

**Iringa Water Supply & Sanitation Authority  
(IRUWASA)**



**Business Plan : 2021/2022- 2023/2024**



**May, 2021**

## **ABBREVIATIONS AND ACRONYMS**

<b>ACRACCS:</b>	Associazione di Cooperazione Rurale in Africa Centro Cooperazione Sviluppo (Italian Foundation)
<b>APM:</b>	Asset Management Plan
<b>BRN:</b>	Big Results Now
<b>BODs:</b>	Biochemical Oxygen Demand
<b>CAPEX:</b>	Capital Expenditure
<b>CBD:</b>	Central Business District
<b>CBOs:</b>	Community Based Organisations
<b>COD:</b>	Chemical Oxygen Demand
<b>CRM:</b>	Customer Relations Management
<b>CM:</b>	Commercial Manager
<b>DPs:</b>	Domestic Points
<b>DN:</b>	Diameter Nominal
<b>EU:</b>	European Union
<b>EWURA:</b>	Energy and Water Utilities Regulatory Authority
<b>FM:</b>	Finance Manager
<b>GiZ:</b>	German Bank of Development
<b>HIV/AIDS:</b>	Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome
<b>HRAM:</b>	Human Resources & Administration Manager
<b>HoDs:</b>	Heads of Departments
<b>HPMU:</b>	Head of Procurement Management Unit
<b>HPRU:</b>	Head of Public Relations Unit
<b>IRUWASA:</b>	Iringa Water Supply and Sanitation Authority
<b>ISO:</b>	International Standard Organization
<b>KfW:</b>	Kreditanstalt für Wiederaufbau
<b>KSIs:</b>	Key Strategic Issues
<b>LCM:</b>	Life Cycle Management
<b>MIS:</b>	Management Information System
<b>MoW:</b>	Ministry of Water

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<b>MoU:</b>	Memorandum of Understanding
<b>MD:</b>	Managing Director
<b>NAWAPO:</b>	National Water Policy
<b>NRW:</b>	Non-Revenue Water
<b>OPEX:</b>	Operating Expenditure
<b>PESTEL:</b>	Political, Economical, Sociological, Technological, Environmental & Legal
<b>SWOC:</b>	Strengths, Weaknesses, Opportunities & Challenges
<b>TBS:</b>	Tanzania Bureau of Standards
<b>TDS:</b>	Total Dissolved Solid
<b>TM:</b>	Technical Manager
<b>uPVC:</b>	Unplasticized Polyvinyl Chloride
<b>WHO:</b>	World Health Organization
<b>WSPs:</b>	Waste Water Stabilization Ponds

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## **EXECUTIVE SUMMARY**

The Business Plan for Iringa Water Supply and Sanitation Authority (IRUWASA) covers a three-year period from year: 2021/2022 to 2023/2024. It has been prepared using



the guidelines issued by EWURA in 2016. Additionally IRUWASA Business Plan during its preparation considered the focus of National Water Policy of 2002, Tanzania Five Year Development Plan (2021/2022 and 2025/2026), Strategies mentioned in the of Ruling Part Manifesto 2020, targets of Tanzania Development Vision 2025 and The United Nations Sustainable Development Goals (2030 Agenda). The introductory part of this Business Plan briefly describes: the contents of the Business Plan; objectives; level of involvement during the process by employees and other stakeholders; and IRUWASA's establishment and Management composition (organization structure).

IRUWASA's description covers: the history of the Authority,, its geographical and geophysical structure; demographics and service area; main IRUWASA's stakeholders; customer care and communication; major contracts, and legal changes which might impact IRUWASA's operation in one way or the other.

IRUWASA has defined its 'Mission' statement as a key part to implement this Business Plan. ***"IRUWASA's mission is to provide adequate and safe water and sanitation services to Iringa Municipal, Ilula and Kilolo Townships population at affordable and cost reflective prices in order to enhance their health and quality of life"***.

The Vision and Mission statements give guide to the organisation's: objectives, strategic issues and activities to be carried out. Moreover, IRUWASA has clarified its roles and defined the core values in its operations for sustainable service delivery.

In the situational analysis, IRUWASA among other things, conducted SWOC to enable it to take into account its resources and how these resources can be mobilized to achieve its strategic objectives. The situation analysis was addressed the organisation's internal environmental factors with respect to:: internal capabilities; physical resources; financial resources; human resources; intangible resources, and available assets.

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The Weighted Average Tariff (WAT) will be TSh. 2100 throughout the Business Plan planning period. The proposed tariff will contribute to achieve the set objectives. Due to the fact that the tariff to be used will be the same, it is expected that most of the planned activities to be implemented will be operational activities and the small part of the investment extended to Ilula and Kilolo Townships.

The Internal Environment is a pointer of the organization's capacity to meet Customer needs and expectations. The analysis also examined the External Environment, areas which the organization has no direct influence but they need, either to be exploited or appreciated when determining an organization's choice of direction and action.

The internal and external appraisal clarified IRUWASA's organizational Strengths, Weaknesses, Opportunities and Challenges (SWOC). The SWOC analysis gave IRUWASA, strategic issues of the Business Plan which will influence the attainment of IRUWASA's mission and vision.

The Situation Analysis consequently, enabled IRUWASA, in its determination to transform the current situation of water and sanitation services in the future, to develop strategic objectives as follows:

1. Water supply services improved;
2. Sanitation services improved;
3. Financial sustainability improved;
4. Operational efficiency and service sustainability improved;
5. Measures to combat the HIV/AIDS pandemic and promote corporate social responsibility culture and gender mainstreaming in IRUWASA's operations improved and
6. Measures to combat corruption at the work place enhanced

The action plan on how these objectives can be achieved and the associated costs have been established in the Business Plan.

Some of main activities to be implemented include the following: -

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1. Construction of water distribution and sewerage networks;
2. Construction of waste water stabilization ponds;
3. Rehabilitation of water treatment plant and drilling of boreholes;
4. Procurement of working tools such as computers, furniture, motorcycles, vehicles and other office equipment;
5. Increase number of house connections (water and sewer customers);
6. Conduction of Customer survey
7. Employ more staff to cover vacant position
8. Educate staff about HIV AIDS
9. Educate staff about effect of corruption
10. Increase staff remuneration
11. Enhance board members leadership skills.

The major risks associated with this Business Plan are the financial risks, which can be caused by failure of some customers to pay their water dues on time as well as increase in inflation. Environmental risks involve increase of treatment costs, river silting due to water pollution or water deficit due to land degradation leading to failure in implementing the planned objectives. The mitigation measures are in place to ensure that possible assessed risks are overcome. Measures to be applied include: educating the community living along water sources on conservation strategies and some basics on the Environmental Acts and its Regulations; and conducting rehabilitations, repair and maintenance of IRUWASA assets depending on the situation of the particular assets.

The budget to finance envisaged activities from IRUWASA own funds stands at: TZS. 9.08 billion; TZS. 10.6 billion, and TZS. 10.8 billion in years 2021/2022, 2022/2023 and 2023/2024 respectively. The proposed Business Plan Total budget (Tsh.65.8 billion) and financial projections (as shown in Annex C & D respectively), is Tsh. 30.6 billion (46.4%) which is expected to be covered by IRUWASA and Tsh. 35.3 billion (53.6%) to be covered by the Government and other stakeholders.

The average

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## 1.0 INTRODUCTION

This Business Plan aims at making sure that: water supply and sanitation services are well established; revenue collection efficiency is increased; financial sustainability is achieved; operation efficiency is attained, and behavior change in HIV/AIDS and gender mainstreaming are enhanced. In cooperation with the Board of Directors, IRUWASA staff and other stakeholders, the Authority will ensure the set objectives are achieved within the planned period to support the economic growth and health of Iringa Municipal population, Ilula and Kilolo Townships.

IRUWASA Business Plan has been prepared basing on the assumptions that;

- Economic parameters will stand in average as stated in this Business Plan. The cost reduction programme will be fully implemented. Working ratio will be 0.69 , production capacity and efficiency will be expanded and improved to attain 26,830m<sup>3</sup>/day, NRW will be reduced from 28% in 2020/2021 to 26% by 2022/24, and execution of the tariff setting will be as per plan in order to meet the proposed planned activities as indicated in the Income Statement. Development Partners funded planned projects will be realized, contribution to investment will not be less than 35%, customers increase will be from 30,332 to 42,332, changes in power tariff will be immediately addressed by the regulator and there will be no any legal changes which will affect IRUWASA operational activities.

This Business Plan contains the following parts: introduction; description of IRUWASA; IRUWASA's vision; mission and objectives; its current performance; standard and performance targets to be achieved; three years business forecast; action plan; asset management plan; outlined investment plan, capacity development, and financial projections.;

The accomplishment of this plan depends on the availability of recourses and collaboration from all stakeholders including: IRUWASA's Board of Directors; employees; customers; MoW; Regional and District Commissioner's Office; Iringa

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Municipal Council; Rufiji Basin Water Board; EWURA; Suppliers; GiZ; KfW; EU; ACRA; WARIDI, and other Development Partners.

The preparation of the Business Plan involved employees at different levels of the Authority. In order to get their inputs, IRUWASA Management distributed questionnaires to staff who contributed ideas on what could be included in the Business Plan. Soliciting ideas from staff was also done through sectional and departmental meetings. IRUWASA Management discussed and deliberated on the draft Business Plan on 17<sup>th</sup> May, 2021 and the same was discussed by Workers Council on 18<sup>th</sup> May 2021. During Management deliberations, stakeholders' ideas as given on 08<sup>th</sup> December 2020 through public meeting, during preparing IRUWASA Business Plan (2020-2023) were given due weight. Finally, it was submitted to IRUWASA Board of Directors on 27 May 2021 for review, discussion and approval. The Board of Directors is another level of participation as the Board members represent different groups of water users.

## **2.0 DESCRIPTION OF IRUWASA**

The Water Supply and Sanitation Act 2019 provides the legal institutional framework for the management and provision of water supply and sanitation services. The Water Supply and Sanitation Act makes the Boards of Directors the sole mandated authorities to obtain the licenses for the provision of water and sanitation services in their areas of jurisdiction. The Water Supply and Sanitation Act aims at addressing the weaknesses and challenges that face the water industry.

Iringa Water Supply and Sanitation Authority (IRUWASA), being one of the water supply and sanitation authorities, is an autonomous legal entity established on 1<sup>st</sup> July 1998 as per the Water Works Act as amended by Act No.8 of 1997 and as repealed and replaced by the Water Supply and Sanitation Act No.12 of 2009 and Act No. 5 of 2019. The law entrusts IRUWASA to supply potable water and provide sanitation services to the residents of Iringa Municipality, Ilula and Kilolo Townships at reasonable tariff and agreed quality in accordance with the service

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standards and guidelines provided by the Ministry of Water (MoW) and the Energy and Water Utilities Regulatory Authority (EWURA).

### **2.1 Leadership and Management**

IRUWASA is governed by a Board of Directors which makes policies for the Authority. The Board comprises of ten members who come from different water users and stakeholders. The day-to-day management is run by the Managing Director who is assisted by four Heads of Departments. The departments are: Technical; Commercial; Human Resource and Administration, and Finance. He is also supported by five independent units namely: Procurement; Internal Audit; Legal Counsel; Information and Communication Technology, and Public Relations. Generally, IRUWASA's key personnel have all the necessary qualifications as per organizations' Scheme of Service. Most of the top management members have achieved postgraduate education level (**Brief profiles for Board of Directors and key personnels' qualification and experience are presented in Table 2.1).** *con*

**Table 2.1: IRUWASA Board of Directors Qualifications and Experience**

S/N	NAME	POSITION	QUALIFICATION/DISCIPLINE	NATIONALITY	DATE OF APPOINTMENT	AGE
1.	Mr. Pascal T. Mhongole	Chairperson	Teacher: BA (Edu); MA	Tanzanian	01/07/2016	76
2.	Eng David Palangyo	Secretary	Master's of Science in Municipal Water and Infrastructure (Water Supply engineering), Bachelor of Science in Civil Engineering, Registered by Engineers' Registration Board of Tanzania (ERB) as a Professional Engineer.	Tanzanian	<u>05/12/1975</u>	
3	Cecilia S. Shirima	Member	BA Education/Administrator/Teacher	Tanzanian	01/01/2020	75

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4	Mrs Happiness Seneda	Member	Bachelor of Business Administration, MBA (Finance & Human Resources Management)	Tanzanian	23/11/2019	36
	Rev. Prof. Pius Mgeni	Member	B.A. Education, B.A. Theology, M.A. Philosophy, M.A. Education, PhD Philosophy.	Tanzanian	01/01/2020	56
6.	CPA. Hamidu Njovu	Member	Accountant: Advanced Diploma in Accounting, Postgraduate Degree in Accounting. CPA (T)	Tanzanian	23/11/2019	55
7.	Hon. Nguvu Chengula	Member	BA Education	Tanzanian	23/11/2019 to 31/12/2019	49
8.	Bibi. Ashura Nassib Jongo	Member	Form IV	Tanzanian	01/07/2016	62
9	Hamid Mohamed Mbatta	Member	<del>Technician</del> Advanced Diploma in ICT and Diploma in Banking	Tanzanian	01/01/2020	56
10	Joash Nyitambe	Member	MSc IT and Management, Masters Degree in Geoinformatics	Tanzanian	01/01/2020	57

**Table 2.2: IRUWASA Key Personnel Qualifications and Experience**

NO	NAME	ACADEMIC QUALIFICATION	PROFESSION	DESIGNATION	EXPERIENCE
1.	Eng. David Pallangyo	Master's of Science in Municipal Water and Infrastructure (Water Supply engineering), Bachelor of Science in Civil Engineering, Registered by Engineers' Registration Board of Tanzania (ERB) as a Professional Engineer.	Engineer	Managing Director	19 years
2.	Eng. Fabian Maganga	Master's of Water Resources Management, Bachelor of Science in Environmental Engineering, Registered by	Engineer	Technical Manager	17 years



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NO	NAME	ACADEMIC QUALIFICATION	PROFESSION	DESIGNATION	EXPERIENCE
		Engineers' Registration Board of Tanzania (ERB) as a Professional Engineer.			
3.	Jessica Mwalyoyo	Master's Degree in Business Administration (Marketing), Postgraduate Diploma in Business Administration (Marketing), Advanced Diploma in Business Administration.	Administrator / Marketer	Commercial Manager	13 Years
4.	CPA. Steven A. Mwasaka	Degree of Bachelor of Business Administration, Diploma in Education, ACPA (T)	Accountant	Chief Internal Auditor	15 Years
5.	CPA. Mark Lasco	Master's Degree in Business Administration (MBA Finance), Degree of Bachelor of Commerce (Accounting), CPA(T), ACCA (UK)	Accountant	Finance Manager	16 Years
6.	Amina Mwinyi	Master's Degree in Business Administration (Human Resource Management), PHR Examination, Bachelor of Arts in Political Science and Public Administration.	Administrator	Human Resources and Administration Manager	13 Years
7.	Restituta Sakila	Master's Degree in Business Administration (Marketing), Bachelor of Arts in Political Science and Public Administration.	Administrator	Head of Public Relation Unit	13 Years
8.	Adv. Edwin C. Hyera	Post Graduate Diploma in Legal Practice, Degree of Bachelor of Laws	Advocate	Legal Officer Grade I	9 Years

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NO	NAME	ACADEMIC QUALIFICATION	PROFESSION	DESIGNATION	EXPERIENCE
9.	Philbert Mbatina	Master's Degree in Business administration (Corporate Management), C.P.S.P Certificate (Procurement and Supplies Professional), Advanced Diploma in Material Management.	Procurement and Supplies specialist.	Head of Procurement Officer.	16 Years
10	Yahya A. Kamba	Post Graduate Diploma in ICT Policy and Regulations, Advanced Diploma in Information Technology	IT Specialist	Head of Information and Communication Unit	12 Years

IRUWASA started its operation as a category 'C' Authority in 1998. It was promoted to category 'B' in August 2003 and to category 'A' in May 2007. By being in category "A", IRUWASA aims at becoming the Authority that covers fully its costs. The road map to this end is envisaged through this Business Plan, which will be implemented for a period of three financial years starting from the year 2021/2022 to 2023/24.

## **2.2 Geographical Description of Iringa Municipality, Ilula and Kilolo Townships**

Iringa Municipality is located 500km South - West of Dar es salaam, and is the headquarters of Iringa Region. The current population of the Municipality, Kilolo and Ilula Townships is 267,178 (2012 Census Projections Rate) inhabitants. A greater part of the service area lies between 1,500m and 2000m above mean sea level. The mean annual temperature is 19°C and the average annual rainfall is 700mm.

## **2.3 Water Supply Services**

### **2.3.1 Water Sources and Treatment**

IRUWASA has a total of 10 water sources which is being used for service provision for her customers in its service area. Three major water sources for Iringa Municipality. These sources are Little Ruaha River, Kitwiru Springs and Nyamuhanga Borehole. Currently, 21,000 m<sup>3</sup>/day (86%)

of the water supply is tapped from Little Ruaha River while about 3,000m<sup>3</sup>/day (12%) is tapped from Kitwiro Springs and 330m<sup>3</sup>/day ( 2%). Also in Kilolo zote there are four water sources which are Ikunduvi, Mwosongela, Kiswengele and Kwastason with capacity of 2,075m<sup>3</sup> water production per day and Ilula Zone has three water sources which are Mgombezi, Ilomba and Idemle with capacity of producing 6,300m<sup>3</sup>/day.

IRUWASA has a conventional water treatment plant for raw water from Little Ruaha River. The plant comprises the units as follows : intake structure;; pre-sedimentation units (sand trap); flocculation units; sedimentation units; rapid sand filters and disinfection system; clear water reservoir; pumping water transmission mains, and water storage tanks with total capacity of 7,101m<sup>3</sup>. The treatment process for water abstracted from the Kitwiro spring is by disinfection only.

### **2.3.2 Transmission Mains and Distribution Systems**

The water supply system comprises 41.37km of transmission mains and 834.9km of reticulation. The reticulation is supplied from thirteen reinforced concrete tanks, and two concrete block tanks.

### **2.3.3 Water Reservoir and Tanks Infrastructure**

IRUWASA has one Clear Water Reservoir (CWR) at Ndiuka water treatment plant and 24 water storage tanks. Details for each tank are in table 3.5. The CWR has a capacity of 2,500m<sup>3</sup>, and the tank's total capacity is 8,415m<sup>3</sup>. The storage tanks at Kising'a, Nduli, Kitasengwa and Ulonge were acquired from Iringa District Council and Iringa Municipal Council after expanding water supply services to respective areas. The three tanks located at Ugwachanya, Hoho hill and Tosamaganga Secondary were constructed through the WARIDI program.

**Table 2.3 Water Storage Tank Details**

<b>S/N</b>	<b>Tank Name</b>	<b>Location</b>	<b>Volume (m<sup>3</sup>)</b>	<b>Material</b>
1.	Tank A	Mkwawa University College of Education	1,089	Reinforced concrete
2.	Tank B	Wilolesi	592	Reinforced concrete

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3.	Tank C	Wilolesi Redrock	592	Reinforced concrete
5.	Tank D	Lugalo	592	Reinforced concrete
6.	Tank H	Don Bosco	37	Reinforced concrete
7.	Tank E	Mtwivila	592	Reinforced concrete
8.	Tank F	Mkimbizi (TRM)	37	Reinforced concrete
9.	Tank G	Gangilonga	1,089	Reinforced concrete
10.	Tank I	Chawe/Ipogolo	352	Reinforced concrete
11.	Tank J	Kibwabwa/Ipogolo	1,089	Reinforced concrete
12.	Gangilonga Tank	Gangilonga	550	Reinforced concrete (old tank)
13.	Kitwiru Tank	Kitwiru	340	Reinforced concrete blocks
14.	Mgongo Tank	Mgongo	150	Reinforced concrete blocks
15.	Nduli Tank	Nduli	90	Reinforced concrete
16.	Kising'a - Shule	Kising'a	150	Reinforced concrete blocks
17.	Kising'a - Uwanjani	Kising'a	45	Reinforced concrete blocks
18.	Isakalilo Junction	Njia Panda ya Tosa	45	Blocks
19.	Kitasengwa	Kitasengwa	44	Reinforced concrete blocks
20.	Mtwivila Sump	Mtwivila	100	blocks
21.	Mtwivila Hill	Mtwivila	300	Reinforced
22.	Ugwachanya	Ugwachanya	200	blocks
23.	Hoho Hill	Hoho	200	blocks
24.	Tosamaganga Secondary	Tosamaganga	200	blocks
	<b>Total</b>		<b>8,415</b>	

## **2.4 Sanitation Services**

### **2.4.1 Sewerage System**

The sewerage system in Iringa Municipality, Ilula and Kilolo Townships has a total length of 68km and is relatively in good condition. It covers the central business district (CBD) area, serving 8% of total population. The main trunk sewer of the network (DN 300 Asbestos Cement) was constructed in year 2000. The lateral sewers comprise of different sizes of uPVC pipes that vary from DN 100 to DN 200. The trunk main of DN 300 is the sewer outfall, which joins the manholes to the wastewater treatment plant.

IRUWASA has wastewater stabilization ponds (WSPs). The WSPs are large, shallow basins in which raw sewage is treated entirely by natural processes involving both algae and bacteria. The plant has three units namely: two anaerobic ponds in parallel; one facultative pond in series, and two maturation ponds in series. Thereafter, the effluent from the maturation pond is discharged into two compartments of constructed wetlands for further treatment. The constructed wetlands are artificial wastewater treatment systems consisting of shallow ponds or channels in which aquatic plants have been planted. The treatment of the wastewater in the shallow ponds relies on natural microbial, biological, physical and chemical processes.

### **2.4.2 Removal of Wastewater by Cesspit Emptier Trucks**

IRUWASA owns two cesspit emptier trucks (9m<sup>3</sup> capacity each) which collect domestic wastewater from septic tanks and pit latrines and subsequently transport the same to the sludge ponds for further biological treatment process in the Wastewater Stabilization Ponds (WSPs).

### **2.4.3 Wastewater Quality Monitoring**

Wastewater quality monitoring is normally carried out several times a year. The parameters monitored are: Physical Analysis; Ph, Conductivity, COD, Chemical Analysis, Ammonia, Total Dissolved Solids (TDS), Bacteriological Analysis, E-coli, and BOD. Generally, the results from tests conducted do not meet the required effluent standards. In order to meet the required effluent standards IRUWASA

expanded the treatment plant by constructing two new maturation ponds. The project was completed in December, 2019. Additionally, IRUWASA is planning to introduce reagents for activating the microorganisms' biological process in the wastewater stabilization ponds.

## **2.5. Demographics and Service Area**

### **2.5.1 Water Supply Coverage**

The actual water production capacity from Little Ruaha River, Kitwiru spring and Nyamhanga borehole is 21,000 m<sup>3</sup>/day (86%), 3,000m<sup>3</sup>/day(12%) and 330m<sup>3</sup>/day(2%) respectively. The daily water demand is estimated at 16,000m<sup>3</sup>. The situation of water supply to the beneficiaries is satisfactory and the average service is 20 hours per day. Similarly, the water supply covers 90% of the Municipal population of 267,178 people (2012 National Census).

The un-served areas within the services area cover peri-urban areas only which include: part of Msisina, Mgongo; Nduli; Igumbilo; Itamba; Kitasengwa; Kigonzi; Ugele; Mkoga, and part of Tagamenda.

The Water Use Permit for Little Ruaha River is 16,560m<sup>3</sup>/day, for Kitwiru spring is 3,600m<sup>3</sup>/day while, for Nyamhanga borehole is 440m<sup>3</sup>/day. The unserved population some are using water from shallow wells and some from temporary rivers. But during the dry season they are forced to walk long distance looking for other water sources including water from IRUWASA served customers.

### **2.5.2 Sanitation Services**

The gravity sewerage system is only in Iringa Municipality at a central business area which has a total length of 68 km. The sewerage services cover 8% of the total 267,178 inhabitants. The trunk sewer pipes are designed to handle about 3,746,000 liters of wastewater per day. The present treatment is at 4,320,000 liters per day and the total number of connections made is 2,294, which is equivalent to 21,374 people as of June, 2020. Iringa Municipal generates around 8,272,390 liters of wastewater per day. As a matter of improving the performance of the maturation ponds, during the period two maturation ponds were constructed to increase the

retention period to improve the performance of ponds, finally meet the recommended effluent quality. Also, the shallow ponds with aquatic plants were improved to enhance the natural wastewater treatment process before reaching the river.

### **2.5.3 Service for the Poor**

IRUWASA provides free water service of 8 buckets per family per day to poor households. The number of poor house-holds identified (up to June, 2020) was 24.

### **2.6 IRUWASA Stakeholders**

In order to achieve its overall objectives, IRUWASA has been collaborating with different stakeholders including: customers; Ministry of Water (MoW); EWURA; Regional and District commissioners' Offices; Iringa Municipal Council; Rufiji Basin Water Board; ACRA; CCS; WAMI; Suppliers; GiZ; KfW; EU, and other Development Partners. IRUWASA has been communicating with her stakeholders through: meetings; letters; public addresses by use of loud speakers, local radios, workshops, and seminars.

In order to meet stakeholders' expectations, IRUWASA has a dedicated section, which deals with customer care and a unit that deals with public relations. The two are playing the main role of strengthening communication and good customer relations through: meetings; public announcements; letters; radios as well as workshops and seminars.

### **2.7 Major Contracts and Agreements**

The implementation and achievement of this Business Plan has taken into consideration all contractual agreements that might have an impact on the planned activities. These include: -

- Customer Charter which aims at providing reliable service to customers;
- Credit Policy which aims at providing reliable service to customers;
- Memorandum of understanding between Ministry of Water and IRUWASA, and

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- Partnership and MoUs with different organizations supporting IRUWASA's role of improving service and increasing customer base.

Currently, IRUWASA has partnership with the following stakeholders:

- a) Hope Servicing Systems for supply of prepaid water meters;
- b) Oikos Tanzania LTD for supply of smart phone meter reading software, and
- c) USAID/WARIDI for water supply construction project.

