanent Secretary, President's Office - Regional Administration and Local Government (PO-RALG), P. O. Box 1923, **DODOMA.**
Permanent Secretary, Vice President's Office, Government City, Mtumba Area, P. O. Box 2502, **40406 DODOMA.** Tel: +255 026 2329006 Fax : +255 026 2329007 Email: ps@vpo.go.tz	Permanent Secretary (Health), Ministry of Health, Community Development, Gender, Elderly and Children, University of Dodoma, College of Social Science and Humanity, Block 11, P.O. Box 573, **40478 DODOMA.**
Director General, National Environment Management Council (NEMC), Regent Estate Plot No. 28/29/30, P.O. Box 63154 **DAR ES SALAAM.**	

Annex 2: List of Relevant Legislation

	Legislation	Responsible Institution
1.	Tanzania Investment Act 1997	TIC
2.	Companies Act No. 12 of 2002	BRELA
3.	Business Activities Registration Act, 2007	
4.	Business Names (Registration) Act, Cap 213	
5.	National Industries (Licensing and Registration) Act, Cap 46	
6.	Trade and Service Marks Act No. 12 of 1986	
7.	Patents (Registration) Act of 1994	
8.	Public Private Partnership Act, 2009	Ministry of Finance and Planning
9.	Electricity Act, 2008	Ministry of Energy
10.	The Local Government (District Authorities) Act, 1982 as amended to 30th June 2000	PO-RALG
11.	The Local Authorities (Urban Authorities) Act, 1982 as amended to 30th December 2000	
12.	Urban Planning Act No. 8 of 2007	
13.	Public Health Act No. 1 of 2009	MHCDGEC
14.	Occupational Health and Safety Act No. 5 of 2003	OSHA
15.	Environmental Management Act No. 20 of 2004.	Vice President's Office/ NEMC
16.	Industrial and Consumer Chemicals (Management and Control) Act No. 3 of 2003	GCLA
17.	Water Resource Management Act No. 11 of 2009	Ministry of Water
18.	Water Supply and Sanitation Act No. 12 of 2009	
19.	Standards Act (2009)	TBS
20.	Land Act No. 4 of 1999	MLHHSD
21.	Village Land Act No. 5 of 1999	
22.	East African Community Customs Management Act of 2004	TRA
23.	Income Tax Act of 2004	TRA
24.	Value-Added Tax Act of 1997 as revised in 2006	TRA
25.	Employment and Labour Relations Act No. 6 of 2004	PMO-LYEPwD
26.	Labour Institutions Act No. 7 of 2004	
27.	Non-Citizens (Employment Regulation) Act 2015	
28.	Immigration Act no 7 of 1995	MHA
29.	Workers Compensation Act No. 20 of 2008	WCF

Legislation	Responsible Institution
30. Social Security Regulatory Authority Act Cap 135 R.E 2015	SSRA
31. Insurance Act No.10 of 2009	TIRA