All agreements are still under implementation and the progress is quite good. We look forward for improved IRUWASA services through these and other expected partnerships.

## **2.8 Changes in Business**

During the last planning period, the Authority experienced changes in the following areas: -

- Incoming of a new IRUWASA Board of Directors effective from 2<sup>nd</sup> February, 2020;
- Extension of service area to cover Kilolo and Ilula townships;
- Implementation of WARIDI Construction Project at Ugwachanya, Kalenga, Tosamaganga and Mgera villages;
- Implementation of Isimani Tarafani Project of 29 Villages, and
- Supervision of Iringa and Njombe Towns' Water Projects.

## **3.0 IRUWASA's VISION AND MISSION**

### **3.1 Vision**

***"To be the best water supply and sanitation authority in Tanzania in the provision of modern, quality and sustainable services".***



### **3.2 Mission**

***"To provide adequate and safe water and sanitation services to Iringa Municipal, Kilolo and Ilula townships population at affordable and cost reflective prices in order to enhance their health and quality of life."***

### **3.3 King Slogan/Motto**

***"Your Joy is Our Happiness".***

### **3.4 IRUWASA Core Values**

In order to fulfill her vision and mission statements, IRUWASA adheres to the following core values:

- i. **Reliability:** IRUWASA aims at offering and performing the promised services accurately and all the time;
- ii. **Accountability:** Willingness to help customers and provide prompt services and take responsibility for the intended poor performance;
- iii. **Competence:** Ensuring that staff have required skills and knowledge to deliver water supply and sanitation services;
- iv. **Security:** Ensuring customers' freedom from danger, risk, or doubt concerning the services of IRUWASA;
- v. **Sustainability:** To ensure financial, economic, operational and environmental sustainability is guaranteed;
- vi. **Creativity and innovation:** Involving the use of skills and imagination to offer mandated services, and
- vii. **Integrity:** Being honest and having strong moral principles in the delivery of mandated services.

### **3.5 IRUWASA Objectives**

The methodology applied during the formulation of the strategic objectives was to critically conduct the situational analysis. This was done through one stakeholders' meeting, one operational staff meeting and two management meetings. Thereafter, critical issues to be worked upon were raised. Nevertheless, in order to implement these objectives, many assumptions were taken into consideration as mentioned in **Chapter 11.5** of this report.

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For IRUWASA to sustainably provide good water supply and sanitation services to the entire Iringa Municipality, Ilula and Kilolo townships, six (06) objectives were developed .

#### **4.0 CURRENT AND FUTURE PERFORMANCE TARGETS OF IRUWASA**

##### **4.1 Current Performance Targets**

A number of interventions were applied to make sure that all set objectives and strategies are implemented as planned and agreed as shown in **Appendix A**. During the planning period (2018/19- 2020/21), IRUWASA' objectives and targets were achieved by 96%, while unachieved targets were only 4% of the planned targets. Most of the pending activities will be implemented during the period of the year 2021/22. Activities to be implemented in the coming financial year 2020/21 i.e. TBS and ISO certification, construction of booster station and transmission line at tank G (Mafifi area).

##### **4.1.2 Overall Quality of Service**

IRUWASA has been providing good services to its customers based on the standards and quality of services set in the Memorandum of Understanding between her and the Ministry of Water. The overall service standards are being monitored by EWURA. IRUWASA is responsible to the Ministry of Water in case of failure to achieve the agreed performance levels. The existing and planned service levels are detailed in ***Annex A on Current and Planned Service Levels, Table 1.***

##### **4.1.3 Guaranteed Service Standards**

IRUWASA promised to provide service to its customers according to quality standards. The Authority had an obligation to fulfill the promise. Failures to meet the set standards and service levels could attract compensation based on loss incurred. Payment should be a one-time credit on customer's bill. The existing and planned guaranteed service standard and service levels are provided in ***Annex A on Minimum Guaranteed Service Levels, Table 2.***

##### **4.1.4. Performance Indicators Related to Water Supply and Sewerage Services**

The Business Plan (2021/22-2023/24) will guide the Authority towards achieving the set standards and targets for the purpose of ensuring that all Iringa Municipal, Ilula and Kilolo Townships customers receive good services at a reasonable price.

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IRUWASA takes the obligation of making sure that the whole population is continuously supplied with adequate water that meets standards set by Tanzania Bureau of Standards (TBS), World Health Organization (WHO) and by the Ministry of Water.

Furthermore, wastewater will be treated to meet Tanzania Effluent Standards. Additionally, the sludge treatment and disposal shall be environmentally friendly.

The following are the Key Result Areas to be given special attention towards effective implementation of IRUWASA core business.

1. Insufficient water supply services
2. Inadequate Sanitation Service
3. Inadequate financial capacity
4. Unreliable Working Procedures
5. HIV/AIDS Prevalence Reduced Among Staff
6. Behavioral Change in Combating Corruption

Additionally, IRUWASA will ensure rehabilitation of water and sewerage infrastructure and protection of user interest by conducting social and environmental impact assessment on its operations. The plan is to maintain water quality to achieve TBS and WHO standards as per IRUWASA vision.

Many precautions have been taken by IRUWASA for sustaining reliable services to its customers as elaborated in this Business Plan, IRUWASA's Risk Management Policy as well as IRUWASA's Strategic Plan.

**4.2 Standards and Future Performance Targets to be Achieved by the Authority**

The achievement of set standards and targets will mainly depend on IRUWASA's future financial capability to finance a number of earmarked investments including:

-

1. Increase of water production by drilling 2 new boreholes;

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2. Expansion of water distribution system by 20km each year (including Ilula and Kilolo);
3. Expansion of sewerage system by 6km each year;
4. Connect 3,000 new water customers each year;
5. Connect 160 new sewer customers each year through the existing system;
6. Construction of 2 new booster stations to serve the mountainous areas;
7. Procurement of 3 standby (spare) pumps for Line B, G and J;
8. Drilling and development of 3 new boreholes;
9. Procurement of working tools (cars, machines, equipment);
10. Procurement of water meters (pre-paid and postpaid);
11. Installation of frequency drive for energy efficiency; and
12. Search for new water source.

The existing and planned Performance Indicators related to Water Supply and Sanitation Service Levels are detailed in **Annex A on Tables 3 and 4** respectively.

This Business Plan will be financed by a total of TZS. 65.8 billion for the three years. The main source of fund for the planned investment will be IRUWASA own sources (46%) and Government and other stakeholders' grants (54%).

## **5.0 BUSINESS PLAN FORECAST**

### **5.1 Business Analysis**

#### **Service to Customers with Low Income**

Water is a basic need and so a basic human right. In order to ensure that every person access water supply and sanitation services, IRUWASA will continue to help low-income customers get connected to the water supply and sewerage system through loan facility. This will be achieved because during the planning period, IRUWASA in collaboration with IDYDC will sustain the established loan facility scheme targeting low-income customers. The purpose of this facility is to enable people with low income and those who can't afford to get lump sum amount to pay for new water connection but can afford to pay for at least 5-8 buckets per day to get water supply connections through a soft loan scheme.

Additionally, IRUWASA will continue to give new connection loans and free water and sanitation services to low-income customers in support of pro poor interventions.

#### **Efforts to Increase Customer Base**

Since its inception, IRUWASA has been cooperating and partnering with different organizations in order to support its role of improving service and increasing its customer base. In fulfillment of this course, IRUWASA signed the partnership contract with ACRA CCS for implementing the water supply projects to serve peri urban areas. Such partnerships which complement IRUWASA's efforts to increase customer base, will be maintained and enhanced in the next planning period. Furthermore, the Business Plan ( July,2021- June, 2024) has prioritized extension of water and sewerage networks by 120km and 108km respectively in order to increase the customer base. Investment in water and sewerage network will go hand in hand with offering discounts on new service connections charges. The target is to attain 42,332 and 5,654 water and sewerage customers respectively by June 2024 from the current 30,332 water

connections and 2,294 sewer connections. The target is to raise the customer base by 28.3% for water supply and 59.4% sewerage service by June, 2024.

### **Financial Stability and Prepaid Water Meters**

IRUWASA signed another MoU with Hope Servicing Systems for supplying prepaid water meters to IRUWASA to support IRUWASA's debt management and collection strategy. Installation of prepaid water meters has helped IRUWASA to decrease customers' outstanding debts including those of Government Institutions. Furthermore, IRUWASA has fully embarked on the utilization of the Government Electronic Payment (GePG) System in enhancing its revenue collection.

Nevertheless, IRUWASA will fully utilize the revenue collection management software in order to support human efforts in debt collection.

In order to stabilize IRUWASA's financial liquidity IRUWASA, will continue implementing the Revenue Collection Strategy and installation of more prepaid water meters in order to increase collection efficiency from current, 96% to 98% by June, 2024.

### **Measures to Deal With Other Competitors**

Reliability, affordability and professional delivery of mandated services is the only way to outdo potential competitors. IRUWASA has set sound strategies to make sure that all her customers receive enough, reliable and affordable water and sanitation services. This has been guaranteed through a number of investment interventions which will enable the objective of providing reliable and affordable mandated services to be achieved. These interventions include: increase of water production by 2,500m<sup>3</sup>/day; water and sewer network extension by 120km and 108km (Iringa Municipality, Ilula and Kilolo Townships and the surrounding areas), and enhancing staff customer care and professionalism in service delivery.

## **Key Personnel**

All key positions are filled with people with the right knowledge and skills. IRUWASA has planned to continue recruiting new staff in line with work requirements and the level of technological advancements.

### **5.1.1 IRUWASA Internal Environment Analysis**

The assessment of internal factors aimed at systematically answering the question of how IRUWASA is internally positioned to meet the customers' current and future needs and expectations. The Internal environmental scan involves an organization looking inwards to assess its own strengths and weaknesses in the light of the above objectives. The issues observed in the internal environmental scan were wrapped up and used for developing solutions as described in the analysis of mentioned factors below. The areas assessed included: Protection of users' interest; operator's financial and economic sustainability, and environmental sustainability. ***See Appendix B.***



#### **5.1.1.1 Protection of User Interests**

Service accessibility during the last planning period was generally good. However, there is room for improvement which is to take place during the coming planning period. In the coming planning period, IRUWASA expects to: increase water production by 2,500m<sup>3</sup>/day; extend the water distribution network by 120km, and the sewerage network by 108km in Iringa Municipality, and surrounding areas, and 60km at Kilolo and Ilula Townships. The aim is to make sure that customers have reliable access to services. Furthermore, IRUWASA is guaranteeing attainment of acceptable service levels.

#### **5.1.1.2 Financial and Economic Sustainability**

The priority is to make sure that all sources of revenue are well managed and the resources available are used to add value to the Authority's operations. Consequently, a number of interventions will be applied in order to enhance efficiency and productivity. Such interventions will include: active revenue collection with the support of utilization of prepaid and smart metering technology; reduction of NRW; use of cost-effective options, and ensure enough and reliable water supply.

Furthermore, regular rehabilitation will guarantee IRUWASA's infrastructure sustainability for reliable service delivery.

IRUWASA staffing level is satisfactory compared to the number of water supply and sewerage connections available. Future human resource requirement will be filled as per planned establishment.

#### **5.1.1.3 Environmental Sustainability**

Environmental sustainability is pivotal to sustainability of IRUWASA's operations. Interventions planned are those that will ensure water sources and the environment are protected by ensuring that: human encroachment to water sources is discouraged; planting water friendly trees; establishment of environmental clubs, and wastewater transportation and sludge disposal and

effluent discharge is environmentally friendly. To achieve this, environmental laws will be enforced and two additional maturation ponds will be constructed to improve effluent quality.

#### **5.1.2 IRUWASA's External Environmental Analysis**

External factors influence an organization's choice of direction and action and ultimately, its organization structure and internal processes. The external factors are detailed hereunder and further categorized in three interrelated subcategories as shown in **Appendix C**.

#### **5.1.2.1 Political and Legal Factors**

Political interference can compromise IRUWASA's welfare for the purpose of winning political affiliations. Politics can influence change of water policy, change of leadership, availability of investment funds, tariff setting and equitable distribution of water and sanitation services.

Legal framework can influence change of service area, change of institution or Government structure and Water Act operational rules and regulations.

#### **5.1.2.2 Economic Factors**

Macro and micro economic fundamentals such as inflation, household income, and taxation can influence IRUWASA's operations by affecting customers' ability and willingness to pay water bills. More importantly, these economic dynamics can affect IRUWASA's ability to finance operations.

#### **5.1.2.3 Social Factors**

Social setting can impact on service delivery by influencing the level of willingness to pay bills and cultivate bad behavior such as illegal water consumption.

#### **5.1.2.4 Technological Factors**

Embracing technology in IRUWASA's operations would increase efficiency and productivity. Therefore, IRUWASA will reap from technological advancements in: meter reading and bills production; revenue collection; as well as water treatment, and distribution.

#### **5.1.3 Competitive Analysis**

IRUWASA is facing very little competition in the water industry. The competitive challenge is remotely felt from: water bottling companies; individual borehole operators, and private drilling companies. However, IRUWASA has a comparative advantage in the provision of water and sanitation services due to: the huge investments in water and sanitation infrastructure; assured Government support; enjoyment of economies of scale brought about by the

huge customer base, and availability of professionals manning the Authority's operations.

This Business Plan will further guide interventions aiming at ensuring that IRUWASA maintains supremacy in the overall share in the water and sanitation industry.

#### **5.1.4 SWOC Analysis**

Analysis of available strengths, weaknesses, opportunities and challenges facing IRUWASA will help IRUWASA in gaining its own understanding on how it is positioned to exploit available opportunities and transforming challenges to opportunities.

The assessment is addressed in terms of its internal environment with respect to internal capabilities, physical resources, financial resources, human resources and intangible resources.

The stipulated strengths, weaknesses, opportunities and challenges are summarized in **Appendix. D**

#### **5.1.4.1 Critical Issues**

In view of the foregoing SWOC analysis, a number of critical issues to be considered in the business plan were identified as follows:

- High NRW;
- How can IRUWASA Invest in increasing water production considering industrialization economy and population growth ;
- How can IRUWASA Invest for extension of water supply considering the high water demand especially in the per urban of the service area;
- How can IRUWASA improve Sewerage and sanitation coverage while such investments needs big capital;
- How can IRUWASA improve financial sustainability while customers are reluctant to pay and ;
- How can IRUWASA deal with dilapidated and un-replaced water supply network in some areas;
- How environmental conservation and protection of water sources;
- Demand for water in peri-urban areas and the neighboring population;
- Gender equity;
- Technology application in IRUWASA daily undertakings;
- Educational/awareness programs for customers,
- Behavior change in corruption related matters.

## **5.2 Marketing Strategy**

In the coming three years (2021-2024) demand for water is expected to increase as a result of expansion of Iringa Municipality boundaries and service area to, Ilula and Kilolo Townships growth of water demand by productive industries, increasing students' enrollment in higher learning institutions and growth of tourism in the southern circuit which is currently being enhanced by REGROW Programs. In order to meet this increasing water demand and consequential increased demand for sanitation services, water and sanitation services marketing and public relations are necessary.

Public relation is a strategic communication process that builds on mutual beneficial relationships between organizations and the community. To effectively implement this, IRUWASA has set a number of interventions, which will: strengthen the customer relations such as meetings with its stakeholders; house to house visit;, notifications through mobile phones, and use of different local radios.

### **5.2.1 Water Demand**

On average the majority share of IRUWASA customers are domestic water users, followed by institutions, commercial, industrial and kiosk water users. The distribution of share in water consumption is proportional to the Authority's revenue. Most of IRUWASA's revenue is generated from domestic water users followed by Institutions and other customer categories.

Currently IRUWASA meets customers' water demand. The plan is in place to ensure that future customer water demand is being fully met especially for industrial and peri urban customers. Through this Business Plan, IRUWASA has planned to explore some new water sources and increase production capacity, by improving the treatment plant, and drilling two boreholes so as to achieve the 26,830m<sup>3</sup> per day.

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IRUWASA customers comprise of five categories of beneficiaries as follows:-

- Domestic 94.17% ;
- Institutions 2.78%;
- Commercial 2.13% ;
- Industrial 0.41%,
- Kiosk 0.51%.

The water demand analysis has been computed basing on key assumptions as follows :

- The population growth rate is 1.1% ;
- Domestic water users are grouped into high, medium and low income;
- NRW is 28%, 27% and 26% respectively;
- Production losses will be 5%;
- Institution water consumption will be 14%;
- Commercial water consumption will be 5.5%, and
- Industrial water consumption will be 1%.

Detailed analysis and assumption on the water demand per customer categories is shown in table 5.1.

**Table 5.1: Projected Population and Water Demand**

Description	Unit	2021	2022	2023	2024
House Connection (HI)					
Population supplied by house connection	cap	18,920	19,014	19,204	19,397
Specific water demand	l/cap/d	150	140	140.00	140.00
Water demand	m <sup>3</sup> /d	2,877	<b>2,662</b>	<b>2,689</b>	<b>2,716</b>
House Connection (MI)					
Population supplied by house connection	cap	32,164	32,324	32,648	32,974

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Description	Unit	2021	2022	2023	2024
Specific water demand	l/cap/d	100	90	90	90
Water demand	m³/d	3,261	<b>2,909</b>	<b>2,938</b>	<b>2,968</b>
House Connection (LI)					
Population supplied by house connection	cap	115,410	115,987	117,147	118,319
Specific water demand	l/cap/d	60	50	50	50.00
Water demand	m³/d	6925	5,799	5,857	5,916
Yard Connection Kiosk					
Population supplied by yard connection	cap	22,704	22,931	23,160	23,392
Specific water demand	l/cap/d	25	25	25	25
Water demand	m³/d	575	573	579	585
Total					
Population supplied	cap	189197.4	190,257	192,160	194,081
Water demand	m³/d	13638.4	11,944	12,063	12,184
Specific water demand	l/cap/d	72.1	62.8	63	63
Institution Water demand (3%)	m³/d	409.2	358	362	366
Commercial Water Demand (2.13%)	m³/d	290.5	254	257	260
Industries (0.41%)	m³/d	55.9	128	608	1,190
Total per day		14393.9	12,685	13,290	13,999
Add NRW 25%		4030.3	3,425	3,588	3,780
Water Demand and Production		18424.3	16,109	16,878	17,779
Annual Water Production		<b>6,559,607</b>	<b>5,879,930</b>	<b>6,160,640</b>	<b>6,489,214</b>

With the above customer distribution, IRUWASA's current market, highly depends on domestic and institutional customers.



Up to 30<sup>th</sup> June 2020, IRUWASA had a total number of 30,332 and 2,294 registered water and sewer customers respectively. So far 100% of all IRUWASA customers are metered. The target is to increase water and sewer customers to 42,332 and 5,654 respectively by June 2024. For Water Demand Projection (m<sup>3</sup>/year) refer **Appendix E**.

### **5.2.2 Service Coverage Projection**

In order to bridge the existing gap between the current population directly served and the existing total population (for water and sewerage), IRUWASA will expand its water supply network by 120km and 108km of sewerage network in order to cover new customers. The target is to achieve 98% of water supply coverage and 30% of sewerage coverage from the current 90% and 8% respectively by June 2024 all investments include IRUWASA's own sources and Ministry of Water financial sources. For details of water and sewerage service, coverage projections refer to **Appendix F and G** respectively.

### **5.2.3 Customer Relations**

IRUWASA has notable good customer relations. As a result, IRUWASA has been receiving reports concerning; leakage; infrastructure vandalism; illegal connections; meter problems, and other water service-related problems. To effectively facilitate this, there are toll free phone numbers which are used by customers in reporting any problems relating to IRUWASA services.

In order to properly deal with customer complaints, IRUWASA has established a Call Center unit specifically dealing with: receiving; making a follow-up, and giving feedback to customers on the reported complaints. Additionally, IRUWASA has set a number of interventions that will strengthen the customer communication and relations through: meetings with its stakeholders; conducting house-to-house visits; giving notifications through mobile phones and, through use of different local radios.

#### **5.2.4 IRUWASA and Community Relationship**

IRUWASA's Management has been involving the community in planning and other services related activities. To enhance this good relationship, IRUWASA has been educating the community on different services offered. This is done through community meetings that are being conducted on monthly basis in order to share experience with the community on how to improve the services. Furthermore, communication with the public is done through: radio announcements; interview,, presentations; advertisements through internal and external notice boards and newspapers; exhibitions and, public addresses. Additionally, IRUWASA has been offering financial and material support to the community as a part of its corporate social responsibility.

#### **6.0 ASSET MANAGEMENT PLAN**

IRUWASA's assets comprise water and sanitation infrastructure and other assets. The assets are divided into two components, which are: physical and visible, and buried assets. These assets include: pipes; valves; tanks; pumps; boreholes treatments facilities; buildings; motor vehicles; motor cycles, and many more.

The assets may lose their value over time. If that happens, it becomes difficult to deliver promised services to customers.

In order to manage that, IRUWASA has established the Asset Management Plan, which will assist management to come up with better decision making on managing assets.

For IRUWASA to properly manage its asset it must answer the following questions: -

##### **a) What is the Current State of the System's existing Assets?**

IRUWASA's existing assets are in good condition since the major rehabilitation and replacement of infrastructure was conducted in year 2012. Apart from the major rehabilitation, assets conditions deteriorate year after year. Through this Business Plan, IRUWASA has set aside strategies and funds for maintenance, rehabilitation or replacement of the assets depending on their conditions.

**b) What is the Required Sustained Level of Service?**

The required sustained level of service for IRUWASA's customers depends highly on the assets' condition. If assets such as tanks, transmission and distribution pipes, pumps and many more, are in good condition the required level of service will be sustained to all customers. Therefore, good asset condition means good customers' service. Hence, the Authority's sustainability.

**c) Which Assets are Critical for Sustained Performance?**

Among IRUWASA's existing assets, some of them are very critical for services assurance. The critical assets include: water intake at Ndiuka and Kitwiru, pumping stations; water treatment plant at Ndiuka; pipelines; wastewater treatment ponds; sewerage laterals and, IRUWASA accounting and billing computer systems.

**d) What is the Best Long Term Financing Strategy?**

The best long term financing strategy to be applied by IRUWASA is through own source financing whereby, 46% of revenue requirements for this Business Plan will originate from water and sanitation services, while 54% will be contributed by the Ministry of Water and other stakeholders.

**6.1 Asset and Value of Assets**

The water supply assets extend from the source of water intake, at the Little Ruaha River, to the point at individual customer property boundaries. It includes: intake structures and screen; a conventional water treatment plant; water pumps and other peripherals; water transmission mains; primary, secondary and tertiary water distribution systems; water storage tanks; valves; fire hydrants; public stands and, water meters.

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IRUWASA conducted the asset valuation activity which revealed that the value of all assets was Tsh. 73.9 billion as at 30<sup>th</sup> June 2020. According to the Asset Valuation Report of 2018, the general condition of IRUWASA's assets is good.

IRUWASA has a map which shows the water supply and sewerage systems. All IRUWASA customer connections have fixed locations through XY coordinates in GIS system. Currently, the survey is still underway to improve the existing coordinates just in case there is a possibility of wrong data.



**Figure 6.1: Water Treatment Plant and Main Water Pumping Station at Ndiuka**

IRUWASA has a sewerage system asset which extends from customer property boundaries to the wastewater treatment plant located at Don Bosco area. The System covers lateral and secondary sewer lines, trunk main, inspection chambers, manholes, inlet screening and grit chamber, wastewater stabilization ponds, sludge ponds and constructed wetlands. IRUWASA owns also two cesspit emptier trucks which are used to serve the customers who are not connected to the sewerage

system. **(See Appendix S: Map of Location of the Water and Sanitation Assets).**

### **6.1.2 Assets Details**

#### **6.1.2.1 Water Sources and Treatment**

There are three major water sources for Iringa Municipality. These sources are surface water, spring and borehole namely Little Ruaha River, Kitwiru Spring and Nyamhanga borehole respectively.

There is a conventional water treatment plant for raw water from Little Ruaha River. The plant comprises the following units: intake structure; pre-sedimentation unit (sand trap); flocculation unit; sedimentation unit; rapid sand filters, and disinfection unit. There is also a clear water reservoir for distribution via the pumping water transmission mains to the water storage tanks. The treatment process for water abstracted from the Kitwiru spring and Nyamhanga borehole is by disinfection only.



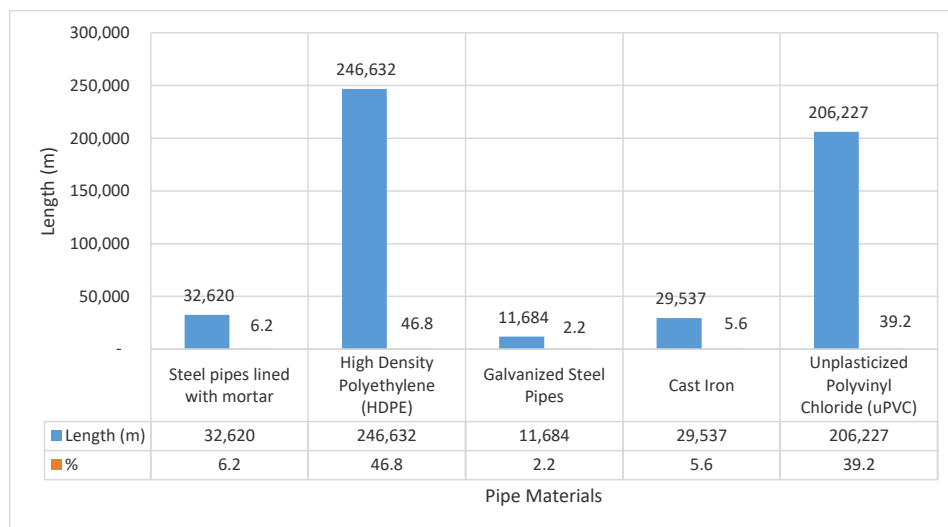
**Figure 6.2: Expansion of Water Supply Infrastructure to Kitwiru**

**Area**

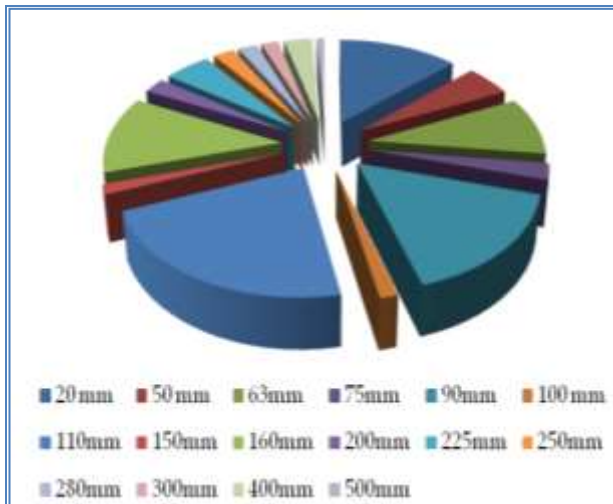
#### 6.1.2.2 Water Transportation Mains and Distribution Lines

The water supply system comprises of 41.37kms of transmission main and 834.9kms of reticulation. The reticulation is supplied from 11 reinforced concrete tanks and two concrete blocks tanks.

The percentages of pipe materials and sizes in the water transportation mains and distribution lines are presented in Figures 6.3 & 6.4.



**Figure 6.3: Length and Percentage of Pipe Materials**



**Figure 6.4: Pipe Sizes Distribution**

#### **6.1.2.3 Sewerage System**

The sewerage system with a total length of 68kms in Iringa Municipality is in good condition. It covers the central business district area (CBD), equivalent to 8% of the Iringa Municipality, Ilula and Kilolo Townships total population. The main trunk sewer of the network (DN 300 Asbestos Cement) was constructed in year 2000. The lateral sewers comprise different sizes of uPVC pipes varying from DN 100 to DN 200. The trunk main of DN 300 is the sewer outfall, which joins the manholes to the wastewater treatment plant.

IRUWASA has wastewater stabilization ponds (WSPs). WSPs are large, shallow basins in which raw sewage is treated entirely by natural processes involving both algae and bacteria (microorganisms). The plant has three units namely: two anaerobic ponds in parallel, one facultative pond in series, and two maturation ponds in series. Thereafter, the effluent from the maturation pond, is discharged to the two compartments of constructed wetlands for further treatment. The constructed

wetlands, are artificial wastewater treatment systems, consisting of shallow ponds or channels which have been planted with aquatic plants, and which rely upon natural microbial, biological, physical and chemical processes to treat wastewater.

The utility also has two cesspit emptier trucks which collect sewage from households and institutions that are not connected to the sewer network, discharge at sludge ponds connected in series with the anaerobic ponds.

**Table 6.1: Sewer Classes and Diameter**

<b>Sewer Class</b>	<b>Diameter (mm)</b>
Lateral sewers	100
Secondary sewers	150-200
Trunk sewers	300

Summarized Asset Register and Value of Assets are found in **Appendix H**.

#### **6.1.6 Replacement Costs and Asset Values**

The replacement costs to be used is Tsh. 15.06 billion, 14.9 billion and 14.5 billion for the years: 2021/2022; 2022/2023, and 2023/2024 respectively. The replacement cost is mainly for the expansion of treatment plant as indicated in **Appendix J of Lifecycle Costing and Asset Management**.

#### **6.2 Asset Inventory and System Map**

IRUWASA has a map that shows the location of all water supply infrastructures. It also helps to easily describe and understand the system of water supply without visiting the same.

Currently the whole water supply system has been captured in GIS.

IRUWASA Asset Register contains the following: -

- a) Name and location;
- b) Historical cost/value or re-valued amount;
- c) Useful life span and estimated remaining useful life;



- d) Replacement costs;
- e) Annual depreciation;
- f) Accumulated depreciation;
- g) Book value;
- h) Functional purpose;
- i) Size and or capacity;
- j) Construction materials;
- k) Construction/installation date, and
- l) Manufacturer.

### **6.3 Assessment and Conditions of Each Asset**

The assets of IRUWASA are categorized in conditions that illustrate the status of each asset as follows:

- Very good condition these are assets which do not need any repairs;
- Good Condition: Normally they need minor repairs that do not exceed 5% of asset value;
- Satisfactory/fair: these are the ones which require major repairs which ranges between 10-20%;
- Poor conditions: These are assets which require substantial renewal or upgrade between 30%-60%' and
- Very poor condition: These are assets that cannot be serviceable and needs more than 60% of replacement.

In this Business Plan, IRUWASA has set aside funds for normal repair and maintenance, minor and major repair, renewal and replacement.

All IRUWASA assets have been assessed and their condition is well known as shown in **Appendix I.**

### **6.4 Estimating Useful Life Span and Remaining Useful Life**

Normally, IRUWASA controls the materials quality by setting standards for every material to be procured. There is a special team which actually must conduct inspection before user departments start to use the respective items to make sure that all supplied materials conforming with the set technical specifications.

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All assets' standards are established /originates from the user departments basing on the best practice or available basic or minimum standards on that particular item.

There are set standards for pipes, pumps, water meters, electronic equipment and others depending on Iringa water nature and general climatic condition.

Quality is one of the criteria in establishing the asset useful life that is why IRUWASA is critically committed on that. Again, past experience on asset, knowledge asset condition and nature of operation of the asset can determine the useful life of the asset.

The estimated useful life of IRUWASA's assets based on the above-mentioned factors are described in the table below:

**Table 6.2 Estimated Useful Life Span and Remaining Useful Life of IRUWASA Key Assets**

<b>IRUWASA Asset</b>	<b>Expected useful life in years</b>	
	<b>Useful Life</b>	<b>Remaining</b>
Ndiuka and Kitwiru Intake structures	35	28
Nyamhanga Borehole	15	14
Chlorination equipment	10	5
Storage tanks	30	23
Pumps	15	8
Buildings	50	40
Water treatment plants	40	33
Electrical systems	10	4
Transmission mains	35	28
Distribution pipes	35	20
Valves	35	28
Meters	10	3
Sewerage network	35	28
Service lines	30	20
Lab/Monitoring equipment	7	3
Office furniture/equipment	5	3

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IRUWASA Asset	Expected useful life in years	
	Useful Life	Remaining
Intangible assets	5	3
Workshop equipment and tools	10	4
Computers	3	2
Vehicles, motor cycles and bicycles	5	4
Transportation equipment /heavy duty vehicles	8	4
Waste stabilization ponds	40	28
Constructed wetlands	10	8

### 6.5 Replacement Cost

IRUWASA has set aside funds for replacement of assets which can no longer be used for normal operations amounting to TZS. 1.09 billion for the year 2021/22, TZS.1.10 billion for the year 2022/23 and TZS. 1.11 billion for the year 2023/24. Assets to be replaced/renewed are shown in **Appendix M Renewal and Replacement of Non-Current Assets**.

### 6.6 Depreciation Cost

IRUWASA has been using the straight-line method for computation of Annual Depreciation Charge as recommended by EWURA. This computation was applied during tariff calculations so that it neither creates a burden, to IRUWASA nor to customers. The useful life span of IRUWASA's commonly used pipes is shown in the table below:

**Table 6.3 Useful life of IRUWASA Assets**

Pipe Material	Total length (m)	1-5 yrs (m)	6-10 yrs (m)	11-15 yrs (m)	16-20 yrs (m)	21-30 yrs (m)	> 30yrs (m)
HDPE	368,712	128,080	0	0	76,000	105,723	79,909
uPVC	222,827	20,600			50,000		61,469

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Pipe Material	Total length (m)	1-5 yrs (m)	6-10 yrs (m)	11-15 yrs (m)	16-20 yrs (m)	21-30 yrs (m)	> 30yrs (m)
CI	29,537	2,000	26,000	0	0	0	1,537
GS	11,684	0	0	0	0	4000	7,684
Steel pipes lined with mortar	32,632	0	0	0	0	29,547	3,073
<b>Total</b>	<b>665,392</b>	<b>150,680</b>	<b>26,000</b>	<b>0</b>	<b>126,000</b>	<b>139,270</b>	<b>153,672</b>

### 6.7. Summarized Asset Register

The IRUWASA Assets Register has three categories of assets. Category one, is water supply assets which includes assets for production and distribution activities. Category two, is Sewerage assets and category three, is miscellaneous assets. The later includes: land & buildings; furniture; vehicles and motorcycles; computers and accessories; intangible assets; electrical and office equipment; workshop equipment and tools, and sewerage maintenance equipment. All IRUWASA's assets and its value are summarized in **Appendix H**.

### 6.8 Assessment of Risks and Consequences

Early in the preparation of this plan, IRUWASA Management was fully involved in developing the objectives and goals of the Utility Assets Management [Plan](#) as described below: -

- i. To meet IRUWASA's legal obligations under the Water and Sanitation Act 2019 which is to develop and maintain waterworks and sanitation works;
- ii. To provide the linkage between IRUWASA's Business Plan on water supply and sanitation services, and the levels of service that are actually delivered by IRUWASA to Iringa, Kilolo and Ilula townships residents;
- iii. To define the levels of service which residents can expect to receive from IRUWASA assets;

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- iv. To define performance measures and, where available provide performance data to compare actual asset performance with targeted levels of service;
- v. To provide a detailed description of all asset components comprising the utility asset and the condition of each component;
- vi. To provide a financial valuation (Depreciated Replacement Value) of the complete water supply asset as well as individual components, and
- vii. To identify and quantify risks that may cause failure of part of the water supply and sanitation system, and describe measures to be undertaken to prevent, minimize or mitigate those risks.

For IRUWASA to achieve the above-mentioned objectives in its Assets Management Plan, it has assessed the assets with regards to the nature, condition and life expectancy of each asset. This helps IRUWASA to achieve the required service level whereby the preventive measures of asset's failure will be taken into consideration.

Every asset has been assessed regarding its level of risk by evaluating the probable risks and how to manage, mitigate and monitor the risks.

IRUWASA's asset level of risks has been categorized into; very high; high; medium, or low condition. Through these assets' levels risks, IRUWASA determined the level of replacement/maintenance or major rehabilitation according to the need. The assessment of risk and consequences to IRUWASA is presented in **Appendix I**.

## **6.9 Life Cycle Management**

Just like other Water Authorities, IRUWASA assets pass through different phases depending on their conditions and related costs that are necessary to make them continue to deliver the expected service level. IRUWASA's assets, also have key stages in asset lifecycle that are:-

### **a) Asset Planning**

IRUWASA has been planning on which asset to be owned or procured in the future to serve its operation and to assure service sustainability. In this Business Plan there are assets which are expected/ planned to be maintained, repaired, and or rehabilitated or renewed.

**b) Asset Creation or Acquisition**

This will be done as actual need and necessity to have that asset arises. The acquisition of an asset is planned to be done when the total asset failure occurs. This might be a purchase of that particular asset or construction of the asset.

**c) Asset Operations and Maintenance**

During its planning period IRUWASA will continue operating its assets, especially plants at Ndiuka Pumping station, Kitwiru and other boosters stations. During operations, routine maintenance will be conducted to plants so that they are, not subjected to failure but continue to be sustainable. Some of the maintenance are planned to be preventive by preventing the assets like plants to consume more power or fuel but instead create efficiency. IRUWASA has a repair and maintenance schedule in place to assure that this is done.

**d) Assets Disposal and Rationalization**

During the last financial year an assets evaluation exercise was conducted for all IRUWASA assets. Through that exercise, depending on the asset's condition, a remark was made to determine if it can still be used or it needed replacement, especially those which have totally failed or are redundant. Those assets identified for disposal, IRUWASA will seek permission from the Treasury Registrar's Office for auctioning or giving out as donation to the public. In that way the asset's remaining value can be served.

## **7.0 CAPACITY DEVELOPMENT ANALYSIS**

The training program is in place to ensure that this strategic objective is met. Through IRUWASA's training program, the Board and Staff have to undergo training (on job and off the job training) to be financed by IRUWASA. Areas of training that need emphasis will include: strategic leadership and management; execution and performance monitoring; corporate governance essentials; building effective boards and board dynamics; risk management; financial accounting for non-financial managers; customer care; entrepreneurship; Public Procurement Regulatory Act and procedures; information technology; engineering, and management. The Key objective of this strategy is to enhance individual staff capabilities, organizational abilities and stakeholders' awareness on IRUWASA's mandated services.

Furthermore, IRUWASA will consider employees' welfare by mainstreaming crosscutting issues in the organization such as HIV/AIDS, gender, corporate social responsibility and good governance.

The Training Needs Assessment for IRUWASA is detailed in **Annex L**.

### **7.1 Review of Organization Structure**

IRUWASA is governed by the Board of Directors which is appointed by the Minister responsible for Water and its day-to-day operations are regulated by the Energy and Water Utilities Regulatory Authority (EWURA). The Board of Directors makes policies for the Authority. The Board comprises of ten members who come from different water users and stakeholders. The day-to-day management is executed by the Managing Director who is assisted by four Heads of Department. The departments are: Technical, Commercial, Human Resource and Administration and Finance. The Managing Director is supported by five independent units namely: Procurement, Internal Audit, Legal

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Counsel, Information and Communication Technology and Public Relations. Generally, IRUWASA's key personnel have all the necessary qualifications as per IRUWASA's Scheme of Service.

Most of the top management members have achieved postgraduate education level. During the current year (2020/21) the ICT Unit was shifted from the Commercial Department and it is now reporting to the Managing Director as an independent unit. Again, the vacant position of Legal Counsel was filled. The management communication system is in two ways directions i.e from operational staff to management and from management to the operational staff. The main objective of this system is to simplify the flow of information to and from all organizational directions and enhance staff involvement.

Every staff has got his/her key roles and responsibilities depending on the expertise and skills for the particular position. IRUWASA's organization structure is referred as **Appendix K**.

## **7.2 Staff Number and Skills**

As at 30<sup>th</sup> June, 2020 IRUWASA had a total number of 142 staff with different skills. IRUWASA has key personnel with the requisite skills and experience. It is through the skills and experience available in the Utility and future recruitments that achievements of the set performance targets are guaranteed.

The detailed analysis on staff positions and requirements is described in **Table 7.2**.



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**Table 7.1: Summary of Staff Requirements and Efficiency**

Target Level	Current Staffing Level (No)	Required Total Staffing Level (No)			Clarification on Changes in Staffing Levels
		Year 1	Year 2	Year 3	
Management	10	10	10	10	
Support Staff	132	150	160	170	38 staff to be employed
Total Number of Staff	142	160	170	180	38 staff to be employed
Total Number of water and Sewerage Connections	30,332	36,332	39,332	42,332	Network expansion and customer sensitization
Staff per 1,000 water and Sewerage Connection	4.6	4.4	4.3	4.3	Network expansion and customer sensitization

### 7.3 Training Needs

During the planning period, the Authority will implement the training needs as stated in the Authority's Training and Development Policy. The Authority training needs assessment has been categorized at different staff levels i.e., at organizational level, nature of task, and at individual level. The training assessment is targeting to trigger the achievement of the Authority's strategic objectives. Areas of emphasis for training will be: leadership and management; career and professional courses; technology applications, and crosscutting issues (customer care, HIV/AIDS and code of ethics). Through this assessment the Authority will be able to know the global training needs at

organizational level and individual needs with regards to staff performance. The aim is to know all training needs required for the purpose of improving general performance.

**Table 7.2: Training Needs Assessment**

Target level in the RWU	Description of the general content of the required training	Projected Costs ("000" TZS)		
		Year 1	Year 2	Year 3
Board	<ul style="list-style-type: none"> <li>▪ National Water Policy (NAWAPO) and other policies.</li> <li>▪ Water Supply and Sanitation Act No. 5 (2019) and its Regulations.</li> <li>▪ The Leadership Role of the Board,</li> <li>▪ EWURA responsibilities,</li> <li>▪ Financial Statement/Financial Accounting /Numeracy for (non-financial) Directors</li> <li>▪ Operation and maintenance of water infrastructure,</li> <li>▪ Corporate governance,</li> <li>▪ Water price review procedures, values and responsibilities of the public leaders,</li> <li>▪ General operating issues of the authorities.</li> <li>▪ Experience sharing</li> </ul>	59,750	58,000	43,250
Management	<ul style="list-style-type: none"> <li>▪ Risk Management</li> <li>▪ Financial Management</li> <li>▪ Water Sector Management Information System</li> <li>▪ Procurement, Stores &amp; Inventory Management</li> <li>▪ Waste Water Management</li> <li>▪ Marketing Management</li> <li>▪ Effective Department Collection &amp; Recovery</li> <li>▪ Legal Advising and by laws formulation skills</li> <li>▪ Effective Report &amp; Minutes Writing</li> </ul>	76,750	79,000	71,250

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Target level in the RWU	Description of the general content of the required training	Projected Costs ("000" TZS)		
		Year 1	Year 2	Year 3
	<ul style="list-style-type: none"> <li>▪ Information Technology Security &amp; Control</li> <li>▪ Corporate Social responsibility</li> <li>▪ Accounting &amp; Auditing for the Public Sector</li> <li>▪ Asset Management</li> <li>▪ Managing Human Resources for Strategic Outcome</li> <li>▪ Training on management tools</li> <li>▪ Management skills</li> <li>▪ Career and professional training</li> <li>▪ Management functions</li> <li>▪ Project Planning, Monitoring &amp; Evaluation Project/proposal writing skills</li> <li>▪ Presentation skills</li> </ul>			
Supervisors	<ul style="list-style-type: none"> <li>▪ Exchange program from other Utilities</li> <li>▪ Customer Care</li> <li>▪ Supervisory skills</li> <li>▪ Attitude Change</li> <li>▪ HIV/AIDS and other incurable diseases awareness</li> <li>▪ Non-Revenue Water</li> <li>▪ Accountability</li> <li>▪ Meter and data management</li> <li>▪ Workplace and professional ethics</li> <li>▪ Water Meter Management</li> <li>▪ Billing &amp; Data management</li> <li>▪ Senior Drivers and Transport Officers</li> <li>▪ Modern Secretarial Skills and Office Management</li> <li>▪ Electronic Record Management</li> <li>▪ Front Office Management</li> </ul>	66,750	71,000	71,250
Support staff	<b>A. Technical</b> <ul style="list-style-type: none"> <li>▪ Maintenance of Prepaid Water Meters</li> <li>▪ Water treatment</li> </ul>	108,750	111,000	121,250

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Target level in the RWU	Description of the general content of the required training	Projected Costs ("000" TZS)		
		Year 1	Year 2	Year 3
	<ul style="list-style-type: none"> <li>▪ Plumbing and Pipe fitting</li> <li>▪ Operations &amp; maintenance of water supply systems</li> <li>▪ Water treatment</li> <li>▪ Water Quality Control and Management</li> <li>▪ Water Pump operations &amp; Maintenance</li> <li>▪ Pump Mechanics and its Electrical Installation</li> <li>▪ Non-Revenue Water</li> <li>▪ GIS and Remote Sensing Application</li> </ul> <p><b>B. Commercial</b></p> <ul style="list-style-type: none"> <li>▪ Accounts statistics</li> <li>▪ Business ethics</li> <li>▪ Meter reading and data management skills</li> <li>▪ Revenue follow up collection skills</li> <li>▪ Water Supply and Sanitation Act No. 5 (2019) and its Regulations</li> <li>▪ Prepaid water meters</li> <li>▪ Meter reading skills</li> </ul> <p><b>C. Human Resources &amp; Administration</b></p> <ul style="list-style-type: none"> <li>▪ Drivers' instruction course</li> <li>▪ Vehicles fleet management &amp; maintenance</li> <li>▪ Modern Secretarial Skills and Office Management</li> <li>▪ Electronic Record Management</li> <li>▪ Front Office Management</li> <li>▪ Public service Act No.8 2002 and its regulations</li> </ul> <p><b>D. Finance</b></p> <ul style="list-style-type: none"> <li>▪ Preparation of financial accounting</li> <li>▪ Updated IPSAs from NBAA</li> </ul>			

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Target level in the RWU	Description of the general content of the required training	Projected Costs ("000" TZS)		
		Year 1	Year 2	Year 3
	<p><b>E. PMU</b></p> <ul style="list-style-type: none"> <li>▪ The implementation of force account</li> <li>▪ Emergency procurement</li> <li>▪ Stores records keeping</li> <li>▪ Inventory/ store Management</li> <li>▪ Preparation and delivery of procurement and stores information</li> </ul> <p><b>F. ICT</b></p> <ul style="list-style-type: none"> <li>▪ System Security analysis</li> <li>▪ Solution to network challenges (LAN/WAN)</li> <li>▪ Data mining</li> <li>▪ Operating system in SERVER, WINDOW, LINOX and UNIX</li> </ul> <p><b>G. Internal Audit</b></p> <ul style="list-style-type: none"> <li>▪ Risk management</li> <li>▪ Auditing of Financial accounts prepared through IPSAS</li> <li>▪ Auditing of ICT systems</li> <li>▪ Preparation and reporting of audit reports to the Board of Directors</li> </ul> <p><b>H. Public Relations</b></p> <ul style="list-style-type: none"> <li>▪ Call center</li> <li>▪ Handling of customer's complaints</li> </ul>			
Cross Cutting Issues	<ul style="list-style-type: none"> <li>▪ Customer Care and Team working</li> <li>▪ HIV/AIDS and non-communicable diseases</li> <li>▪ Non-Revenue Water</li> <li>▪ Code of ethics for public servants</li> <li>▪ Occupational Health and Safety Management</li> </ul>	30,000	40,000	50,000

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Target level in the RWU	Description of the general content of the required training	Projected Costs ("000" TZS)		
		Year 1	Year 2	Year 3
	<ul style="list-style-type: none"> <li>▪ Handling of confidential issues within the organization</li> <li>▪ Gender, Sexual and Child harassment</li> <li>▪ Services provided by service providers eg. pension funds, NHIF, Banks, NIC etc</li> <li>▪ Open Performance and Review System (OPRAS)</li> <li>▪ IRUWASA strategic plan</li> <li>▪ Experience sharing to all IRUWASA staff</li> </ul>			
<b>Total Cost</b>		<b>342,000</b>	<b>359,000</b>	<b>357,000</b>

## **8.0 KEY STRATEGIC ISSUES**

There are 6 key strategic issues which accrue from the corporate appraisal as explained below.

### **8.1 Insufficient water supply services**

This will be achieved through improvement of water supply infrastructure by increasing water networks from the current (2020/21) 834.9km to 984.9km by June 2024, replacement of about 6,000 old water meters, expansion and refurbishment of the old water treatment plant. The expectation is to increase the water supply coverage from 90% to 98%, maintain population served with clean and safe water at 20 hours. Furthermore, water production will be increased from the current production capacity of 24,330m<sup>3</sup> to 26,830m<sup>3</sup> per day.

### **8.2 Inadequate Sanitation Service**

The current network length is 68kms. In the three years of the Business Plan, IRUWASA will extend additional 108kms to achieve 176kms by June 2024. The improvement will

also involve the construction of VIP toilets at five water tanks. In collaboration with different partners, IRUWASA is expecting to expand the sanitation services through educating the community and facilitating them in constructing septic tanks and soak away pits.

### **8.3 Inadequate financial capacity**

IRUWASA is expecting to increase its revenue base from TSh. 750 million to TSh. 900 million and collection efficiency from the current 96% to 98% by June, 2024. Increment on revenue collection goes hand in hand with reduction of NRW. According to the number of interventions set, IRUWASA plans to reduce NRW from an average of 28% in June 2020 to 26% by June 2024. The reduction of NRW will lead to low energy consumption, increase in billing efficiency, availability of enough water to meet increasing water demand and increase in revenue collection. The strategies for NRW reduction will include universal metering, pipe leaks control, pressure variation control, conducting leak detection and repair, regular illegal inspections, customers' reconnection, customer surveys for upgrading the billing database and old pipe replacement.

The current billing and revenue collection efficiency will be improved by: sensitizing the public on the importance of prompt bills settlement; improving bills payment modes; increasing revenue collection staff; installation of prepaid water meters; updating billing; conducting intensive customers follow ups; applying a reasonable water tariff; serving customers in a professional way; introducing bonus for achieving performance agreements, and customer sensitization on full utilization of electronic payment modes.

### **8.4 Unreliable Working Procedures**

In this area the main focus will be to streamline the following:

1. Train the IRUWASA Board of Directors and Staff in order to ensure good understanding of best practices applied in: the management of water and sanitation systems; IRUWASA management tools and different policies, and laws

and regulations governing the water and sanitation sectors. Furthermore, training will be given on crosscutting issues influencing the achievement of IRUWASA's strategic objectives. The training will be financed by IRUWASA, the Government, Development Partners and Employees themselves. To accomplish the above strategies, IRUWASA has both a Training and Development Policy and a Training Program in place to develop its employees;

2. Procure different working tools to enable employees perform their duties effectively and efficiently;
3. Increase staff salaries in compliance with the Government minimum wage announcements and establishment of performance-based incentive scheme;
4. Put in place appropriate Management Information Systems (MIS);
5. Monitoring public relations and private community partnership;
6. Outsourcing partners for service delivery such as debts collection, cleaning services, new connections and security services' and
7. Assessing and empowering partners by creating an enabling environment for partners to participate in IRUWASA operations.

### ***8.5 HIV/AIDS Prevalence Reduced Among Staff***

Awareness education on the HIV spreading mechanisms, preventive measures, encouraging voluntary counseling and testing, discouraging stigma and discrimination to HIV/AIDS infected individuals will be ensured to staff and other stakeholders. The aim is to reduce high staff turnover, reduce absenteeism and increase level of productivity.

### ***8.6 Behavioral Change in Combating Corruption***

Awareness education on the broad impact of corruption to IRUWASA staff and the Authority as a whole, will be conducted . The plan is to make sure that all IRUWASA staff at all levels are knowledgeable about the effects of corruption and its consequences.



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**Table 8.1 Objectives, Next Steps and Actions for Addressing Key Strategic Issues**

S/N	Key Strategic issue	Objectives	Next Steps/ Targets	Action to be taken /Strategies
1	HIV/AIDS Prevalence	E. Behavior change in HIV/AIDS, Corporate Social Responsibility and Gender Mainstreaming are enhanced	At least 01 gender balance sensitization conducted annually	Conduct 01 gender balance sensitization seminar
				Eradicate gender violence
			HIV/AIDS awareness and behavior change enhanced by 2024	Conduct 02 awareness and sensitization meetings/events
				Distribute 300 pieces condoms monthly
				Prevent new HIV infection
				Prevent stigma related to HIV/AIDS( provide financial assistance)
			Adherence to Environmental laws and regulations by 2024	Strengthen environmental coordination team
				Establish 02 environmental clubs
				Plant 1,200 water loving trees
				Install 120 bee hives
				Carry out 06 awareness campaign on environmental conservation
				Protect 03 water sources
				Adherence to guidelines, rules and regulations, EIA and EA reports and Acts available.
			Strengthened institutional framework and stakeholder's collaboration by 2024	Conduct 03 stakeholders meeting
				Formulate/establish institutional framework for PPP
				Conduct awareness on PPP annually
				Formulate 03 partnerships.
2	Behavioral Change in Combating Corruption	F. Behavior change in corruption is enhanced	All IRUWASA staff trained on corruption effects by 2024	Conduct staff training on the effect of corruption
3	Insufficient water supply services	A: Water supply coverage increased from 90% to 98% by 2024	Water supply coverage increased from 90% to 98% by 2024	Expand water distribution network to Iringa Municipality and per urban areas by 100km
				Expand water distribution network to Ilula and Kilolo by 60km
				Replace dilapidated pipes in Iringa Municipality and by 12km
				Replace dilapidated pipes to Kilolo and Ilula areas by 6km
				Rehabilitation of acquired tanks (Ugwachanya, Tosamaganga and Kalenga)

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				Reconnect 3,000 customers from old to new system
				Reconnect 1,800 customers from old to new system to Kilolo and Ilula Zones
				Replace a total of 6,000 old meters
				Connect 3,000 new customers (postpaid)
				Connect 6000 new customers (prepaid)
				Install 1,000 new meters (distance meter reading )
				Install 03 new water booster pumps of 10 to 50m3/h (TRM, Tumaini, Ruaha zone, Gangilonga)
				Construct 06 storage tanks (50m3 - 300m3 ) being 3 for Iringa, 2 for Ilula and 1 Kilolo
				Construct 12 new Fire Hydrants (6 Iringa, 4 Ilula and 2 Kilolo)
			Increased daily water production capacity from 24,330 to 26,330m3/day by 2024	Improve Idemle water source - Ilula
				Improve Ilomba water source - Ilula
				Improve Kilolo water sources
				Develop three boreholes (Ugwachanya, Nduli, Mawelewele)
				Install pumping main lines from the three boreholes
				Expand the sand trap at Ndiuka treatment plant
				Construction of 2,500m3 clear water tank at Ndiuka
				Improve the chlorination system at Ndiuka, Ilula and Kilolo
			Development of Mtitu River as a New Water Source for Kilolo, Iringa, Ilula and the surrounding villages	Acquire 3 standby pumps for water production
				Acquire potential water sources areas (boreholes, mtitu)
				Acquire area for new water treatment plant - Mtitu
				Acquire areas for tanks
				Prepare investment plan under phased construction
				Solicit funds for implementations
				Start implementation by construction of abstraction point, low lift pump house and treatment plant and main line
				Identify all potential large water users including industrial areas along the Mtitu Project
				Expand water services to identified larger water users
				Conduct study for future industrial water demand.
			Reduced NRW from 228% to 26% in June 2024	Replace 167 water meters per month.
				Reconnect 83 water meters per month.
				Acquire lab equipment
				Conduct 01 full water quality analysis per quarter.
				Acquire 03 standby float valves in each year for Iringa, Kilolo and Ilula.
				Visit 300 customer connections in each quarter.
				Attend all identified leakages within 12 hours once reported.

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				<p>Verify 10% of meter readings against Production and distribution ( submitted by Sales Assistants) and 20% of meter readings in the billing system per month .</p> <p>Maintain optimal system pressure of not more than 7 bars.</p> <p>Install new telemetry system for the tanks of Hoho, Mtwivila, Ugwachanya, Cagrielo</p> <p>Repair and maintain telemetry system for Ndiuka, tank B, C, I, J and Kitwiru.</p> <p>Acquire 25 GPS assisted mobile phones loaded with network for enhancing leak repair teams including emergency and survey teams</p> <p>Conduct refresher training to plumbers once in every year.</p> <p>Acquire 01 leak detector, 01 meter calibration machine and 01 portable pressure gauge.</p> <p>Implement NRW reduction strategies.</p>
<b>4</b>	<b>Inadequate sewerage system</b>	<b>B. Sewerage Services Improved</b>	<p>Sewerage coverage increased from 8% to 30% by 2024</p> <p>Construct 90km of new sewer network to cover Wilolesi, Lugalo, Gangilonga, Kihesa, Mtwivila, Mkimbizi and Kigonzi.</p> <p>Expand 18km of sewer network at Mkwawa, Ilala, Mivinjeni, Frelimo, Miyomboni, Mshindo, KwaKilosa, Mlandege, DonBosco.</p> <p>Construct 3km of new sewer trunk main to Don Bosco wastewater treatment plant constructed by June 2024.</p> <p>Sensitize at least 7,500 households to connect to sewer network.</p> <p>Connect at least 480 new customers to the sewerage network.</p> <p>Connect at least 3,000 new customers to the sewerage network through new project.</p> <p>Construct new wastewater treatment plant at Kipululu at Nduli Ward.</p> <p>Acquire 01 high pressure vacuum truck</p> <p>Acquire land and introduce sludge ponds for Kilolo zone</p> <p>Acquire land and introduce sludge ponds for Ilula zone</p>	<p>Enlarge 3.6 km of the old/ overloaded of the existing network.</p> <p>Rehabilitate 120 existing manholes and inspection chambers.</p> <p>Educate and sensitize the public on the importance and proper use of the sewerage system.</p> <p>Dislodge 02 anaerobic ponds.</p> <p>Prepare ToR for consultant procurement</p> <p>Acquire the consultant for manual preparation.</p> <p>Educate public on the proper construction of onsite sanitation facilities.</p> <p>Sign 02 MoU to Collaborate with Municipal Council, NGOs, CBOs and other stakeholders on sanitation issues.</p>
			<p>Rehabilitation of 3.6km of sewer infrastructures by 2024</p> <p>Establish the construction manual and empower Knowledge for onsite sanitation by June 2024</p>	<p>Enlarge 3.6 km of the old/ overloaded of the existing network.</p> <p>Rehabilitate 120 existing manholes and inspection chambers.</p> <p>Educate and sensitize the public on the importance and proper use of the sewerage system.</p> <p>Dislodge 02 anaerobic ponds.</p> <p>Prepare ToR for consultant procurement</p> <p>Acquire the consultant for manual preparation.</p> <p>Educate public on the proper construction of onsite sanitation facilities.</p> <p>Sign 02 MoU to Collaborate with Municipal Council, NGOs, CBOs and other stakeholders on sanitation issues.</p>

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				Construct 05 toilets at IRUWASA Tanks (Mgongo, Mseke, Hoho, Kilolo, Ilula).
			01 light weight cesspit emptier truck with capacity of 4m <sup>3</sup> acquired by June 2024	Prepare specifications for 01 light weight emptier truck
				Acquire 01 light weight emptier truck.
5	Inadequate financial capacity	C. Financial Sustainability Improved	Increased revenue base from TZS 800 million to TZS 1.2 billion by 2024	Connect 9,000 water supply customers.
				Connect 480 sewer customers
				Connect 720 customers through loan scheme.
				Acquire 33 GPS assisted mobile phones for enhancing revenue collection
				Adjust water and sewer tariff to reflect operational cost
				Procure and replace 6,000 aged water meters.
				Survey illegal water connections
			Revenue collection efficiency increased from 97% to 98% by June 2024	Conduct house to house to all households in the service area
				Acquire and install 01 debt Management mobile application software ( and sensitization of customers on electronic payments)
				Conduct 01 follow up meeting once every week for revenue collection monitoring
				Motivate the best staff performers in revenue collection as per target (commission)
			Expanded pre-paid water meter services to 20% of IRUWASA customers by 2024	Explore the best performing brand of pre-paid water meters and software
				Recommend improvement to manufacturer
				Acquire 8,000 water prepaid meter on credit
				Install 6000 pre-paid water meters to customers
			Reduce Operational Costs by 20% by June 2024	Outsource leakage repair function
				Outsource transportation services for leak and sewer unblocking services
				Conduct 01 multi-skilled staff training annually
				Acquire bulk materials for repair and maintenance
			Resource mobilization team appointed within the Utility and 01 development partner solicited by June 2024	Identify team members
				Appoint team members
				Training and or experience sharing on project proposal writing
				Solicit 01 Development Partner
				Develop 03 project proposals
6	Unreliable working procedures	D. Operational Efficiency and Sustainability Improved	TBS and ISO Certificates for provision of quality water and sanitation services acquired by June 2024	Implement at least one project
				Identify a team of staff to serve as a steering committee
				Identify facilitators
				Conduct workshop training for 06 staff and 03 for Board Members
			Electronic payment and Online payments channels expanded (e.g. using Credit	Acquire and implement certification conditions
				Identify potential payment channels
				Map all customers in GIS
				Fully implement smart phone meter reading

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			Cards, etc.) and information flow systems enhanced by 2024	Handle customer complaints online
				Water monitoring devices installed to 11 tanks
				Install the online applications system for new water connections
				Create and implement customers' forum for information and notification
			Implement by 100% efficiency usage of ICT infrastructure and accessories by June 2024	Acquire and install 03 integrated software for HR, store/procurement, Finance, Technical and Commercial operations management
				Install and implement the independent Audit software
				Supply 30 PCs to all departments and Sections
				Install and maintain strong, fast and affordable internet network system
			Risk Management Plan improved by December 2024	Review Risk Management Plan
				Install online backups
				Acquire 02 standby pumps for Mawelewele, Ugwachanya
				Acquire all repair and maintenance materials
				Conduct electronic payment reconciliation on daily basis
				Continue implementation of OSHA requirement
				Adhere to legal and regulatory requirement by 95%( compensation, workers council, legal consultancy, town service levy, land rents )
				Introduce solar lighting system for IRUWASA main office
			10 Board Directors and 115 staff trained by the year 2024	Conduct 01 leadership and or governance training to Board Members annually
				Conduct 01 exchange visit to Board Members
				Carry out 01 exchange visit to Management and operational staff
				Conduct 02 in-house / external refresher courses to Management and operational staff
				Conduct 01 eye opening / exposure visits to four Officers (MD and four Head of Departments)
				Sponsor 06 staff to attend Masters degree
				Sponsor 06 staff to attend a Degree
				Sponsor 06 staff to attend Diploma
				Sponsor 6 staff to attend certificate courses
				Sponsor 6 staff attend Secondary certificate
				Recruit 42 new staff in different Departments and Cross Cutting Sections
			Establish IRUWASA football team and staff club by 2024	Establish 03 indoor games
				Establish 01 IRUWASA staff Club
				Conduct IRUWASA family day event
				Conduct medical check-up to all staff as per OSHA requirement
				At least 100% increase on repatriation benefits
				Equip all staff with safety gears (Working tools)

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				Meet office requirements for sanitary and cleanliness(upkeep of offices)
				Equip all staff with tools, equipment and furniture
				Renovate IRUWASA buildings (Conference hall and staff houses, Gym, Office Buildings)
				Establish and implement performance based remuneration scheme
				Establish and implement competitive remuneration scheme
			The transport policy developed and approved by Board of Directors by 2024	Develop transport policy
				Prepare and implement maintenance and repair schedule for vehicles and motor cycles
				Install fleet management computer system
				Acquire 03 new vehicles
				Acquire 15 new motorcycles
				Procure 30 computers
			Customer relationship management and networking with other service providers established by 2024	Conduct 32 sensitization session to encourage new water and sewerage customers to connect to the water and sewerage system
				01 MD – Customers face to face meetings conducted weekly
				Conduct at least 01 joint marketing with other service providers
				Establish and implement reward system to 30 whistle blowers/informers
				Provide publicity materials to stakeholders
				Customize existing IRUWASA website
				Establish network with best performing organizations and implement the best practices
			Reduced customer complaints at least by 10% per year by 2024	Reduce Customer complaints by at least 10% per year( survey)
				Solve customer complaints at least 98% each year (survey).
				24 hours call center established
				Emergency team formed
			03 power source explored and 01 source identified and installed by January 2024	Explore 03 power sources
				Install 01 identified power source and change lighting system to minimize power consumption
				Install 01 device at Ndiuka treatment plant to control power consumption
				Conduct 01 staff audit
			Optimize labor by maintaining the manning level of 6 by 2024	Establish optimal Authority staff requirement
				Employ staff according to staff requirements
			90% of poor families in Iringa Municipality, Ilula and Kilolo Townships assessed and served by June 2024	Give free water to extremely 30 poor customers
				Offer free sanitation services to extremely 10 poor customers
				Offer new connection loans to 720 customers with low income

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				Serve by 100% all identified poor families with water
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## **9.0 ACTION PLAN**

This action plan sets out the Authority's targets to be addressed from each objective. It further describes the activities to be undertaken, specify the responsible officer for implementation and starting and completion dates. The costs involved and the source of funds for both operational and capital investment are also covered under this part of the Business Plan.

Generally, there are six objectives, targets and various activities planned to be implemented for the period of three years. The detailed information on the set objectives, targets and activities are given in **Table 9.1**.

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**Table 9.1: Action Plan For Three Years (2021/2022 – 2023/2024)**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
<b>A. Behavior change in HIV/AIDS , Corporate Social Responsibility and Gender Mainstreaming are enhanced</b>	90% of poor families in Iringa Municipality, Ilula and Kilolo Townships assessed and served by June 2024	Give free water to extremely 30 poor customers	CM&HPR U	July, 2021	June, 2024	3000	3,500	3,500	10,000	IRUWASA	Administration	
		Offer free sanitation services to extremely 10 poor customers	CM&HPR U	July, 2021	June, 2024	2,500	3,000	3,500	9,000	IRUWASA	Administration	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Offer new connection loans to 720 customers with low income	CM&HPRU	July, 2021	June, 2024	3,000	30,000	35,000	68,000	IRUWASA	Administration	
		Serve by 100% all identified poor families with water	CM&	July, 2021	June, 2024	2000	1,000	1,500	4,500 0	IRUWASA	Administration	
	At least 01 gender balance sensitization conducted annually	Conduct 01 gender balance sensitization seminar	HRAM	July, 2021	June, 2024	-	18,000	23,000	41,000	IRUWASA	Administration	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Eradicate gender violence	HRAM	July, 2021	June, 2024	1000	5,000	6,000	12,000	IRUWASA	Administration	
	HIV/AIDS awareness and behavior change enhanced by 2024	Conduct 02 awareness and sensitization meetings/events	HARM	July, 2021	June, 2024	2,000	5,000	6,000	13,000	IRUWASA	Administration	
		Distribute 300 pieces condoms monthly	HARM	July, 2021	June, 2024	4,350	4,500	5,000	13,850	IRUWASA	Administration	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Prevent new HIV infection	HARM	July, 2021	June, 2024	-	9,750	9,650	19,400	IRUWASA	Administration	
		Prevent stigma related to HIV/AIDS( provide financial assistance)	HRAM&	July, 2021	June, 2024	8,400	500	1000	9,900	IRUWASA	Administration	
	Adherence to Environmental laws and regulations by 2024	Strengthen environmental coordination team	LO	July, 2021	June, 2024	7,000	7,000	7,000	21,000	IRUWASA	Administration	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Establish 02 environmental clubs	LO&	July, 2021	June, 2024	2,000	2,500	2,500	7,000	IRUWASA	Administration	
		Plant 1,200 water loving trees	HPRU	July, 2021	June, 2024	2,000	2,000	3,000	7,000	IRUWASA	Investment	
		Install 120 bee hives	HPRU	July, 2021	June, 2024	2,000	2,000	2,000	6,000	IRUWASA	Investment	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Carry out 06 awareness campaign on environmental conservation	HPRU&LO	July, 2021	June, 2024	1,000	5,000	5,000	11,000	IRUWASA	Administration	
		Protect 03 water sources	HPRU&LO	July, 2021	June, 2024	5,000	5,000	31,000	41,000	IRUWASA	Administration	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Adherence to guidelines, rules and regulations, EIA and EA reports and Acts available.	LO	July, 2021	June, 2024	-	16,000	16,000	32,000	IRUWASA	Administration	
	Strengthened institutional framework and stakeholder's collaboration by <b>2024</b>	Conduct 03 stakeholders meeting	CM & HPRU	July, 2021	June, 2024	19,650	15,760	15,760	51,170	IRUWASA	Administration	
		Formulate/establish institutional framework for PPP	LO	July, 2021	June, 2024	5,000	2,000	0	7,000	IRUWASA	Administration	



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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Conduct awareness on PPP annually	LO, CM& HPRU	July, 2021	June, 2024	2,500	2,500	0	5,000	IRUWASA	Administration	
		Formulate 03 partnerships.	LO, CM& HPRU	July, 2021	June, 2024	3,000	3,000	3,000	9,000	IRUWASA	Administration	
<b>B. Behavior change in corruption is enhanced</b>	All IRUWASA staff trained on corruption effects by 2024	Conduct staff training on the effect of corruption	HRAM	July, 2021	June, 2024	5000	5000	5000	15000	IRUWASA	Administration	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
<b>C</b>	Water supply coverage increased from 90% to 98% by 2024	Expand water distribution network to Iringa Municipality and per urban areas by 100km	TM	July, 2021	June, 2024	400,000	400,000	400,000	1,200,000	IRUWASA	Investment	
		Expand water distribution network to Ilula and Kilolo by 60km	TM	July, 2021	June, 2024	300,000	300,000	300,000	900,000	MoW	Investment	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Replace dilapidated pipes in Iringa Municipality and by 12km	TM	July, 2021	June, 2024	65,000	55,000	50,000	170,000	IRUWASA	Investment	
		Replace dilapidated pipes to Kilolo and Ilula areas by 6km	TM	July, 2021	June, 2024	60,000	45,000	45,000	150,000	IRUWASA	Investment	
		Rehabilitation of acquired tanks (Ugwachanya, Tosamaganga and Kalenga)	TM	July, 2021	June, 2024	55,000	45,000	35,000	135,000	IRUWASA	Investment	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Reconnect 3,000 customers from old to new system	TM	July, 2021	June, 2024	151,000	151,000	151,000	453,000	IRUWASA	Investment	
		Reconnect 1,800 customers from old to new system to Kilolo and Ilula Zones	TM	July, 2021	June, 2024	125,000	125,000	125,000	375,000	IRUWASA	Investment	
		Replace a total of 6,000 old meters	TM&CM	July, 2021	June, 2024	230,500	185,000	185,000	600,500	IRUWASA	Investment	
		Connect 3,000 new customers (postpaid)	TM	July, 2021	June, 2024	56,700	56,700	56,700	170,100	IRUWASA	Investment	
		Connect 6000 new customers (prepaid)	TM	July, 2021	June, 2024	700,000	700,000	700,000	2,100,000	IRUWASA	Investment	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Install 1,000 new meters (distance meter reading )	TM	July, 2021	June, 2024	100,000	50,000	50,000	200,000	MoW		
		Install 03 new water booster pumps of 10 to 50m <sup>3</sup> /h (TRM, Tumaini, Ruaha zone, Gangilonga)	TM	July, 2021	June, 2024	200,000	250,000	250,000	700,000	IRUWASA	Investment	
		Construct 06 storage tanks (50m <sup>3</sup> - 300m <sup>3</sup> ) being 3 for Iringa, 2 for Ilula and 1 Kilolo	TM	July, 2021	June, 2024	240,500	220,500	180,000	641,000	IRUWASA	Investment	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Construct 12 new Fire Hydrants (6 Iringa, 4 Ilula and 2 Kilolo)	TM	July, 2021	June, 2024	18,500	12,500	10,200	41,200	IRUWASA	Investment	
		Improve Idemle water source - Ilula	TM	July, 2021	June, 2024	15,500	12,500	4,500	32,500	IRUWASA	Administration	
	Increased daily water production capacity from 24,330 to 26,330m3/day by 2024	Improve Ilomba water source - Ilula	TM	July, 2021	June, 2024	7,500	15,000	8,500	31,000	IRUWASA	Administration	
		Improve Kilolo water sources	TM	July, 2021	June, 2024	8,000	7,500	1,500	17,000	IRUWASA	Administration	
		Develop three boreholes (Ugwachanya, Nduli, Mawelewele)	TM	July, 2021	June, 2024	225,000	135,000	90,000	450,000	IRUWASA	Investment	

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**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Install pumping main lines from the three boreholes	TM	July, 2021	June, 2024	110,000	150,000	80,000	340,000	IRUWASA	Investment	
		Expand the sand trap at Ndiuka treatment plant	TM	July, 2021	June, 2024	155,000	110,000	75,000	340,000	MoW	Investment	
		Construction of 2,500m3 clear water tank at Ndiuka	TM	July, 2021	June, 2024	750000	350,000	200,000	1,300,000	MoW	Investment	
		Improve the chlorination system at Ndiuka, Ilula and Kilolo	TM	July, 2021	June, 2024	95,000	85,000	75,000	255,000	IRUWASA	Investment	
		Acquire 3 standby pumps for water production	TM	July, 2021	June, 2024	150000	155,000	160,000	465,000	IRUWASA	Investment	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS. '000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
	Development of Mtitu River as a New Water Source for Kilolo, Iringa, Ilula and the surrounding villages	Acquire potential water sources areas (boreholes, mtitu)	TM	July, 2021	June, 2024	42,000	45,000	13,000	100,000	MoW	Administration	
		Acquire area for new water treatment plant - Mtitu	TM	July, 2021	June, 2024	15,000	10,000	0	25,000	IRUWASA	Administration	
		Acquire areas for tanks	TM	July, 2021	June, 2024	25,000	10,000	0	35,000	IRUWASA	Administration	
		Prepare investment plan under phased construction	TM	July, 2021	June, 2024	2500	2,500	0	5,000	IRUWASA	Administration	
		Solicit funds for implementations	MD	July, 2021	June, 2024	2,500	2,500	0	5,000	IRUWASA	Administration	



**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Start implementation by construction of abstraction point, low lift pump house and treatment plant and main line	TM	July, 2021	June, 2024	3,100,000	3,100,000	3,100,000	9,300,000	MoW	Investment	
		Identify all potential large water users including industrial areas along the Mtitu Project	TM	July, 2021	June, 2024	5,500	2,500	1,500	9,500	IRUWASA	Administration	
		Expand water services to identified larger water users	TM	July, 2021	June, 2024	32,000	32,000	32,000	96,000	IRUWASA	Administration	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Conduct study for future industrial water demand.	TM	July, 2021	June, 2024	0	7,000	0	7,000	IRUWASA	Administration	
	Reduced NRW from 28% to 26% in June 2024	Replace 167 water meters per month.	TM&CM	July, 2021	June, 2024	0	0	0	0	IRUWASA	Investment	
		Reconnect 83 water meters per month.	TM&CM	July, 2021	June, 2024	0	0	0	0	IRUWASA	Investment	
		Acquire lab equipment	TM	July, 2022	June, 2025	20,000	15,000	15,000	50,000	IRUWASA		
		Conduct 01 full water quality analysis per quarter.	TM	July, 2021	June, 2024	7,500	7,500	7,500	22,500	IRUWASA	Administration	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS. ' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Acquire 03 standby float valves in each year for Iringa, Kilolo and Ilula.	TM	July, 2021	June, 2024	25,000	35,000	35,000	95,000	IRUWASA	Investment	
		Visit 300 customer connections in each quarter.	TM&CM	July, 2021	June, 2024	12,000	12,000	12,000	36,000	IRUWASA	Administration	
		Attend all identified leakages within 12 hours once reported.	TM	July, 2021	June, 2024	320,000	520,000	450,000	1,290,000	IRUWASA	Administration	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Verify 10% of meter readings against Production and distribution (submitted by Sales Assistants) and 20% of meter readings in the billing system per month .	TM&CM	July, 2021	June, 2024	10,000	10,000	12,000	32,000	IRUWASA	Administration	
		Maintain optimal system pressure of not more than 7 bars.	TM	July, 2021	June, 2024	11,500	5,000	5,000	21,500	IRUWASA	Administration	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Install new telemetry system for the tanks of Hoho, Mtwivila, Ugwachanya, Cagrielo	TM	July, 2021	June, 2024	45,000	75,000	75,000	195,000	IRUWASA	Investment	
		Repair and maintain telemetry system for Ndiuka, tank B, C, I, J and Kitwiru.	TM	July, 2021	June, 2024	5,000	2,000	2,000	9,000	IRUWASA	Investment	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Acquire 25 GPS assisted mobile phones loaded with network for enhancing leak repair teams including emergency and survey teams	TM	July, 2021	June, 2024	3,000	3,000	3,000	9,000	IRUWASA	Investment	
		Conduct refresher training to plumbers once in every year.	HRAM	July, 2021	June, 2024	10,000	33,000	33,000	76,000	IRUWASA	Administration	
		Acquire 01 leak detector, 01 meter calibration machine and 01 portable pressure gauge.	TM	July, 2021	June, 2024	94,000	54,000	54,000	202,000	MoW	Investment	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS. ' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Implement NRW reduction strategies.	TM&CM	July, 2021	June, 2024	706,864	600,000	958,514	2,264,378	IRUWASA	Administration	
<b>D.Sewerage Services Improved</b>	Sewerage coverage increased from 8% to 30% by 2024	Construct 90km of new sewer network to cover Wilolesi, Lugalo, Gangilonga, Kihesa, Mtwivila, Mkimbizi and Kigonzi.	TM	July, 2021	June, 2024	3,780,000	3,780,000	3,024,500	10,584,500	MoW	Investment	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Expand 18km of sewer network at Mkwawa, Ilala, Mivinjeni, Frelimo, Miyomboni, Mshindo, KwaKilosa, Mlandege, DonBosco.	TM	July, 2021	June, 2024	150,000	150,000	150,000	450,000	IRUWASA	Investment	
		Construct 3km of new sewer trunk main to Don Bosco wastewater treatment plant constructed by June 2024.	TM	July, 2021	June, 2024	50,000	100,000	240,000	390,000	IRUWASA	Investment	



**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS. ' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Sensitize at least 7,500 households to connect to sewer network.	HPRU	July, 2021	June, 2024	2,250	24,000	36,000	62,250	IRUWASA	Administration	
		Connect at least 480 new customers to the sewerage network.	TM	July, 2021	June, 2024	48,000	48,000	48,000	144,000	IRUWASA	Investment	
		Connect at least 3,000 new customers to the sewerage network through new project.	TM	July, 2021	June, 2024	400,000	400,000	400,000	1,200,000	MoW	Investment	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS. ' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Construct new wastewater treatment plant at Kipululu at Nduli Ward.	TM	July, 2021	June, 2024	2,500,000	2,500,000	2,500,000	7,500,000	MoW	Investment	
		Acquire 01 high pressure vacuum truck	TM	July, 2021	June, 2024	-	600,000	120,000	720,000	MoW	Investment	
		Acquire land and introduce sludge ponds for Kilolo zone	TM	July, 2021	June, 2024	20,000	110,000	120,000	250,000	IRUWASA	Investment	
		Acquire land and introduce sludge ponds for Ilula zone	TM	July, 2021	June, 2024	5,000	6,000	10,000	21,000	IRUWASA	Investment	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
	Rehabilitation of 3.6km of sewer infrastructures by 2024	Enlarge 3.6 km of the old/ overloaded of the existing network.	TM	July, 2021	June, 2024	20,000	50,000	50,000	120,000	IRUWASA	Investment	
		Rehabilitate 120 existing manholes and inspection chambers.	TM	July, 2021	June, 2024	7,000	7,000	5,000	19,000	IRUWASA	O&M	
		Educate and sensitize the public on the importance and proper use of the sewerage system.	HPRU	July, 2021	June, 2024	2,000	4,000	4,000	10,000	IRUWASA	Administration	
		Dislodge 02 anaerobic ponds.	TM	July, 2021	June, 2024	0	20,000	20,000	40,000	IRUWASA	O&M	
	Establish the construction manual and empower	Prepare ToR for consultant procurement	TM	July, 2021	June, 2024	3,000	3,000	0	6,000	IRUWASA	Administration	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
Knowledge for onsite sanitation by June 2024		Acquire the consultant for manual preparation.	TM	July, 2021	June, 2024	0	12,000	4,000	16,000	IRUWASA	Administration	
		Educate public on the proper construction of onsite sanitation facilities.	TM&HPRU	July, 2021	June, 2024	5,000	2,000	5,000	12,000	IRUWASA	Administration	
		Sign 02 MoU to Collaborate with Municipal Council, NGOs, CBOs and other stakeholders on sanitation issues.	LO, TM, HPRU	July, 2021	June, 2024	0	2,000	1,500	3,500	IRUWASA	Administration	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Construct 05 toilets at IRUWASA Tanks (Mgongo, Mseke, Hoho, Kilolo, Ilula).	TM	July, 2021	June, 2024		5,000	15,000	20,000	IRUWASA	Investment	
	01 light weight cesspit emptier truck with capacity of 4m <sup>3</sup> acquired by June 2024	Prepare specifications for 01 light weight emptier truck	TM	July, 2021	June, 2024	0	0	0	0	IRUWASA	Administration	
		Acquire 01 light weight emptier truck.	TM	July, 2021	June, 2024		200,000	0	200,000	MoW	Administration	
<b>E.</b>	Increased revenue base from TZS 800	Connect 9,000 water supply customers.	TM&CM	July, 2021	June, 2024	0	0	0	0	IRUWASA	Investment	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS. ' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
<b>Financial Sustainability Improved</b>	million to TZS 1.2 billion by 2024	Connect 480 sewer customers	TM&CM	July, 2021	June, 2024	-	0	0	0	IRUWASA	Investment	
		Connect 720 customers through loan scheme.	TM, CM&HPRU	July, 2021	June, 2024	-	0	0	0	IRUWASA	O&M	
		Acquire 33 GPS assisted mobile phones for enhancing revenue collection	CM&HPRU	July, 2021	June, 2024	11,000	11000	11,000	33,000	IRUWASA	Investment	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS. ' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Adjust water and sewer tariff to reflect operational cost	CM, FM, TM	July, 2021	June, 2024	12,000	12,000	13,000	37,000	IRUWASA	Administration	
		Procure and replace 6,000 aged water meters.	TM&CM	July, 2021	June, 2024	0	0	0	0	IRUWASA	Investment	
		-Survey illegal water connections	CM	July, 2021	June, 2024	12,000	12,000	12,000	36,000	IRUWASA	Administration	
	Revenue collection efficiency increased from 97% to	Conduct house to house to all households in the service area	CM, LO	July, 2021	June, 2024	50,000	50,000	50,000	150,000	IRUWASA	Administration	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS. ' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
	98% by June 2024	Acquire and install 01 debt Management mobile application software ( and sensitization of customers on electronic payments)	CM & HPRU	July, 2021	June, 2024	0	2,000	1000	3,000	IRUWASA	Investment	
		Conduct 01 follow up meeting once every week for revenue collection monitoring	CM	July, 2021	June, 2024	0	0	0	0	IRUWASA	Administration	



**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Motivate the best staff performers in revenue collection as per target (commission)	CM	July, 2021	June, 2024	5,000	5,000	5,000	15,000	IRUWASA	Administration	
	Expanded pre-paid water meter services to 20% of IRUWASA customers by 2024	Explore the best performing brand of pre-paid water meters and software	TM&CM	July, 2021	June, 2024	0	10,000	10,000	20,000	IRUWASA	Administration	
		Recommend improvement to manufacturer	TM&CM	July, 2021	June, 2024	250	500	200	950	IRUWASA	Administration	
		Acquire 8,000 water prepaid meter on credit	FM	July, 2021	June, 2024	1,000,000	1,000,000	715239	2,715,239	MoW	Administration	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Install 6000 pre-paid water meters to customers	TM&CM	July, 2021	June, 2024	740,000	740,000	740,000	2,220,000	IRUWASA	Investment	
	Reduce Operational Costs by 20% by June 2024	Outsource leakage repair function	HPMU	July, 2021	June, 2024	90,000	90,000	90,000	270,000	IRUWASA	O&M	
		Outsource transportation services for leak and sewer unblocking services	HPMU	July, 2021	June, 2024	2,500	2,500	2,500	7,500	IRUWASA	O&M	
		Conduct 01 multi-skilled staff training annually	HRAM	July, 2021	June, 2024	10,000	10,000	10,000	30,000	IRUWASA	Administration	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Acquire bulk materials for repair and maintenance	HPMU, TM	July, 2021	June, 2024	1,000	1,000	1,000	3,000	IRUWASA	O&M	
	Resource mobilization team appointed within the Utility and 01 development partner solicited by June 2024	Identify team members	MD	July, 2021	June, 2024	0	0	0	0	IRUWASA	Administration	
		Appoint team members	MD	July, 2021	June, 2024	0	0	0	0	IRUWASA	Administration	
		Training and or experience sharing on project proposal writing	Team	July, 2021	June, 2024	15,000	10,000	5,000	30,000	IRUWASA	Administration	
		Solicit 01 Development Partner	Team	July, 2021	June, 2024	4,500	2,500	2,000	9,000	IRUWASA	Administration	
		Develop 03 project proposals	Team	July, 2021	June, 2024	3000	3000	3000	9,000	IRUWASA	Administration	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Implement at least one project	Team	July, 2021	June, 2024	3000	25000	30,000	58,000	MoW	Administration	
<b>F.Operational Efficiency and Sustainability Improved</b>	TBS and ISO Certificates for provision of quality water and sanitation services acquired by June 2024	Identify a team of staff to serve as a steering committee	MD	July, 2021	June, 2024	0	0	0	0	IRUWASA	Administration	
		Identify facilitators	Team	July, 2021	June, 2024	1,200	0	0	1,200	IRUWASA	Administration	
		Conduct workshop training for 06 staff and 03 for Board Members	HRAM	July, 2021	June, 2024	55,000	100,000	100,000	255,000	IRUWASA	Administration	
		Acquire and implement certification conditions	Team	July, 2021	June, 2024	25,000	25,000	25,000	75,000	IRUWASA	Administration	
	Electronic payment and	Identify potential	HICTU& CM	July, 2021	June, 2024	0	27,800	17,800	45,600	IRUWASA	Administration	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS. ' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
	Online payments channels expanded (e.g. using Credit Cards, etc.) and information flow systems enhanced by 2024	payment channels										
		Map all customers in GIS	TM, CM & HICTU	July, 2021	June, 2024	12,000	12,000	12,000	36,000	IRUWASA	Administration	
		Fully implement smart phone meter reading	CM, HICTU	July, 2021	June, 2024	0	15,000	0	15,000	IRUWASA	Administration	
		Handle customer complaints online	CM, HICTU	July, 2021	June, 2024	12,000	12,000	12,000	36,000	IRUWASA	Administration	
		Water monitoring devices installed to 11 tanks	TM	July, 2021	June, 2024	0	0	0	0	IRUWASA	Investment	
		Install the online applications system for new water connections	HICTU	July, 2021	June, 2024	0	10,000	10,000	20,000	IRUWASA	Investment	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Create and implement customers' forum for information and notification	HICTU, HPRU	July, 2021	June, 2024	0	3,100	3,100	6,200	IRUWASA	Administration	
	Implement by 100% efficiency usage of ICT infrastructure and accessories by June 2024	Acquire and install 03 integrated software for HR, store/procurement, Finance, Technical and Commercial operations management	HICTU& HPMU	July, 2021	June, 2024	5,000	5,000	5,000	15,000	IRUWASA	Investment	
		Install and implement the independent Audit software	HICTU& CIA	July, 2021	June, 2024	12,000	0	0	12,000	IRUWASA	Investment	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS. '000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Supply 30 PCs to all departments and Sections	HICTU & HPMU	July, 2021	June, 2024	25,000	25,000	20,000	70,000	IRUWASA	Investment	
		Install and maintain strong, fast and affordable internet network system	HICTU	July, 2021	June, 2024	15,000	15,000	10,000	40,000	IRUWASA	Investment	
	Risk Management Plan improved by December 2024	Review Risk Management Plan	FM	July, 2021	June, 2024	5000	5,000	5000	15,000	IRUWASA	Administration	
		Install online backups	HICTU	July, 2021	June, 2024	21,000	5,000	5000	31,000	IRUWASA	Administration	62,000
		Acquire 02 standby pumps for Mawelewele, Ugwachanya	TM	July, 2021	June, 2024	50,000	50,000	0	100,000	IRUWASA	Investment	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Acquire all repair and maintenance materials	TM& HPMU	July, 2021	June, 2024	210,000	80,000	110,000	400,000	IRUWASA	O&M	
		Conduct electronic payment reconciliation on daily basis	FM	July, 2021	June, 2024	1,560	5,000	5,000	11,560	IRUWASA	Administration	
		Continue implementation of OSHA requirement	HRAM	July, 2021	June, 2024	25,000	25,000	25,000	75,000	IRUWASA	Administration	



**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Adhere to legal and regulatory requirement by 95%( compensation, workers council, legal consultancy, town service levy, land rents )	LO	July, 2021	June, 2024	40,000	40,000	40,000	120,000	IRUWASA	Administration	
		Introduce solar lighting system for IRUWASA main office	TM	July, 2021	June, 2024	15,000	35,000	15,000	65,000	IRUWASA	Investment	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
	10 Board Directors and 115 staff trained by the year 2024	Conduct 01 leadership and or governance training to Board Members annually	HARM	July, 2021	June, 2024	13,000	12,000	12,000	37,000	IRUWASA	Administration	
		Conduct 01 exchange visit to Board Members	HARM	July, 2021	June, 2024	0	0	30,000	30,000	IRUWASA	Administration	
		Carry out 01 exchange visit to Management and operational staff	HARM	July, 2021	June, 2024	45,000	45,000	45,000	135,000	IRUWASA	Administration	
		Conduct 02 in-house / external refresher courses to Management and operational staff	HARM	July, 2021	June, 2024	30,000	30,000	30,000	90,000	IRUWASA	Administration	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Conduct 01 eye opening / exposure visits to four Officers (MD and four Head of Departments)	HARM	July, 2021	June, 2024	35000	0	30,000	65,000	IRUWASA	Administration	
		Sponsor 06 staff to attend Masters degree	HARM	July, 2021	June, 2024	40,000	40,000	40,000	120,000	IRUWASA	Administration	
		Sponsor 06 staff to attend a Degree	HARM	July, 2021	June, 2024	40,000	30,000	30,000	100,000	IRUWASA	Administration	
		Sponsor 06 staff to attend Diploma	HARM	July, 2021	June, 2024	40,000	40,000	40,000	120,000	IRUWASA	Administration	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Sponsor 6 staff to attend certificate courses	HARM	July, 2021	June, 2024	15,000	15,000	15,000	45,000	IRUWASA	Administration	
		Sponsor 6 staff attend Secondary certificate	HARM	July, 2021	June, 2024	5,000	5,000	5,000	15,000	IRUWASA	Administration	
		Recruit 42 new staff in different Departments and Cross Cutting Sections	HARM	July, 2021	June, 2024	6,000	4,000	4,000	14,000	IRUWASA	Administration	
		Establish 03 indoor games	HPRU	July, 2021	June, 2024	3,000	14,000	15,000	32,000	IRUWASA	Administration	
	Establish IRUWASA football team and staff club by 2024	Establish 01 IRUWASA staff Club	HPRU	July, 2021	June, 2024	900	14,000	15,000	29,900	IRUWASA	Investment	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Conduct IRUWASA family day event	HRAM	July, 2021	June, 2024	10,200	10,200	10,200	30,600	IRUWASA	Administration	
		Conduct medical check-up to all staff as per OSHA requirement	HRAM	July, 2021	June, 2024	6,000	6,000	6,000	18,000	IRUWASA	Administration	
		At least 100% increase on repatriation benefits	HRAM	July, 2021	June, 2024	15,000	26,000	16,000	57,000	IRUWASA	Administration	
		Equip all staff with safety gears (Working tools)	HRAM	July, 2021	June, 2024	10,000	18,000	18,000	46,000	IRUWASA	Administration	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS. ' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Meet office requirements for sanitary and cleanliness (upkeep of offices)	HRAM	July, 2021	June, 2024	35,075	35,000	35,000	105,075	IRUWASA	Administration	
		Equip all staff with tools, equipment and furniture	HRAM	July, 2021	June, 2024	40,000	40,000	40,000	120,000	IRUWASA	Investment	
		Renovate IRUWASA buildings (Conference hall and staff houses, Gym, Office Buildings)	TM	July, 2021	June, 2024	50,000	130,000	50,000	230,000	IRUWASA	Investment	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Establish and implement performance based remuneration scheme	HRAM	July, 2021	June, 2024	20,000	32,000	132,000	184,000	IRUWASA	Administration	
		Establish and implement competitive remuneration scheme	HRAM	July, 2021	June, 2024	2,538,347	2,690,648	2,852,087	8,081,082	IRUWASA	Administration	
	The transport policy developed	Develop transport policy	HRAM& TM	July, 2021	June, 2024	4,000	10,000	10,000	24,000 0	IRUWASA	Administration	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
	and approved by Board of Directors by 2024	Prepare and implement maintenance and repair schedule for vehicles and motor cycles	HRAM&TM	July, 2021	June, 2024	140,217	122,000	122,000	384,217	IRUWASA	Administration	
		Install fleet management computer system	HICTU	July, 2021	June, 2024	9,000	0	20,000	29,000	IRUWASA	Investment	
		Acquire 03 new vehicles	TM,HPM U&FM	July, 2021	June, 2024	0	200,000	150,000	350,000	IRUWASA	Investment	
		Acquire 15 new motorcycles	TM,HPM U&FM	July, 2021	June, 2024	10,800	33,500	33,500	77,800	IRUWASA	Investment	
		Procure 30 computers	HRAM, HICTU&HPMU	July, 2021	June, 2024	25,000	25,000	25,000	75,000	IRUWASA		



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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
	Customer relationship management and networking with other service providers established by 2024	Conduct 32 sensitization session to encourage new water and sewerage customers to connect to the water and sewerage system	HPRU	July, 2021	June, 2024	40,024	11,840	11,840	63,704	IRUWASA	Administration	
		01 MD – Customers face to face meetings conducted weekly	HPRU	July, 2021	June, 2024	1,000	5,376	5,376	11,752	IRUWASA	Administration	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Conduct at least 01 joint marketing with other service providers	HPRU&CM	July, 2021	June, 2021	1,000	24,000	24,000	49,000	IRUWASA	Administration	
		Establish and implement reward system to 30 whistle blowers/informers	CM	July, 2021	June, 2024	14,550	7,200	7,200	28,950	IRUWASA	Administration	
		Provide publicity materials to stakeholders	HPRU	July, 2021	June, 2024	38,075	10,000	10,000	58,075	IRUWASA	Administration	
		Customize existing IRUWASA website	HPRU&H ICTU	July, 2021	June, 2024	18,000	0	0	18,000	IRUWASA	Administration	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Establish network with best performing organizations and implement the best practices	HRAM	July, 2021	June, 2024	10,000	31,000	30,000	71,000	IRUWASA	Administration	
	Reduced customer complaints at least by 10% per year by 2024	Reduce Customer complaints by at least 10% per year( survey)	CM&HPRU	July, 2021	June, 2024	35,000	35,000	35,000	105,000	IRUWASA	Administration	
		Solve customer complaints at least 98% each year (survey).	CM&TM	July, 2021	June, 2024	7,000	7,150	6,000	20,150	IRUWASA	Administration	
		24 hours call center established	CM&HIC TU	July, 2021	June, 2024	20,500	26,000	0	46,500	IRUWASA	Investment	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS. ' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
		Emergency team formed	TM&CM	July, 2021	June, 2024	26,600	30,300	30,000	86,900	IRUWASA	Administration	
		Explore 03 power sources	TM	July, 2021	June, 2024	1,000	5,000	7,000	13,000	IRUWASA	Administration	
	03 power source explored and 01 source identified and installed by January 2024	Install 01 identified power source and change lighting system to minimize power consumption	TM	July, 2021	June, 2024	75,000	80,000	55,000	210,000	IRUWASA	Investment	
		Install 01 device at Ndiuka treatment plant to control power consumption	TM	July, 2021	June, 2024	75,000	131,219	209,508	415,727	IRUWASA	Investment	
	Optimize labor by	Conduct 01 staff audit	HRAM	July, 2021	June, 2024	-	1,500	1,500	3,000	IRUWASA	Administration	

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Objectives	Next Steps/ Targets	Action to be taken /Strategies	By Whom	Start Date	Completion Date (Month and Year)	Cost in Thousands TZS			Total Cost in TZS.' 000'	Source of Funding	Nature of Expenditure (O&M or Investment)	Comments
						2021 / 2022	2022 / 2023	2023 / 2024	Total			
	maintaining the manning level of 6 by 2024	Establish optimal Authority staff requirement	HRAM&	July, 2021	June, 2024	1,000	1,500	1,500	4,000	IRUWASA	Administration	
			HoDS	July, 2021					0			
		Employ staff according to staff requirements	HRAM	July, 2021	June, 2024	-	5,000	5,000	10,000	IRUWASA	Administration	
	<b>TOTAL</b>					<b>21,824,512</b>	<b>22,690,542</b>	<b>21,368,874</b>	<b>65,883,928</b>			

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**Note: Summary of the sources of funds (TZS "000")**

S/N	Source of Funds	Year 2021/22	Year 2022/23	Year2023/24	Total
1	IRUWASA	9,600,512	10,176,542	10,787,135	30,564,189
2	MoW	12,224,000	12,514,000	10,581,739	35,319,739
3	Loan	0	0	0	0
	<b>Total</b>	<b>21,824,512</b>	<b>22,690,542</b>	<b>21,368,874</b>	<b>65,883,928</b>

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**10.0 INVESTMENT PLAN**

The main planned investments for the three consecutive years is summarized in ***Annex N***. The main investments have been derived from both the Action and Assets Management Plans.

A Summary of physical works to be carried out, capital expenditure, and potential sources of funding for the three coming years is presented in the ***Action Plan***.

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## **11.0 FINANCIAL PLAN**

This chapter translates all planned activities in terms of financial capability to implement the same. It further projects the future income and expenditure of the Authority. All financial plans to cover Operation and Maintenance, Capital Expenditure plus all identified sources of funds are to be clearly elaborated in this part. The Financial plan will help the Authority to foresee the amount of cash flow to be required. It is through this, the Authority will be able to determine its future

Future total revenue (turnover, including Depreciation and Return on Investment) will be TSh. 12.6 billion, TShs 13.3 billion and TShs 13.9 billion for year 2021/22, 2022/23, 2023/24 respectively, is shown in the Forecasted Financial Statements.

Total revenue (turnover) will be achieved if services are improved with increased revenue collection efficiency and review of water tariff in regard with IRUWASA's increase in production, distribution and administration costs. Currently electricity costs account for about 11% of IRUWASA's monthly revenue collection.

In response to this challenge, IRUWASA has planned to implement energy efficiency technology that will cut down the power cost by at least 10%. Additionally, a gradual increase of water tariffs depending on an average increase of operation costs will be applied. It is expected that average tariff will be Tsh. 2,100 and will remain constant during the whole planning period.

### ***11.1 Statement of Financial Performance***

A statement of financial performance is a statement that shows income and expenditure for a period of one year or one operating cycle. The purpose of the income and expenditure statement, is to show the generated surplus (profit)



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or incurred losses during the period being reported. Table No. 11.1 shows the income and expenditure statement.

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**Table No. 11.1: Statement of Financial Performance**

SOURCE OF DATA	Audited Historical Data			Current Year	Long Term Plans		
	Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
<b>INCOME</b>							
<b>Own Funds:</b>							
Water Charges	7,058,341,344	7,211,482,838	7,306,829,125	8,002,905,000	8,893,455,665	9,427,063,005	9,992,686,786
Sewerage Disposal Charges	775,962,045	536,778,273	493,091,436	463,756,054	530,038,554	561,840,867	595,551,319
Reconnection charges	70,120,000	54,845,635	43,489,510	60,000,000	96,200,000	101,972,000	108,090,320
Other operating Income	3,144,766,787	255,675,111	50,207,259	157,100,000	80,817,500	85,666,550	90,806,543
<b>Total</b>	<b>11,049,190,176</b>	<b>8,058,781,857</b>	<b>7,893,617,330</b>	<b>8,683,761,054</b>	<b>9,600,511,719</b>	<b>10,176,542,422</b>	<b>10,787,134,968</b>
<b>Operational Grants</b>							
Government	61,416,000	61,416,000	-	-			
Bank Loan	295,090,000	-	-		-	-	-
Other Grants.			-		-	-	-
<b>Grand Total Income</b>	<b>11,405,696,176</b>	<b>8,120,197,857</b>	<b>7,893,617,330</b>	<b>8,683,761,054</b>	<b>9,600,511,719</b>	<b>10,176,542,422</b>	<b>10,787,134,968</b>
<b>Operational and Maintenance Expenses:</b>							
Production Expenses	1,264,339,145	1,323,320,491	1,257,682,536	1,333,143,488	1,386,594,995	1,455,924,745	1,528,720,983
Distribution Expenses	40,611,015	55,409,485	64,340,865	68,201,317	70,935,804	74,482,594	78,308,583

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SOURCE OF DATA	Audited Historical Data			Current Year	Long Term Plans		
	Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
Sewerage Disposal and Sanitation Expenses	30,787,921	50,420,179	17,299,604	18,337,580	19,072,813	20,026,454	21,027,776
Maintenance and Repair Expenses	595,822,129	682,677,033	719,377,273	762,539,909	793,113,443	832,769,115	874,407,571
Personnel Expenses	1,906,952,416	2,213,084,667	2,276,408,132	2,394,667,068	2,490,679,663	2,615,213,646	2,745,974,328
Administrative Expenses	1,252,909,789	1,296,954,699	1,525,540,050	1,528,776,171	1,624,362,212	1,705,580,322	1,790,859,338
Business Promotion Expenses	45,090,000	64,208,300	68,550,020	72,663,021	75,576,397	79,355,217	83,322,978
Events and Donations Expenses	49,859,784	32,139,600	61,009,925	64,670,521	67,263,442	70,626,614	74,157,945
Board Expenses	39,250,000	58,666,250	42,725,000	58,857,825	73,569,300	77,247,765	81,110,153
Depreciation/ Amortization	3,388,275,084	1,516,692,942	1,560,301,829	2,012,295,778	2,200,998,781	2,581,193,074	2,952,875,478
<b>Total Expenses</b>	<b>8,613,897,283</b>	<b>7,293,573,646</b>	<b>7,593,235,233</b>	<b>8,314,152,677</b>	<b>8,802,166,850</b>	<b>9,512,419,547</b>	<b>10,230,765,134</b>
<b>SURPLUS(LOSS) FOR THE YEAR</b>	<b>2,791,798,893</b>	<b>826,624,211</b>	<b>300,382,097</b>	<b>369,608,376</b>	<b>798,344,869</b>	<b>575,188,319</b>	<b>368,717,920</b>

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***11.2 Statement of Financial Position***

The data for the financial opening position is derived from the audited financial information for 2021/22, 2022/2023 and 2023/2024 on assumption that audited historical financial data represent fairly the economic affairs of the Authority. Values of non-current assets have been derived from IRUWASA's Fixed Assets Register. The detailed information on statement of financial position of IRUWASA is shown in table 1.12 below:

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**Table No. 11.2: Statement of Financial Position**

	Audited Historical Data			Current Year	Long Term Plans		
<b>ASSETS</b>	Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
<b>Non-current assets</b>							
Property, Plant and Equipment	56,638,261,000	57,442,499,351	73,938,534,818	76,282,972,698	89,142,835,864	101,476,337,468	113,036,412,158
Inventories-Capital Nature	219,045,641	219,045,641	233,837,842	233,837,842	218,837,842	218,837,842	206,837,842
Intangible Assets	282,905,923	231,124,738	229,628,061	229,628,061	98,628,061	153,628,061	153,628,061
<b>Total</b>	57,140,212,564	<b>57,892,669,730</b>	<b>74,402,000,721</b>	76,746,438,601	89,460,301,767	101,848,803,371	113,396,878,061
<b>Current assets</b>							
Inventories	1,231,529,751	1,533,993,394	1,861,426,594	1,271,956,348	1,281,003,814	1,861,539,645	2,325,347,482
Trade and Other receivables	1,013,582,033	932,103,723	687,437,638	952,827,957	1,000,469,355	1,430,118,843	1,515,226,803
Cash and Cash equivalent	629,935,534	1,331,894,086	630,482,416	579,732,838	254,355,254	550,000,000	550,000,000
<b>Total current assets</b>	<b>2,875,047,318</b>	<b>3,797,991,203</b>	<b>3,179,346,647</b>	2,804,517,143	2,535,828,424	3,841,658,488	4,390,574,284

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	Audited Historical Data			Current Year	Long Term Plans		
ASSETS	Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
<b>Total assets</b>	<b>60,015,259,882</b>	<b>61,690,660,933</b>	<b>77,581,347,368</b>	79,550,955,744	91,996,130,191	105,690,461,859	117,787,452,345
<b>Equity and Liabilities</b>							
<b>Capital and reserve</b>							
Government fund	1,707,723,642	47,825,107,019	62,321,940,898	62,321,940,898	75,258,598,521	88,890,789,278	101,131,602,104
Accumulated Surplus/(deficit)	(613,937,228)	12,142,321,662	12,901,788,188	13,527,749,781	14,326,094,650	14,901,282,969	15,270,000,888
Revaluation Reserve	11,929,634,679	0	0	0	0	0	0
	13,023,421,093	<b>59,967,428,681</b>	<b>75,223,729,086</b>	75,849,690,679	89,584,693,170	103,792,072,246	116,401,602,992
Deferred Grant Income	46,117,383,377	-	-	-	-	-	-
Long term borrowing	-	-	-	1,600,000,000	1,600,000,000	1,066,666,667	533,333,333

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	Audited Historical Data			Current Year	Long Term Plans		
ASSETS	Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
	46,117,383,377	-	-	1,600,000,000	1,600,000,000	1,066,666,667	533,333,333
<b>Current liabilities</b>							
Trade and other payables	415,370,982	1,264,147,822	2,357,618,282	2,101,265,066	811,437,021	831,722,946	852,516,020
Deferred Income	459,084,430	459,084,430	-				
<b>Total Current liabilities</b>	874,455,412	1,723,232,252	2,357,618,282	2,101,265,066	811,437,021	831,722,946	852,516,020
<b>Total equity and liabilities</b>	60,015,259,881	61,690,660,933	77,581,347,368	79,550,955,744	91,996,130,191	105,690,461,859	117,787,452,345

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**11.3 Statement of Cash Flows**

A statement of cash flows, provides information on the inflow and outflow of cash and cash equivalents and serves as an indicator of the liquidity of IRUWASA. It includes cash flows from operating, investing and financing activities. Cash flows from operating activities have been derived from the principal revenue generating activities. Cash flows from financing activities refer to activities that alter the equity capital and borrowing structure of IRUWASA while cash flows from investing activities refer to acquisition and disposal of long-term assets and other investments that are not included in the cash equivalents. The indirect method of presentation of statement of cash flow is applied. The detailed statement of cash flow is shown in table 11.3 below:



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**Table No. 11.3: Statement of Cash Flows**

SOURCE OF DATA		AUDITED ACCOUNTS			Current	LONG TERM F/PLAN		
	TZS	Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
<b>Cash flows from</b>		<b>TZS</b>	<b>TZS</b>	<b>TZS</b>	<b>TZS</b>	<b>TZS</b>	<b>TZS</b>	<b>TZS</b>
<b>Operating activities</b>								
Profit/(Loss) For the Year		2,791,998,894	826,624,211	300,382,097	2,809,119,315	798,344,869	575,188,319	368,717,920
Adjustments for Non-Cash Items:								
Depreciation and Amortization		3,115,714,392	1,693,918,033	1,344,885,289	2,217,756,377	2,200,998,781	2,581,193,074	2,952,875,478
Gain on revaluation		-	-	-				
Amortization of Grants		(2,665,428,206)	-	-				
<b>Profit/-Loss Before Changes in Working Capital Items</b>		<b>3,242,285,080</b>	<b>2,520,542,244</b>	<b>1,645,267,386</b>	<b>5,026,875,692</b>	<b>2,999,343,650</b>	<b>3,156,381,393</b>	<b>3,321,593,397</b>
(Increase)/Decrease in Inventories		(297,740,364)	(302,463,643)	(327,433,200)	(367,478,473)	(9,047,466)	(580,535,831)	(463,807,836)
(Increase)/Decrease in Trade and Other Receivables		(6,432,183)	81,478,310	(704,297,441)	50,749,579	(644,476,774)	(687,245,964)	(85,107,960)
(Decrease)/Increase in Trade and Other Payables		(124,308,778)	848,776,840	1,080,668,779	(55,401,422)	(1,372,862,441)	103,320,322	20,793,074

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SOURCE OF DATA			AUDITED ACCOUNTS			Current	LONG TERM F/PLAN		
		TZS	Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
Adjustment for Deferral Income			-	-	459,084,430				
<b>Net Cash Flows From/ (Used In) Operating Activities (A)</b>	<b>(A)</b>		2,813,803,755	3,148,333,751	2,153,289,954	4,654,745,375	972,956,969	1,991,919,920	2,793,470,675
<b>Cash Flows From/ (Used In) Investing Activities</b>									
Acquisition of Intangibles			(12,418,800)	(6,000,000)	(28,835,700)	(146,698,388)	(101,000,000)	(55,000,000)	(50,000,000)
Acquisition of Property, Plant and Equipment			(2,557,513,824)	(2,440,375,199)	(2,811,073,723)	(4,444,695,854)	(12,859,863,166)	(12,969,836,519)	(13,711,588,328)
Adjustments for Transferred Stocks (Capital in Nature) to Non-Current Assets	<b>(B)</b>		4,707,080	-	(14,792,201)	<b>(114,100,712)</b>	15,000,000	-	12,000,000
<b>Cash Flows From/ (Used In) Financing Activities (B)</b>			<b>(2,565,225,544)</b>	<b>(2,446,375,199)</b>	<b>(2,854,701,624)</b>	<b>(4,705,494,954)</b>	<b>(12,945,863,166)</b>	<b>(13,024,836,519)</b>	<b>(13,749,588,328)</b>
Long term Long			(245,993,879)	-	-		(533,333,333)	(533,333,333)	(320,864,515)
Capital Grants (MoW)			-	-	-		12,180,861,947	11,861,894,678	11,276,982,168
<b>NET INCREASE/(DECREASE)</b>	<b>(A+B +C)</b>		2,584,332	701,958,552	(701,411,670)	(50,749,579)	(325,377,583)	295,644,746	0

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SOURCE OF DATA			AUDITED ACCOUNTS			Current	LONG TERM F/PLAN		
		TZS	Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
<b>IN CASH AND CASH EQUIVALENTS (A + B+C)</b>									
Cash and Cash Equivalents at the Beginning of the Year			627,351,202	629,935,534	1,331,894,086	630,482,416	579,732,838	254,355,254	550,000,000
<b>CASH AND CASH EQUIVALENTS AT THE END OF THE YEAR</b>			629,935,534	1,331,894,086	630,482,416	579,732,838	254,355,254	550,000,000	550,000,000

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#### **11.4 Financial Ratios**

Many financial ratios can be derived from the financial projections. These indicate the financial health of IRUWASA over time and can be used by a regulator such as EWURA and Ministry of Water for comparison of performance with other authorities.

The following are some of the financial ratios.

**(a) Liquidity:** liquidity ratios measure the ability of the Authority to meet the short-term maturing obligations from the current assets;

**(b) Activity or Operating Performance:**

(a) Leverage ratios which show the extent of indebtedness or also ability of the Authority to service their long-term debts, and

(b) Other ratios that have been provided in the Performance Indicators which include Account Receivable Collection period, Revenue Collection Efficiency, Operating ratio and Personnel expenditure as % of collection from water and sewerage bills.

The financial ratios are frequently used in analyzing performance of the Authority as well as serving the purpose for financial projections include the following:

**(a) Current Ratio**

The current ratio (CR) measures whether or not the Authority has enough resources to pay its debts over the next 12 months. It compares IRUWASA's current assets to its current liabilities. The current ratio is an indication of IRUWASA's liquidity and ability to meet creditors' demands.

The formula used to calculate the current ratio is given in table 11.4.

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Current Ratio (CR) = Current Assets / Current Liabilities

**(b) Operating Ratio**

The operating ratio is an indicator that is used to measure the Authority's ability to recover operating costs (including depreciation) from its annual revenues. Operating ratio is calculated by dividing the Authority's total annual operating expenses with the annual revenue.

**(c) Debt Servicing Coverage Ratio**

The Debt Servicing Coverage Ratio (DSCR) measures the ability of IRUWASA to carry out payments of the loan (principal + interest). It indicates the percentage of total revenue income that is spent towards paying the annuities (interest and principal) on loans taken by IRUWASA.

**(d) Account Receivable Collection Period**

Account Receivable Collection period indicates the amount of money owed to the Authority by the customers, expressed as the average duration in months the utility takes to collect the bills. It is calculated by taking the total accounts receivable during the year divided by the total water and sewerage sales (bills) multiplied by 12. A value of between 1 and 2 months is considered reasonable.

**(e) Personnel Expenditure as % of Current Collection From Water and Sewerage Bills**

Total personnel expenditures expressed as a percentage of the total collection from current water and sewerage bills plus collections from other water and sewerage related services (excluding grants and subsidies). The limit for this indicator is 30% as provided in the Performance Contract between the Ministry of Water and IRUWASA.

**(f) Collection Efficiency (%)**

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This ratio refers to total collection from water and sewerage services expressed as a percentage of total water and sewerage billings. The target is to achieve 98% collection efficiency by June 2024.

**Table 11.4: Financial Ratios**

		Unit	Historical			Current	Projections		
			Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
1	Current Ratio	Ratio	3	2	1	1	1	2	2
2	Operating Ratio	Ratio	0.72	0.76	0.73	0.77	0.92	0.94	0.97
3	Debt Service Coverage Ratio	Ratio	0.01	0.03	0.03	0.03	0.02	0.02	0.02
4	Account Receivable Collection Period	Months	1.57	1.46	1.07	1.03	1.29	1.74	1.74
5	Personnel Expenses as % of Collections	%	23%	27%	29%	28%	26%	26%	26%
6	Collection Efficiency	%	94%	95%	96%	98%	98%	98%	98%

### 11.5 Assumptions for Financial Projections

Therefore, the future IRUWASA Financial Plan and Statement has been drawn basing on g assumptions as follows: -

- Economic parameters will stand on average as stated in this Business Plan i.e., inflation rate will be one-digit, average household income will be. 985.50 USD, GDP growth rate will be 4.5% per annum;
- The Operation and Maintenance cost reduction programme will be fully implemented;

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- Working ratio will be 0.69 ;
- Production capacity and efficiency will be expanded and improved over the three years to attain 26,830m<sup>3</sup>/day;
- NRW will be reduced from 28% year 2020/21 to 26% by 2023/24;
- IRUWASA will execute the tariff setting as per plan in order to meet the proposed planned activities as indicated in the Income Statement;
- Development Partners and Government funded planned projects will be realized;
- IRUWASA will contribute not less than 30% of investment;
- Customers increase from 30,332 to 42,332;
- Changes in power tariff will be immediately addressed by the Regulator,, and
- There will be no any legal changes which will affect IRUWASA's operational activities.

**Table 11.5: Financial Projections Assumptions**

Projection Matrics	Unit	Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2021/2023	Year 2023/2024
Inflation rate annual	%	4.5	5.1	5	5	5	5	5
Average Household Income	TZS /year	292,000	305,140	318,871	333,221	348,215	363,885	380,260
Cash Position in months of operating expenses	Months	1	0.3	1	1	0.5	0.5	0.4
Accounts Receivable in months of annual revenues	Months	1.57	1.46	1.07	1.03	1.29	1.74	1.74
Prepaid Expenses as % of operating expenses	%	0	0	0	0	0	0	0
Inventories in months of operating expenses	Months	1.4	1.5	1.09	1.38	1.30	1.71	1.71
Payable in months of operating expenses	Months	0.58	2.08	3.73	3.40	2.23	2.07	2.11

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Projection Matrics	Unit	Year 2017/ 2018	Year 2018/ 2019	Year 2019/ 2020	Year 2020/ 2021	Year 2021/ 2022	Year 2021/ 2023	Year 2023/ 2024
Water Production	Million M <sup>3</sup>	6.56	6.63	6.69	6.56	5.88	6.16	6.49
Bulk water purchase volume (if applicable)	Million M <sup>3</sup>	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Bulk water purchase price	Tzs/ M3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Number of new connections	Number	2,725	2,978	3,075	1,500	3,000	3,000	3,000
Average electricity tariff	TZS /kW h	306	318	235	344	235	235	235
Number of employees	Number	89	89	142	131	160	170	180
Average Chemical cost	Tzs/ kg	4500	4,500	4,500	5,000	5,500	6,000	6,600



## **12.0 MONITORING, EVALUATION AND REPORTING**

The success of the implementation of the Business Plan will depend largely on how planned activities and outputs are effectively monitored and evaluated. A monitoring and evaluation system is required to measure and evaluate the level of implementation, achievement and impact of this Business Plan. The purpose of monitoring and evaluation system is to assess the extent of achievement/ failure, suggest strategies to overcome failures and lay the basis for improving implementation of the Business Plan.

While the Managing Director will have the overall responsibility in this monitoring and evaluation exercise, all stakeholders who are directly involved in the implementation of the Business Plan will participate in the monitoring and evaluation activities at least once per year. Monitoring and evaluation will be at different levels including: corporate managerial level; departmental level; and individual performance level. The monitoring and evaluation levels of performance are as summarized below:

- 1) **Individual Level** - Individual performance targets will be agreed upon between the supervisors and or managers concerned. This will be part of the institutional performance appraisal system (OPRAS). This system will be linked to performance contracts that are part of IRUWASA's management. An important role of the performance appraisal system is to monitor performance and identify staff training and development needs. This is in addition to the reward aspects of performance appraisal;
- 2) **Departmental Level** - Weekly departmental meetings shall be held to monitor the implementation of the departmental plans and reported to the Managing Director;
- 3) **The Managing Director's Office** will have the overall responsibility to monitor and evaluate the implementation of this Business Plan. This office will also coordinate the implementation of all activities related to the implementation of this Business Plan and report to the Board;

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- 4) **Management Level** - At management level, weekly, monthly and quarterly meetings (to be reported to the Board of Directors) shall be held to monitor the implementation of the operational plan along with the Utility's Strategic Plan. Also, the Management shall organize annual strategic reviews to evaluate the impact of operational plans at both operational and strategic levels. Additionally, all weekly, monthly and quarterly reports will be submitted to EWURA, The Treasury Registrar and MoW as per requirements. IRUWASA will also be responsible with reporting the annual performance to the respective authorities;
- 5) **Workers Council**- the council shall monitor the implementation of the Business Plan through meetings which will be conducted twice a year and report the performance to the Board, and
- 6) **Board Level** - The Board shall monitor the implementation of both the operational activities and the Business Plan in quarterly meetings and report the WSSA's performance on quarterly basis.

The Annual Budget is a tool for the implementation of the operational plan on an annual basis. The operational plan, in turn, will be regarded as the tool for the implementation of the Business Plan. This approach ensures that, at all times, the organization is focused on the strategic path defined in the Business Plan and the Strategic Plan.

Through monitoring, the Management will provide information on the level of achievement. The monitoring process will help to determine whether the implementation is on course, establish the need for any amendments in light of the ever-changing dynamics in water and sanitation sector and in the political environment. Monitoring, follow-up and control systems will be established at all levels. Evaluation will complement monitoring by assessing planned, on-going and completed interventions in the Business Plan to determine their relevance, efficiency, effectiveness, impact and sustainability with the intent of incorporating lessons learned into the decision-making process.

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**13.0 CONCLUSION**

IRUWASA in cooperation with the Ministry of Water, EWURA and other Stakeholders aims at providing reliable and adequate water supply and sanitation services which meets Tanzania and International level for Water and Wastewater Quality Standards. It also, aims at securing sufficient and stable financing of the Authority to ensure implementation of key strategic issues at the proposed costs. It is the conviction of IRUWASA that, this Business Plan, will improve the performance in her daily operations, finally convince customers to timely pay for their water bills and fulfill the Authority's overall targets which is to meet full cost recovery at the same time meet people's expectations.

# APPENDICES

## APPENDIX A

### Analysis of External Environment – PESTEL Analysis

#### **APPENDIX A: CURRENT AND PLANNED PERFORMANCE**

**Table 1: Overall Quality of Service Targets**

**Table 2: Guaranteed Quality of Service Targets**

**Table 3: Water Supply Performance Targets**

**Table 4: Sewerage Performance Targets**

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**Table1: Overall Quality of Service Targets**

Code	Focus and Description	Minimum Service Level Requirement by the Authority	Current Service Level: Year 2020/2021	Description of ongoing Projects/Operational Activities to improve the Current services Level	Starting and Completion dates	Costs Million TZS	Provisional Service Level Target: Year 2021/2022	Provisional Service Level Target: Year 2022/2023	Provisional Service Level Target: Year 2023/2024
WSS 01	<b>Water Quality</b> Testing samples for impurities	To ensure that water is within standards as specified by Tanzania Bureau of Standards (TBS)	100%	<ul style="list-style-type: none"> <li>Procurement of laboratory equipment and reagents</li> <li>Conducting regular water tests and Quality monitoring.</li> </ul>	July 2018 - June 2021	400	98%	98%	98%
WSS 02	<b>Water Pressure</b> Minimum/maximum water pressure	Must maintain a pressure ranging from 0.5 to 2 bars <b>(1bar is equivalent to 10m of column of water)</b>	0.5 to 7	To maintain 7 bars IRUWASA has done the following: <ul style="list-style-type: none"> <li>Installation of Pressure Reducing Valves (PRVs)</li> <li>Established Water supply zones basing on recommended water supply operating pressure.</li> </ul>	July 2018 - June 2021	5	0.5 to 7	0.5 to 7	0.5 to 7
WSS 03	<b>Reliability of supply</b> Notify public of intention to interrupt supply planned interruptions	Minimum notification time of 12 hours for short interruptions (less than 4 hours) and 24 hours for longer interruptions	14 hrs and 48 hrs	<ul style="list-style-type: none"> <li>Customer's notification through loud speakers and local radios, short text messages.</li> <li>Provision of toll free services</li> </ul>	July 2018 - June 2021	18	12 hrs and 24 hrs	12 hrs and 24 hrs	12 hrs and 24 hrs

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Code	Focus and Description	Minimum Service Level Requirement by the Authority	Current Service Level: Year 2020/2021	Description of ongoing Projects/Operational Activities to improve the Current services Level	Starting and Completion dates	Costs Million TZS	Provisional Service Level Target: Year 2021/2022	Provisional Service Level Target: Year 2022/2023	Provisional Service Level Target: Year 2023/2024
		(more than 4 hours)		<ul style="list-style-type: none"> <li>Official letters to big customers.</li> </ul>					
WSS 04	<b>Reliability of supply</b> Restoration after emergency lock-off	Maximum time of 24 hours to restore supply	24 hrs	<ul style="list-style-type: none"> <li>Special rescue team including prequalified Contractors.</li> <li>Availability of electrical spare parts for distribution system</li> <li>Availability of spare parts for water supply system (Pipes and fittings)</li> </ul>	<ul style="list-style-type: none"> <li>July 2018 - June 2021</li> </ul>	50	24 hrs	24 hrs	24 hrs
WSS 05	<b>Sewerage</b> Correction of sewerage problems	Maximum of 24 hours to correct sewerage problems, after being informed	12 hrs	<ul style="list-style-type: none"> <li>Special rescue team</li> <li>Availability of spare parts for sewerage system (Pipes and fittings)</li> </ul>	July 2018 - June 2021	24	12 hrs	12 hrs	12 hrs
WSS 06	<b>Sewerage</b> Sewerage effluent quality	Ensure that sewerage effluent is within the standards specified by Tanzania Standards	100%	<ul style="list-style-type: none"> <li>Replant of reeds</li> <li>Conducting regular sample tests for monitoring purposes.</li> <li>Regular cleaning of Wastewater Stabilization Ponds</li> </ul>	July 2018 - June 2021	40	60%	60%	65%

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Code	Focus and Description	Minimum Service Level Requirement by the Authority	Current Service Level: Year 2020/2021	Description of ongoing Projects/Operational Activities to improve the Current services Level	Starting and Completion dates	Costs Million TZS	Provisional Service Level Target: Year 2021/2022	Provisional Service Level Target: Year 2022/2023	Provisional Service Level Target: Year 2023/2024
				for removing scum.					
WSS 07	<b>Water meters</b> Changing meters	Licensees must provide consumers with details of the date of the change, meter readings on the day and serial numbers of the new meter	2 days	- Verbal notification through sales representatives	July 2018 - June 2021	2	2 days	2 days before	2 days before
WSS 08	<b>Delivery of bills</b> Issue of first bill	Maximum time of 30 working days after connection	30 days	All new customers are registered in the billing system immediately after new connection.	July 2018 - June 2021	2	30 days	30 days	30 days
WSS 09	<b>Appointments</b> Keeping appointments	Must make and keep an appointment at customers request and must notify customer prior to appointed time, if cannot keep appointment.	100%	Complaints are registered in the billing system and forwarded to the respective departments for action.	July 2018 - June 2021	0	98%	99%	100%
WSS 010	<b>Complaints</b> Response to complaints	Maximum of 5 working days to acknowledge customer,	2day	All reported complaints entered into the system immediately after being received.	July 2018 - June 2021	2	2 day	2 day	2 day



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Code	Focus and Description	Minimum Service Level Requirement by the Authority	Current Service Level: Year 2020/2021	Description of ongoing Projects/Operational Activities to improve the Current services Level	Starting and Completion dates	Costs Million TZS	Provisional Service Level Target: Year 2021/2022	Provisional Service Level Target: Year 2022/2023	Provisional Service Level Target: Year 2023/2024
	not bill related	complaints, after receipt.							
		Maximum time of 20 working days to complete investigation respond, from date of receipt of complaint.	7 days	There is a Sales Attendant in every supply zone attending customers' complaints.	July 2018 - June 2021	4	7 days	7 days	7 days
WSS 011	<b>Complaints</b> Response to billing complaints	Maximum of 5 working days to acknowledge customer complaints after receipt.	2 days	All reported complaints are entered into the system immediately after being received.	July 2018 - June 2021	2	2 days	2 days	2 days
		Maximum 10 working days to complete investigation and respond, from date of receipt of complaint.	4 days	Done accordingly by the sales representatives available in each water supply zone.	July 2018 - June 2021	3	4 days	3 days	3 days

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Code	Focus and Description	Minimum Service Level Requirement by the Authority	Current Service Level: Year 2020/2021	Description of ongoing Projects/Operational Activities to improve the Current services Level	Starting and Completion dates	Costs Million TZS	Provisional Service Level Target: Year 2021/2022	Provisional Service Level Target: Year 2022/2023	Provisional Service Level Target: Year 2023/2024
WSS 012	<b>Account status</b> Issue of account status	Meter to be read on same day customer is moving if on a weekday/(within 2 days of move if on a weekend) provided that 5 days' notice of move is given. Maximum time of 15 working days to provide final bill after move.	Same as per requirement	Done immediately after being received the notification from customers	July 2018 - June 2021	0.4	Same as per requirement	Same as per requirement	Same as per requirement

**Table 2: Guaranteed Quality of Service Targets**

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**Table 2: Guaranteed Quality of Service Targets**

Code	Focus and Description	Minimum Service Level Requirement by the Authority	Current Service Level: Year 2020/21	Description of ongoing Projects/Operational Activities to improve the Current services Level	Starting and Completion dates	Costs Million TZS	Provisional Service Level Target: Year 2021/22	Provisional Service Level Target: Year 2022/2023	Provisional Service Level Target: Year 2023/24
WSSG 1	<b>Access</b> Connection to supply	Maximum time of 7 working days	7 days	The service has been outsourced	July 2018 -June 2021	900	7 days	7 days	7 days
WSSG 2	<b>Water meters 1</b> Meter installation for Licensee's with 100%	Maximum of 30 working days to install meter on customer's request	14 days	Done in parallel during new connection ( <i>all IRUWASA customers are metered</i> )	July 2018 -June 2021	4	14 days	14 day	14 days
WSSG 3	<b>Water meters 2</b> Repair or replacement of faulty meters	Maximum time of 30 working days to repair or replace meter after being informed of defect	7 days	Done accordingly depends on the extend of defect	July 2018 -June 2021	600	7 days	5days	3 days
WSSG 4	<b>Water meters 3</b> Meter reading	Meter reading done at least once every month as long as it accessed by Licensee	Once per month	Done once per month	July 2018 -June 2021	74.5	Once per month	Once per month	Once per month

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Code	Focus and Description	Minimum Service Level Requirement by the Authority	Current Service Level: Year 2020/21	Description of ongoing Projects/Operational Activities to improve the Current services Level	Starting and Completion dates	Costs Million TZS	Provisional Service Level Target: Year 2021/22	Provisional Service Level Target: Year 2022/2023	Provisional Service Level Target: Year 2023/24
WSSG 5	<b>Unjustified disconnection</b> Stop unjustified disconnection	A maximum of 24 hours to restore wrong/unjustified disconnection as per Authorities Credit Policy/Client Service Charter after being notified/aware.	24 hrs	Use of plumbers from the respective water supply zones	July 2018 -June 2021	0.3	24 hrs	24 hrs	24 hrs
WSSG 6	<b>Reconnection</b> Reconnection after payment of overdue amount	Within 24 hours after debt settlement	24 hrs	Use of plumbers from the respective water supply zones	July 2018 -June 2021	50	24 hrs	24 hrs	24 hrs
WSSG 7	<b>Compensation</b> Payment of compensation	Maximum of 60 days after claim is received to process and make payment. Customer must make claim within 60 days of perceived breach	Same as per requirement	After claims confirmed	July 2018 -June 2021	1.2	Maximum of 60 days after claim is received to process and make payment. Customer must make claim within 60 days of perceived breach	Maximum of 60 days after claim is received to process and make payment. Customer must make claim within 60 days of perceived breach	Maximum of 60 days after claim is received to process and make payment. Customer must make claim within 60 days of perceived breach

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**Table 3: Water Supply Performance Targets**

ID. NO	Performance Indicator	Actual 2014/2015	Actual 2015/2016	Actual 2016/2017	Actual 2017/2018	Actual 2018/2019	Actual 2019/2020	Target 2020/2021	Target 2021/2022	Target 2022/2023	Target 2023/2024
<b>Protection of the user interests</b>											
	User service accessibility										
PW 1(a)	Proportion of population served with water (%)	91	92	93	95	95	90	95	97	98	98
PW 1(b)	Proportion of population living within network area (%)	92	96	96	98	97	95	96	97	98	98
PW 2	Number of connections to households (%)	0.28	0.29	0.32	0.34	0.40	0.50	0.55	0.60	0.65	0.70
PW 3	No. of public water kiosks	136	137	99	111	101	215	205	195	185	175
PW 4	Average hours of supply	23.7	23.97	23.5	23.5	23.5	20	22	23	24	24
PW 5	<b>Water quality compliance %</b>										
	3.1 E-coli	100	100	100	100	100	100	100	100	100	100
	3.2 turbidity	98	98	98	100	100	100	100	100	100	100
PW 6	Response to written complaints (%)	100	100	100	100	100	100	100	100	100	100
PW 7	Metering ratio (%)	95	100	100	100	100	100	100	100	100	100
PW 8	Non-Revenue Water (%)	32.9	30.06	28.8	25	27	28	25	28	27	26

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ID. NO	Performance Indicator	Actual 2014/2015	Actual 2015/2016	Actual 2016/2017	Actual 2017/2018	Actual 2018/2019	Actual 2019/2020	Target 2020/2021	Target 2021/2022	Target 2022/2023	Target 2023/2024
PW 9	Payment of electricity bills in %	100	100	100	100	100	100	100	100	100	100
PW 10	Revenue collection efficiency (%)	89	90	95.4	96	96	96	97	98	98	98
PW 11	Working ratio	0.92	0.93	0.73	0.76	0.72	0.76	0.73	0.69	0.67	0.68
PW 12	Operating ratio	1.0	0.99	1.1	0.72	0.76	0.73	0.77	0.92	0.94	0.97
PW 13	Contribution to investment	13	6	20	31	35	36	35	30	30	30
PW 14	Personnel expenditure per m3 produced	130	122	125	264	458	487	372	432	436	439
PW 15	Personnel expenditure as % of collection from water and sewerage bills and other collections	33	36	26	23	27	29	26	26	26	26
PW 16	Administration costs per m3 produced	100	170	223	203	268	326	234	283	286	288
PW 17	Treated water storage capacity (hrs)	8.9	6	10	11	10.5	8	9	10	11	12
PW 18	Water mains rehabilitation (% per year)	0	0	0	0.66	0.1	0.1	0.2	0.2	0.2	0.2

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ID. NO	Performance Indicator	Actual 2014/2015	Actual 2015/2016	Actual 2016/2017	Actual 2017/2018	Actual 2018/2019	Actual 2019/2020	Target 2020/2021	Target 2021/2022	Target 2022/2023	Target 2023/2024
PW 19	Water service connections rehabilitation (% per year)	10	12	10	5.03	6	6	6	5	5	5
PW 20	Mains failures (nr.km/year)	0	0	0	0	1	0	1	3	3	3
PW 21	Personnel/1000 (W&S) connections	7.2	6	4.6	4.3	4.1	4.6	5	4.4	4.3	4.3
PW 22	Revenue per staff per year (Million)		103	98.6	111	97	98	100	79	78	77
PW 23	Energy consumption (kWh/cu.m/100m head)	1.05	0.5	0.55	0.7	0.65	0.7	0.7	0.7	0.7	0.7

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**Table 4: Sewerage Performance Targets**

IND. NO	Name of Indicator	Target 2014/2015	Target 2015/2016	Current 2016/2017	Actual 2017/2018	Actual 2018/2019	Actual 2019/2020	Target 2020/2021	Target 2021/2022	Target 2022/2023	Target 2023/2024
	<b>User service accessibility</b>										
PS 1	Proportion of population connected with sewerage network (%)	13.25	15	16	17.6	18	8	13	20	25	30
PS 2	Number of people sensitized and trained in sanitation	2,000	2,326	2,326	4,500	2,500	2,600	2,700	2,800	2,900	3,000
PS 3	Number of latrines constructed at household levels	2,190	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PS 4	Number of households with connection to sewerage	1,293	1,738	1,845	2,027	2,077	2,294	3,414	4,534	5,654	6,774
PS 5	Response to written complaints (%)	100	100	100	100	100	100	100	100	100	100
	<b>Operator's financial and economic sustainability (are combined with water)</b>										
	<b>Operator's infrastructural sustainability</b>										
PS 6	Treatment of collected wastewater (%)	100	100	100	100	100	100	100	100	100	100



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IND. NO	Name of Indicator	Target 2014/2015	Target 2015/2016	Current 2016/2017	Actual 2017/2018	Actual 2018/2019	Actual 2019/2020	Target 2020/2021	Target 2021/2022	Target 2022/2023	Target 2023/2024
PS 7	Sewerage Mains rehabilitation (% per year)	0	0	0.5	1.2	1.5	1.8	2	2	2	2
PS 8	Sewerage service connection rehabilitation (% per year)	1.5	13	2	1.9	2	1	1	1	1	1
	<b>Operator's operational sustainability</b>										
PS 9 B	Sewer blockages (nr/100km of sewers/year)	14	3.48	1	11.76	14	17	10	17	17	17
PS 10 B	Sewer collapses (nr/100km of sewers/year)	0	0	0	0	0	0	0	0	0	0
PS 11	Wastewater quality compliance (%)										
	8.1 BOD <sub>s</sub> compliance	60	48	60	50	50	60	60	65	70	75
	8.2 COD compliance	60	48	35.5	50	50	60	60	65	70	75
PS 12	Energy consumption (kWh/cu.m/100m head)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PS 13	Safe disposal of sludge (%)	95	100	100	100	100	100	100	100	100	100

## APPENDIX B

### IRUWASA Assessment

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**ANNEX B: IRUWASA ASSESMENT (Internal Factors)**

Functional Activities		Strength in this area – Reasons	Improvement needed – Reasons In this area	Ranks
Protection of User Interest	Water Service and Sanitation Accessibility	1. 90% of the population is served with water because IRUWASA is above Ruling Part Election Manifesto Target of 2020 85% by 2020.	1. Increase population served with water and sewerage network to 98% and 30% respectively.	1
		2. Customers receive Water supply service for an average of 20 hours.	2. Ensuring that customers receive water service for an average of 24hrs.	
		3. IRUWASA has achieved its objective of connecting house hold customers to reach 2,294 customers against 2,167 planned number of customers.	3. Increase number of customers to 5,774.	
		4. Sewerage population coverage of 18% against planned coverage of 8%.	4. Increase sewerage population served to 30%.	
		5. IRUWASA possess two (2) cesspit emptier trucks to cater for households not covered by sewerage network.	5. Procurement of one small cesspit emptier truck to serve unplanned areas with difficulties in accessibility.	
	Quality of service	1. Water quality Compliance is 100% this is due water tests results conducted daily and on monthly basis.	1. Maintenance of water treatment plant and expansion of the same so as to achieve the treatment capacity of 26,830m3 per day	1
		2. Response to received complaints is 100%	2. Improve call center and establish the 24hours emergency team.	
Sustainability of the		1. Compliance is 100% in metering ratio.	1. Exploration of good/advanced technology of prepaid water meters	2

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Functional Activities		Strength in this area – Reasons	Improvement needed – Reasons In this area	Ranks
	Financial and economic sustainability	2. Revenue collection efficiency of 98%	2. Maintenance of 98% revenue collection efficiency.	
		3. 28% Reduction of NRW achieved	3. Reduction of NRW from 28% to 26%	
	Cost indicators	1. Capable to meet Personnel expenditure which is Tsh. 674 per m3 of water produced	1. Maintain the Personnel expenditure per m3 of water produced to TSh. 674	3
		2. Administration Costs.	2. Reduce the Administrative costs so that the saved income increases IRUWASA contribution to investment.	
	Infrastructure sustainability	1. Treated water storage capacity is 10 hours. This helps to avoid service interruptions.	1. Strengthen the storage system by making sure that the float valve and tanks telemetric systems are properly working to achieve storage capacity of 12hours.	2
	Operational sustainability	1. No records for sewerage mains failure because the system is still in a good condition	1. To educate and sensitize community on the proper use of the sewerage system and the importance of reporting in case of any damage or vandalism of water infrastructure.	3
		2. One record water supply network mains failure against 7 planned failures.	2. Conduct preventive maintenance to avoid mains failures.	
	Human resource efficiency	1. Personnel/1000 (W&S) connections is 4.6 against 6 which is a standard	1. Increase number of customers and make sure customers are served with courtesy.	2

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Functional Activities		Strength in this area – Reasons	Improvement needed – Reasons In this area	Ranks
		2. Revenue per staff/year is 98	2. Increase number of customers to increase revenue.	
Environmental sustainability	Energy consumption	All necessary protection for electronic gadgets has been installed to reduce power consumption. Currently all pumps are protected from any damage and are in good condition.	Further studies needed so that energy consumption is reduced.	3

# APPENDIX C

## **Analysis of External Environment – PESTEL analysis**

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**Appendix C: Analysis of External Environment – PESTEL analysis**

Changes in external factors to which must respond	Possible Changes for WSSA	Impact	Probability	Overall Importance	Preparedness	Planned Actions (for external changes with preparedness score of less than or equal to 2 and overall importance of greater or equal to 6)	Comments
POLITICAL	Change of Policy	3	1	3	1	-	Consultations should be made during policy changes
	Availability of funds for investments from MoW	1	1	1	1	-	Consultations should be made during undertakings for assurance
	Funds from Development Partners	2	4	8	1	Prepare and sell more proposal to different partners	Consultations should be made during undertakings for assurance.
	Change of leadership	1	1	1	1	-	National election to take place during 2020
	Expansion of Municipal Boundaries which cause decline in the % of population served and network area	3	3	9	2	1. Investment in water network expansion 2. Increase operational staff 3. Increase transport facilities	Higher Costs needed to rescue the situation. (Budgeted for peri urban).
ECONOMICAL	Financial Crisis and currency fluctuations.	2	2	4	2	-	Close follow-ups on world economic trends.

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Changes in external factors to which must respond	Possible Changes for WSSA	Impact	Probability	Overall Importance	Prepared-ness	Planned Actions (for external changes with preparedness score of less than or equal to 2 and overall importance of greater or equal to 6)	Comments
	Funds from Development Partners	2	4	8	2	Prepare and sell more proposal to different partners	Projects finalization.
	National Budget Deduction/reduction	3	2	6	2	Budget review /Reallocation	-
	Revenue amount/collected	3	2	6	3	1. Increase more payment modalities and pay points	Strategies are in place
						2. Review revenue collection strategies	
	Changes in Tariff	3	2	6	3	1. Budget review (reduce capital expenditure)	Planned for tariff change
	Changes in Promised Fund (MoW through WSDP, Donor Partners)	3	2	6	2	2. Implement planned activities through use of internal funds by phases	Find alternative sources of funds.
						3. Set tariff to meet investment requirement	Compliance with Government and political directives on Tariff adjustments.
SOCIOLOGICAL	Increase in illegal consumptions	3	3	9	3	1. Implement NRW Reduction Strategy	Continuous inspections.



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Changes in external factors to which must respond	Possible Changes for WSSA	Impact	Probability	Overall Importance	Preparedness	Planned Actions (for external changes with preparedness score of less than or equal to 2 and overall importance of greater or equal to 6)	Comments
	Low priority for water payment	3	1	3	2	1. Introduce payments by installment 2. Customer sensitization 3. Install prepaid water meters	Budget for Training, sensitization and advertisement.
	Demographics changes.	2	2	4	2	-	Training for attitude change
	Conflicts from customers	2	1	2	2	-	More meetings, Compensation
TECHNOLOGICAL	Water Meter Technology	2	2	4	2	-	Installation of prepaid and computerized meters.
	New IT-Systems (Internet – Opportunities)	2	2	4	2	-	Installation of website, intranet, proper networking.
	Adopting of modern water and waste water treatment system	3	2	6	2	1. Conduct training on operating the modern acquired technology	Higher Training Costs, expecting challenges associated with new project

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Changes in external factors to which must respond	Possible Changes for WSSA	Impact	Probability	Overall Importance	Preparedness	Planned Actions (for external changes with preparedness score of less than or equal to 2 and overall importance of greater or equal to 6)	Comments
ENVIRONMENTAL	Water source pollution.	3	2	6	2	1. Improve water treatment process	Cause high treatment cost. Separate emergence funds should be arranged for curbing the gap in case of the event.
	River sedimentation					2. Education on water sources protection and conservation.	
	Climatic change (cause decreased water availability from water source).						
LEGAL	Change of service area boundaries	3	3	9	2	1. Investment in water network expansion	Cause some of the operation frameworks to change.
						2. Increase operational staff	
						3. Increase transport	
	Operating rules and regulations of Water Act.	3	1	3	1	-	
Change of Constitution and or Government structure	3	1	3	1	-		

## APPENDIX D

### SWOC Analysis

#### APPENDIX D: SWOC Analysis

**Table No. 3.1: SWOC Analysis in Corporate Appraisal**

CORPORATE APPRAISAL	
Strengths	Weaknesses
<ol style="list-style-type: none"> <li>1. Reliable source of water at Little Ruaha River and Kitwiru Spring Kibwawa borehole.</li> <li>2. Existence of water treatment plant with high capacity compared to needs</li> <li>3. Adequate storage capacity of water tanks</li> <li>4. Sole legal water supply and sanitation service provider in Iringa Municipal, Ilula and Kilolo Townships</li> <li>5. Reliable water supply service for an average of 20 hours per day</li> <li>6. Installation of pre-paid meters</li> <li>7. Availability of cesspit emptier trucks</li> </ol>	<ol style="list-style-type: none"> <li>1. Dilapidated water pipelines in peri-urban and Kilolo and Ilula Townships.</li> <li>2. Untimely repair/replacement of broken pipes and water meters</li> <li>3. High NRW of an average 28%</li> <li>4. Low coverage of sewerage service in the service area of 8%</li> <li>5. Waste water stabilization ponds not efficiently working</li> <li>6. Shortage of educational/awareness on connection to and usage of sewerage system.</li> </ol>

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8. Good performance record. 9. Availability of Integrated Water Resources Management.	
<b>Opportunities</b>	<b>Challenges</b>
1. Growing population and housing needing more water and sanitation services 2. Government support and assistance in major investments 3. Availability of loans for capital investment from financial institutions 4. Availability of reliable water sources and potential for exploration of Mtitu River as an alternative source of water 5. Availability of sites with possible ground water resources 6. Availability of land for possible dam locations 7. Availability of Higher Learning Educational Institutions 8. High demand as there is no substitute for water 9. Tourism center establishment for southern highland zones in Iringa.	1. High energy costs in production and distribution of water 2. Pollution and destruction of water sources by human activities 3. Destruction of water supply and sewerage infrastructure by human activities such as construction, urban farming, theft and sabotage/vandalism 4. Reluctance of customers to connect to sewerage system 5. Un-surveyed areas are hard to reach with cesspit emptier trucks or to connect them to water supply and sewerage system 6. Water theft (illegal water connections and consumption) 7. Political interferences ( <i>e.g.</i> during tariff setting).

**Table No. 3.2: SWOC Analysis in Organizational Capacity**

<b>Strengths</b>	<b>Weaknesses</b>
1. Presence of young and qualified personnel	1. Shortage of transport facilities such as vehicles and motor cycles

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<ul style="list-style-type: none"> <li>2. Conducive working environment, good communication and healthy relations among staff</li> <li>3. Efficient staff training and development</li> <li>4. Self-motivated and highly committed staff</li> <li>5. Good staff welfare services <i>e.g.</i>, tea, milk and funeral support services</li> <li>6. Technology advancement: pre-paid meters; electronic billing and payment system; smartphone meter reading; circulation of bills to customers through SMS and other supporting computer application systems.</li> </ul>	<ul style="list-style-type: none"> <li>2. Shortage of ICT equipment such computers, savers and printers</li> <li>3. Non achievement of full cost recovery (breakeven point)</li> <li>4. In adequate funds to undertake all activities as planned</li> <li>5. Low revenue collection efficiency averaged at 96% per month.</li> <li>6. Shortage of rainfall water storage system.</li> </ul>
<b>Opportunities</b>	<b>Threats/challenges</b>
<ul style="list-style-type: none"> <li>1. Continued investment in metering technology: pre-paid meters; distance and computerized meter reading</li> <li>2. Availability of grants and loans for major investments.</li> </ul>	<ul style="list-style-type: none"> <li>1. High PAYE coupled with high monthly deductions from HESLB to some staff.</li> <li>2. No salary increment.</li> <li>3. Low inclination for some customers to use electronic payments</li> <li>4. Fluctuations on Internet connection which disturb electronic billing and payments.</li> </ul>

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**Table No. 3.3: SWOC Analysis in Customer Service**

Strengths	Weaknesses
<ol style="list-style-type: none"> <li>1. Cordial relationship with customers and other stakeholders</li> <li>2. Provision for impoverished households or communities to connect to water supply network on credit</li> <li>3. Electronic billing and payment systems</li> <li>4. Smartphone meter reading</li> <li>5. Provision for customers to pay water bills on instalments</li> <li>6. Spacious customer service office with professional personnel and TV screens.</li> </ol>	<ol style="list-style-type: none"> <li>1. Untimely response to some customer queries</li> <li>2. Use of unfriendly language by some staff to customers</li> <li>3. Poor on-site sanitation facilities and inadequate knowledge of customers on the proper use of sanitation facilities</li> <li>4. Shortage of educational/awareness programs to customers.</li> </ol>
Opportunities	Threats/challenges
<ol style="list-style-type: none"> <li>1. Presence of local radio stations in Iringa Municipality</li> <li>2. Understanding and cooperative customers when given information.</li> </ol>	<ol style="list-style-type: none"> <li>1. Shortage of customer service facilities such as computers and field transport</li> <li>2. Lengthy queues for customers who pay water bills at the bank</li> <li>3. Inability of Government institutions to settle their bills timely.</li> </ol>

# APPENDIX E

## Water Demand Projection

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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**Appendix E: Water Demand Projections for Three Years (m<sup>3</sup>/year)**

<b>Year</b>	<b>Domestic</b>	<b>Institution</b>	<b>Commercial</b>	<b>Industrial</b>	<b>Kiosk</b>	<b>Total Demand</b>	<b>Total Production</b>
2021/2022	4,691,330	683,145	268,379	48,797	188,281	5,879,932	6,173,928
2022/2023	4,915,296	715,759	281,191	51,126	197,270	6,160,642	6,468,674
2023/2024	5,177,450	753,934	296,188	53,853	207,791	6,489,216	6,813,677



# APPENDIX F

## Water Service Coverage Projection

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## APPENDIX F: Water Service Coverage Projections

S/N	Ward	Total Population (No)	Water Supply Coverage Projection (%)					
			Population directly served with water (No)	Service gape (No)	Population directly served with water (%)	Year1	Year2	Year3
1	Kihesa	22522	21085	0	100	100	100	100
2	Mtwivila	26013	23379	841	96	96	97	98
3	Gangilonga	11881	11123	0	100	100	100	100
4	Kitanzini	4477	4191	0	100	100	100	100
5	Ruaha	21022	18105	1359	92	92	94	98
6	Mshindo	2342	2192	0	100	100	100	100
7	Mivinjeni	5916	5539	0	100	100	100	100
8	Mlandege	5743	5377	0	100	100	100	100
9	Mwangata	16692	15627	0	100	100	100	100
10	Kwakilosa	9837	9025	159	98	98	99	99
11	Makorongoni	9642	9027	0	100	100	100	100
12	Ilala	5505	5154	0	100	100	100	100
13	Mkwawa	11973	10648	484	95	95	96	99
14	Kitwiru	14186	13015	229	98	98	99	99
15	Isakalilo	11372	10115	459	95	95	96	98
16	Nduli	8201	4991	2319	65	95	96	99

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17	Ilula	41942	23068	18874	1	85	90	90
18	Kilolo	37912	23397	14515	1	85	90	95
	<b>Total / Average</b>	<b>267,178</b>	<b>215,057</b>	<b>39,239</b>	<b>1,540</b>	<b>97</b>	<b>98</b>	<b>99</b>

## APPENDIX G

### Sewerage Service Coverage Projection

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**APPENDIX G: Sewerage Service Coverage Projections**

S/N	Ward	Total Population (No)	Current Service Coverage			Sewerage Coverage Projection (%)		
			Population connected with sewerage Network (No)	Service gape (No)	Population connected with sewerage Network (%)	Year1	Year2	Year3
1	Kihesa	22,522	0	22,522	0	0	0	2
2	Mtwivila	26,013	0	26,013	0	0	0	1
3	Gangilonga	11,881	169	11,712	1%	2	3	3.5
4	Kitanzini	4,477	638	3,839	14%	22	22.5	23
5	Ruaha	21,022	0	21,022	0%	0	0	0
6	Mshindo	2,342	851	1,491	36%	51	52	52
7	Mivinjeni	5,916	1,982	3,934	34%	47	48	49
8	Mlandege	5,743	1,801	3,942	31%	44.5	45	46
9	Mwangata	16,692	2,260	14,432	14%	19.5	20	20.5
10	Kwakilosa	9,837	70	9,768	1%	1.5	2	2
11	Makorongoni	9,642	3,711	5,931	38%	55	56	57
12	Ilala	5505.4	2,981	2,524	54%	77	78	80
13	Mkwawa	11,973	6,911	5,062	58%	82	83	85
14	Kitwiru	14,186	0	14,186	0%	0	0	0
15	Isakalilo	11,372	0	11,372	0%	0	0	2

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16	Nduli	8,201	0	8,201	0%	0	0	0
17	Ilula	41942	0	41,942	0%	0	0	0
18	Kilolo	37912	0	37,912	0%	0	0	0
	<b>Total / Average</b>	<b>267,178</b>	<b>21,374</b>	<b>245,804</b>	<b>8%</b>	<b>15</b>	<b>17</b>	<b>30</b>

## APPENDIX H

### Summarized Asset Register and Value of Assets

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

## APPENDIX H: Summarized Asset Register and Value of Assets

No.	Group of Assets	Location	Quantity	Condition	Current Book Value (TZS)	Expected useful life (Years)	Replacement Cost	Method of Estimation
	<b>WATER SUPPLY</b>							
	<b>PRODUCTION</b>							
1	Intake Structures	Ndiuka and Kitwiru Ilula, Kilolo. Intakes	2	Good	692,000,000	50	829,000,000	Knowledge of civil works from civil project and professional Valuer
2	Shallow wells / Boreholes	Nyamhanga	1	Good	38,000,000	5	38,000,000	Cost from Supplier
3	Dams	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	Water Treatment Plant	Ndiuka	1	Good	4,926,049,600	50	6,488,602,000	Knowledge of civil works from civil project
5	Lab. / Monitoring Equipment	Ndiuka	64 various items	Good	33,093,000 0	5	33,453,000	Market price
6	Reservoirs / Clear Water Tanks	Ndiuka	2	Good	127,142,400	25	158,928,000	Knowledge of civil works from civil project
7	Transmission Mains	WTP to Tank G (Gangilonga), B (Wilolesi), I (SIDO) and Kibwabwa (J), Kilolo and ilula lines	2km	Good	20,958,807,431	50	26,198,509,289	Knowledge of civil works from civil project

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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No.	Group of Assets	Location	Quantity	Condition	Current Book Value (TZS)	Expected useful life (Years)	Replacement Cost	Method of Estimation
8	Pumps and Other Peripherals	Ndiuka WTP, Kitwiru Spring, Tank B (Wilolesi), Tank G (Gangilonga), SZ IX (Mkimbizi), Mtwivila Booster, Ilula and Kilolo Pumps	Various	Fair	1,625,000,000	10	1,785,000,000	Cost from Suppliers
	<b>DISTRIBUTION</b>							
9	Distribution Mains	Various including kilolo and Ilula distribution Mains	158	Good	8,062,977,797	25	10,078,722,246	Knowledge of civil works from civil project
10	Storage tanks	Gangilonga, Mlandege, Kitwiru, Mkimbizi, Kihsa and Wilolesi, Mkwawa, Donbosco, Lugalo, Mgongo, Ugwachanya, Mseke Tosamaganga and Fufu, Ilula and Kilolo tanks	11 nos	Good	<b>3,279,385,340</b>	25	<b>2,908,283,820</b>	Knowledge of civil works from civil project
11	Booster Pumps and other peripherals	Wilolesi, Gangilonga, Mkimbizi and Mtwivila, Mseke, booster stations ,	13 items (including pumps, motors, standby generator)	Good	2,805,000	10	2,805,000	Knowledge of civil works from civil project
12	Valves	Included in distribution network	Included in distribution network	Included in distribution network	<b>79,678,258</b>	Included in distribution network	<b>360,916,892</b>	Knowledge of civil works from civil project



**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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No.	Group of Assets	Location	Quantity	Condition	Current Book Value (TZS)	Expected useful life (Years)	Replacement Cost	Method of Estimation
13	Meters	Bulk meters located at Ganglonga, Ndiuka, Mlolo and Mlandege. Ilula and kilolo. Customer meter at various locations	11 bulk meters, 11,893 customer meter	Good	766,291,500	10	953,764,500	Knowledge of civil works from civil project
14	Service Lines	Various	480km	Good				
15	Hydrants	Various	38	Good	36,903,244	N/A	39,182,890 <sub>0</sub>	N/A
	<b>MISCELLANEOUS</b>							
16	Land	Wilolesi, Ndiuka, Kitwiru, Ganglonga, Mlandege and other areas in Iringa Municipality	26,167m <sup>2</sup>	Built up	3,085,912,360	25	3,085,912,360	N/A
17	Buildings and civil works	Wilolesi, Ndiuka, Kitwiru and Ganglonga	30	Good	2,716,024,267	25	2,887,314,248	N/A
18	Furniture/fittings, Computers and accessories	Mostly at Wilolesi (Head Office and zonal office)	260 items	Good	468,435,701	4	839,741,935	Market price
19	Vehicles and Motorcycles	Mostly at Wilolesi (Head Office)	13 motor vehicles and 18 motorcycles	Good	577,529,000	5	1,065,082,000	Market price
20	Intangible assets	Mostly at Wilolesi (Head Office)	3 items	Good	196,412,113	5	317,741,623	Market price
21	Workshop equipment and tools	Wilolesi	6 items	Good	150,555,970	5	209,948,184	Market price
	<b>SEWERAGE</b>							

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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No.	Group of Assets	Location	Quantity	Condition	Current Book Value (TZS)	Expected useful life (Years)	Replacement Cost	Method of Estimation
	<b>CONVEYANCE AND TREATMENT</b>							
22	Pumps and Other Peripherals	N/A	N/A		N/A	N/A	N/A	-
23	Pipelines	CBD area (Miyomboni Kitanzini), Mshindo, Ilala, Mkwawa and Makorongoni	27.60km (Pipe sizes ranges from 90mm - 399mm)	Good	1,891,262,065	25	2,364,077,580.70	Knowledge of civil works from civil project
24	Wastewater treatment ponds	Don Bosco	6 on ground oxidation ponds	Good	<b>2,652,499,200</b>	25	<b>3,315,624,000</b>	Knowledge of civil works from civil project
	<b>MISCELLANEOUS</b>							
27	Sewerage Maintenance Equipment	Wilolesi	46 items	Good	4,095,232	5	400,000,000	Knowledge of civil works from civil project

# APPENDIX I

## Assessment of Risk and Consequences

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

## APPENDIX I: Assessment of Risk and Consequences

Asset description	Condition	Asset age	Obsolescence	Failure history	Risk of failure	Consequences	Risk management Strategy	Maintenance and repair strategy (Strategy to prevent failure)	Rehabilitation /Replacement strategy (Strategy to Mitigate Failure)
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>		
	<b>1-5.</b>	<b>1-3.</b>	<b>1-3.</b>	<b>1-3.</b>	<b>1-3.</b>	<b>1-3.</b>	<b>1-3.</b>		
<b>WATER SUPPLY PRODUCTION</b>									
Intake Structures ( Ndiuka, kitwiru , Kilolo and Ilula intakes)	2	1	1	1	1	3	Rehabilitate		To construct additional intake at Mtitu River
Shallow wells / Boreholes	2	1	1	1	1	2	Repair/Maintain		Drill and develop 3 new boreholes and Submersible pump replacement for Nduli Mawelewele, and Ugwachanya.
Dams									
Water Treatment Plant	2	1	1	1	1	3	Rehabilitate		1.Rehabilitation of flocculation and

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Asset description	Condition	Asset age	Obsolescence	Failure history	Risk of failure	Consequences	Risk management Strategy	Maintenance and repair strategy (Strategy to prevent failure)	Rehabilitation /Replacement strategy (Strategy to Mitigate Failure)
	A	B	C	D	E	F	G		
	1-5.	1-3.	1-3.	1-3.	1-3.	1-3.	1-3.		
									sedimentation units and construction of new treatment units (sand trap, flocculator and sedimentation)
Lab. / Monitoring Equipments	2	2	1	1	1	3	Rehabilitate		Provide well-furnished Laboratory equipment so as to avoid blockage of the equipment. Proper maintenance of the laboratory equipment
Reservoirs / Clear Water Tanks	2	2	1	1	1	3	Rehabilitate		Minor rehabilitation and regular cleaning
Transmission Mains	2	2	1	1	1	3	Rehabilitate		Procure and install 2 new Air Valves along B Line, installation of PRVs

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Asset description	Condition	Asset age	Obsolescence	Failure history	Risk of failure	Consequences	Risk management Strategy	Maintenance and repair strategy (Strategy to prevent failure)	Rehabilitation /Replacement strategy (Strategy to Mitigate Failure)
	A	B	C	D	E	F	G		
	1-5.	1-3.	1-3.	1-3.	1-3.	1-3.	1-3.		
Pumps and Other Peripherals	3	2	1	1	1	3	Rehabilitate		Acquisition of 3 standby pumps
<b>DISTRIBUTION</b>									
Distribution Mains	2	2	1	1	1	3	Rehabilitate		Rehabilitation of 24km of water distribution system
Storage tanks	2	2	1	1	1	3	Rehabilitate		Periodic maintenance and Construction of 6 water storage tanks
Booster Pumps and other peripherals	2	2	1	1	1	3	Rehabilitate		Procure 6 new pumps and motors
Valves	2	2	1	1	1	3	Rehabilitate		Procure and install 2 new Air Valves along B Line, installation of PRVs
Meters	2	2	1	1	1	2	Maintain/Repair	Replacement of 4,500 aged water meters	

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Asset description	Condition	Asset age	Obsolescence	Failure history	Risk of failure	Consequences	Risk management Strategy	Maintenance and repair strategy (Strategy to prevent failure)	Rehabilitation /Replacement strategy (Strategy to Mitigate Failure)
	A	B	C	D	E	F	G		
	1-5.	1-3.	1-3.	1-3.	1-3.	1-3.	1-3.		
Service Lines	2	2	1	1	1	2	Maintain/Repair	Reconnect 3,240 customers	
Hydrants	2	2	1	1	1	1	Maintain/Repair		Installation of 12 hydrants to new service areas
<b>MISCELLANEOUS</b>									
Land	2	0	1	1	1	1	Maintain/Repair	Acquire title deeds and maintain the land	
Buildings and civil works	2	2	1	1	1	3	Rehabilitate	Acquisition of new furniture	Minor repair and construction of 3 new VIP toilets
Furniture/fittings	2	2	1	1	1	1	Maintain/Repair	Periodical maintenance and	
Vehicles and Motorcycles	2	2	1	1	1	1	Maintain/Repair	acquisition of 3 new motor vehicles and cycles	

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Asset description	Condition	Asset age	Obsolescence	Failure history	Risk of failure	Consequences	Risk management Strategy	Maintenance and repair strategy (Strategy to prevent failure)	Rehabilitation /Replacement strategy (Strategy to Mitigate Failure)
	A	B	C	D	E	F	G		
	1-5.	1-3.	1-3.	1-3.	1-3.	1-3.	1-3.		
Computers and accessories	2	2	1	1	1	3	Rehabilitate		Acquisition of new computers and accessories
Intangible assets	2	2	1	1	1	3	Rehabilitate		Acquisition of new software
Electrical/office equipment	2	2	1	1	1	3	Rehabilitate		Acquisition of new Electrical and office equipment
Workshop equipment and tools	2	2	1	1	1	1	Maintain/Repair		Acquisition of new workshop equipment and tools
<b>SEWERAGE</b>									
<b>CONVEYANCE AND TREATMENT</b>									
Pumps and Other Peripherals	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Pipelines	2	2	1	1	1	3	Rehabilitate		Rehabilitation of 6km and expansion of 18km of sewer network.
Wastewater treatment ponds	2	2	1	1	1	3	Rehabilitate		Rehabilitation and expansion of



**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Asset description	Condition	Asset age	Obsolescence	Failure history	Risk of failure	Consequences	Risk management Strategy	Maintenance and repair strategy (Strategy to prevent failure)	Rehabilitation /Replacement strategy (Strategy to Mitigate Failure)
	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>	<b>G</b>		
	<b>1-5.</b>	<b>1-3.</b>	<b>1-3.</b>	<b>1-3.</b>	<b>1-3.</b>	<b>1-3.</b>	<b>1-3.</b>		
									wastewater treatment plant
<b>MISCELLANEOUS</b>									
Sewerage Maintenance Equipment	2	2	1	1	1	3	Rehabilitate		Procure high pressure vacuum truck

# APPENDIX J

## Lifecycle Costs in the Asset Management Plan

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

## APPENDIX J: Lifecycle Costs in the Asset Management Plan

No.	Group of Assets	Operation and Maintenance Activities					Rehabilitation/replacement activities and Costs				
		O&M Activities	Annual budget (TZS)				Rehabilitation / replacement activities and Costs	Annual Capital Expenditure Required (TZS)			
			2020/ 2021	2021/ 2022	2022/ 2023	2023/2024		2020/ 2021	2021/ 2022	2022/ 2023	2023/2024
4	PLANT AND MACHINERY / Water Treatment Plant, Shallow wells / Boreholes, boosters, Intake Structures	Disludge and clean the accumulated sludge in the sedimentation tanks after every two months. Carry out Rapid sand backwashing twice per day	188,836,534	168,278,361	178,192,279	188,601,893	1.Rehabilitation of flocculation and sedimentation units and construction of new treatment units (sand trap, flocculator and sedimentation)	1,000,000,000	4,398,994,000	4,592,396,000	4,029,896,000
	Intake Structures ( Ndiuka, , Ilula and kilolo intakes)	Purchase of 3 Standby pumps	0	30,000,000	30,000,000	30,000,000	Construction of New intake at Mtitu river				

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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No.	Group of Assets	Operation and Maintenance Activities					Rehabilitation/replacement activities and Costs				
		O&M Activities	Annual budget (TZS)				Rehabilitation / replacement activities and Costs	Annual Capital Expenditure Required (TZS)			
			2020/ 2021	2021/ 2022	2022/ 2023	2023/2024		2020/ 2021	2021/ 2022	2022/ 2023	2023/2024
5	Lab. / Monitoring Equipment	Store the equipment in a well-designed store room. Insist and train the Lab Technician on the proper usage of the lab. Equipment	7,553,461	7,931,134	8,327,691	8,744,076	Provide well-furnished laboratory equipment so as to avoid blockage of the equipment. Proper maintenance of the laboratory equipment	4,000,000	183,000,000	147,000,000	147,000,000
	<b>DISTRIBUTION</b>										
9	<b>DISTRIBUTION NETWORK WATER SUPPLY</b> (Distribution Mains/ Transmission Mains Storage tanks/ Meters/ Service Lines, Hydrants)	<b>Maintenance of Civil Structures</b> and Pipe repair and maintenance					Rehabilitation of 6km of water distribution system	54,000,000	2,550,664,000	2,338,053,000	2,460,228,490
			373,896,338	390,341,155	409,858,212	430,351,123					
	Valves						Installation of new valves in new distribution lines	1,000,000	2,000,000	3,000,000	3,000,000
			41,544,038	43,371,239	45,539,801	47,816,791					
16	Land	Plots for water facilities are invaded and degraded	0	2,500,000	2,625,000	2,756,250	Compensation to residents displaced from areas for new water sources and leave way.	70,000,000	35,000,000	38,500,000	42,350,000

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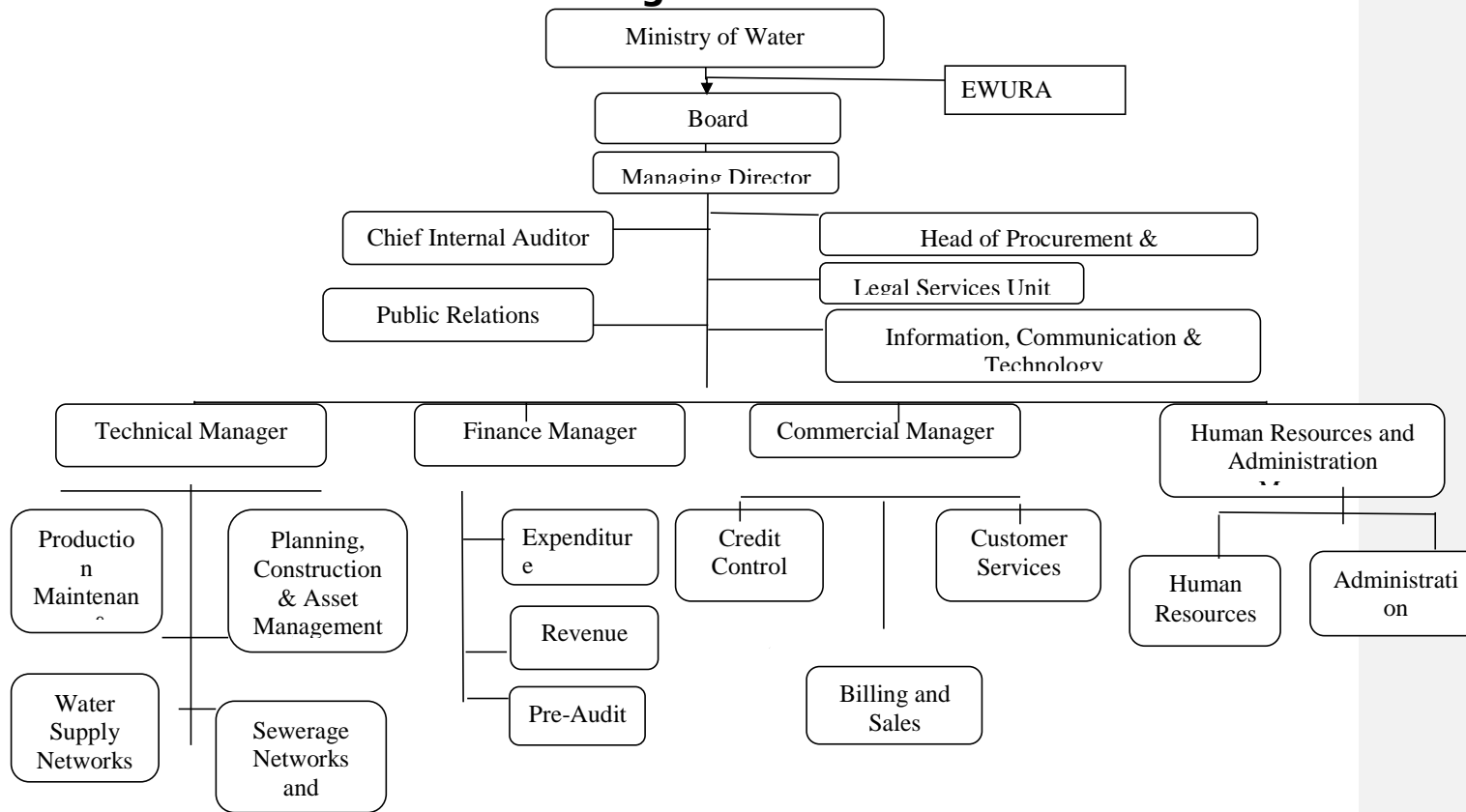
No.	Group of Assets	Operation and Maintenance Activities					Rehabilitation/replacement activities and Costs				
		O&M Activities	Annual budget (TZS)				Rehabilitation / replacement activities and Costs	Annual Capital Expenditure Required (TZS)			
			2020/ 2021	2021/ 2022	2022/ 2023	2023/2024		2020/ 2021	2021/ 2022	2022/ 2023	2023/2024
17	Buildings and civil works	Repair and maintenance	22,000,000	24,000,000	25,200,000	26,460,000	Construction of 3 VIP toilets)	15,000,000	419,257,697	233,732,772	273,462,772
18	Furniture/fittings/ Computers and accessories	Repair and maintenance	7,553,461	7,931,134	8,327,691	8,744,076	Acquisition of new furniture	9,700,000	196,475,000	282,780,000	282,780,000
19	Vehicles and Motorcycles	Routine Repair and maintenance	72,418,267	75,139,180	78,896,139	82,840,946	Acquisition of new motor vehicles and cycles	112,000,000	390,150,000	140,000,000	140,000,000
21	Intangible assets	Update and regular maintenance	3,776,731	3,965,567	4,163,846	4,372,038	Acquisition of new software	7,000,000	101,000,000	55,000,000	50,000,000
23	Workshop equipment's and tools		7,553,461	7,931,134	8,327,691	8,744,076	Acquisition of new workshop equipment and tools	19,000,000	183,000,000	147,000,000	147,000,000
	S SEWERAGE NETWORK		30,213,845	31,724,538	33,310,765	34,976,303		50,000,000	7,166,321,250	7,084,232,906	7,084,232,906
		<b>GRAND TOTAL</b>	<b>349,783,260</b>	<b>637,915,260</b>	<b>741,807,461</b>	<b>778,980,064</b>		<b>1,610,675,000</b>	<b>2,758,114,000</b>	<b>5,188,366,000</b>	<b>3,867,693,000</b>

# APPENDIX K

## IRUWASA Organization Structure

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

## APPENDIX K: IRUWASA Organization Structure



***Iringa Water Supply & Sanitation Authority (IRUWASA)***  
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# APPENDIX L

## Renewal and Replacement of Non-Current Assets

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

## APPENDIX L: Renewal and Replacement of Non-Current Assets

Year	Source of Funds	LAND	Buildings	PLANT AND MACHINERY	DISTRIBUTION NETWORK WATER SUPPLY	SEWERAGE NETWORK	OFFICE EQUIPMENT, FURNITURE AND FITTINGS	MOTORVEHICLES AND MOTORCYCLES	WORKING TOOLS AND LAB. EQUIPMENT	Intangible Asset	TOTAL
2017/2018	Own	-		-	-	-	-	-	-	-	-
	Grant	-		-	-	-	-	-	-	-	-
	Loans	-		-	-	-	-	-	-	-	-
	<b>Sub Total</b>	-		-	-	-	-	-	-	-	-
2018/2019	Own	-		-	155,000,000	510,000,000	59,040,000	-	-	-	724,040,000
	Grant	-		-	-	-	-	-	-	-	-
	Loans	-		-	-	-	-	-	-	-	-
	<b>Sub Total</b>	-		-	155,000,000	510,000,000	59,040,000	-	-	-	724,040,000
2019/2020	Own	-		-	170,000,000	510,000,000	59,040,000	-	-	-	739,040,000
	Grant	-		-	-	-	-	-	-	-	-
	Loans	-		-	-	-	-	-	-	-	-
	<b>Sub Total</b>	-		-	170,000,000	510,000,000	59,040,000	-	-	-	739,040,000
2020/2021	Own	-		-	155,000,000	510,000,000	59,040,000	-	-	-	724,040,000
	Grant	-		-	-	-	-	-	-	-	-
	Loans	-		-	-	-	-	-	-	-	-
	<b>Sub Total</b>	-		-	155,000,000	510,000,000	59,040,000	-	-	-	724,040,000
	Own	35,000,000	133,205,075	239,794,000	87,302,053	38,525,000	-	-	-	-	533,826,128

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Year	Source of Funds	LAND	Buildings	PLANT AND MACHINERY	DISTRIBUTION NETWORK WATER SUPPLY	SEWERAGE NETWORK	OFFICE EQUIPMENT, FURNITURE AND FITTINGS	MOTORVEHICLES AND MOTORCYCLES	WORKING TOOLS AND LAB. EQUIPMENT	Intangible Asset	TOTAL
2021/2022	Grant	-	-	-	566146947	-	-	-	-	-	566,146,947
	Loans										
	<b>Sub Total</b>	<b>35,000,000</b>	<b>133,205,075</b>	<b>239,794,000</b>	<b>653,449,000</b>	<b>38,525,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,099,973,075</b>
2022/2023	Own	38,500,000	133,205,075	239,794,000.00	87,302,053	38,525,000	-	-	-	-	537,326,128
	Grant	-	-	-	566,146,947	-	-	-	-	-	566,146,947
	Loans										
	<b>Sub Total</b>	<b>38,500,000</b>	<b>133,205,075</b>	<b>239,794,000</b>	<b>653,449,000</b>	<b>38,525,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,103,473,075</b>
2023/2024	Own	42,350,000	133,205,075	239,794,000	87,302,053	38,525,000	-	-	-	-	541,176,128
	Grant	-	-	-	566146947	-	-	-	-	-	566,146,947
	Loans	-	-	-	-	-	-	-	-	-	-
	<b>Sub Total</b>	<b>42,350,000</b>	<b>133,205,075</b>	<b>239,794,000</b>	<b>653,449,000</b>	<b>38,525,000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1,107,323,075</b>

# APPENDIX M

## New Investments

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

## APPENDIX M: New Investment

Year	Source of Funds	LAND	PLANT AND MACHINERY	DISTRIBUTION NETWORK WATER SUPPLY	SEWERAGE NETWORK	OFFICE EQUIPMENT / FURNITURE AND FITTINGS	MOTORVEHICLES AND MOTORCYCLES	WORKING TOOLS AND LAB. EQUIPMENT	Intangible Asset	TOTAL
2017/2018	Own	162,816,500		1,279,786,291	1,365,922,075.44	230,296,250	44,000,000	135,000,000	110,930,000	98,322,400
	Grant									
	Loans									
	<b>Sub Total</b>	<b>162,816,500</b>		<b>1,279,786,291</b>	<b>1,365,922,075.44</b>	<b>230,296,250</b>	<b>44,000,000</b>	<b>135,000,000</b>	<b>110,930,000</b>	<b>98,322,400</b>
2018/2019	Own	95,000,000		584,700,000	198,001,664.00	326,021,250	200,000,000	10,800,000	217,580,000	188,122,400
	Grant			1,000,000,000						
	Loans				1,600,000,000.00					
	<b>Sub Total</b>	<b>95,000,000</b>		<b>1,584,700,000</b>	<b>1,798,001,664.00</b>	<b>326,021,250</b>	<b>200,000,000</b>	<b>10,800,000</b>	<b>217,580,000</b>	<b>188,122,400</b>
2019/2020	Own	40,000,000		1,399,500,000	894,285,392.00	316,878,586	202,000,000	190,500,000	245,780,000	227,400,000
	Grant			2,280,000,000						
	Loans									
	<b>Sub Total</b>	<b>40,000,000</b>		<b>3,679,500,000</b>	<b>894,285,392.00</b>	<b>316,878,586</b>	<b>202,000,000</b>	<b>190,500,000</b>	<b>245,780,000</b>	<b>227,400,000</b>
2020/2021	Own	45,000,000		732,500,000	1,746,795,656.00	316,878,586	365,000,000	190,500,000	238,080,000	217,600,000
	Grant			2,280,000,000						
	Loans									
	<b>Sub Total</b>	<b>45,000,000</b>		<b>3,012,500,000</b>	<b>1,746,795,656.00</b>	<b>316,878,586</b>	<b>365,000,000</b>	<b>190,500,000</b>	<b>238,080,000</b>	<b>217,600,000</b>
	Own	86,052,622	141,700,000	1,000,000,000.00	447,796,250	196,475,000	190,150,000	183,000,000	101,000,000	2,346,173,872

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Year	Source of Funds	LAND	PLANT AND MACHINERY	DISTRIBUTION NETWORK WATER SUPPLY	SEWERAGE NETWORK	OFFICE EQUIPMENT / FURNITURE AND FITTINGS	MOTORVEHICLES AND MOTORCYCLES	WORKING TOOLS AND LAB. EQUIPMENT	Intangible Asset	TOTAL
2021/2022	Grant	200,000,000	4,017,500,000	917,215,000.00	6,680,000,000	-	200,000,000	-	-	12,014,715,000
	Loans	-	-	-	-	-	-	-	-	-
	<b>Sub Total</b>	<b>286,052,622</b>	<b>4,159,200,000</b>	<b>1,917,215,000.00</b>	<b>7,127,796,250</b>	<b>196,475,000</b>	<b>390,150,000</b>	<b>183,000,000</b>	<b>101,000,000</b>	<b>14,360,888,872</b>
2022/2023	Own	100,527,697	285,102,000	1,139,356,269	365,707,906	282,780,000	140,000,000	147,000,000	55,000,000	2,515,473,872
	Grant	-	4,067,500,000	548,247,731	6,680,000,000	-	-	-	-	11,295,747,731
	Loans	-	-	-	-	-	-	-	-	-
	<b>Sub Total</b>	<b>100,527,697</b>	<b>4,352,602,000</b>	<b>1,687,604,000.00</b>	<b>7,045,707,906</b>	<b>282,780,000</b>	<b>140,000,000</b>	<b>147,000,000</b>	<b>55,000,000</b>	<b>13,811,221,603</b>
2023/2024	Own	140,257,697	412,602,000	1,156,444,269.00	365,707,906	282,780,000	140,000,000	147,000,000	50,000,000	2,694,791,872
	Grant	-	3,377,500,000	-	6,680,000,000	-	-	-	-	10,057,500,000
	Loans	-	-	-	-	-	-	-	-	-
	<b>Sub Total</b>	<b>140,257,697</b>	<b>3,790,102,000</b>	<b>1,809,779,490.00</b>	<b>7,045,707,906</b>	<b>282,780,000</b>	<b>140,000,000</b>	<b>147,000,000</b>	<b>50,000,000</b>	<b>13,405,627,093</b>

# APPENDIX N

## Total CAPEX

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

## APPENDIX N: Total CAPEX

Year		LAND	BUILDINGS	PLANT AND MACHINERY	DISTRIBUTION NETWORK WATER SUPPLY	SEWERAGE NETWORK	OFFICE EQUIPMENT, FURNITURE AND FITTINGS	MOTORVEHICLES AND MOTORCYCLES	WORKING TOOLS AND LAB. EQUIPMENT	Intangible Asset	TOTAL
2017/2018	Own	162,816,500	-	1,279,786,291	1,365,922,075	230,296,250	44,000,000	135,000,000	110,930,000	98,322,400	3,427,073,516
	Grant										
	Loans										
	<b>Sub Total</b>	<b>162,816,500</b>	<b>-</b>	<b>1,279,786,291</b>	<b>1,365,922,075</b>	<b>230,296,250</b>	<b>44,000,000</b>	<b>135,000,000</b>	<b>110,930,000</b>	<b>98,322,400</b>	<b>3,427,073,516</b>
2018/2019	Own	95,000,000	-	1,039,700,000	708,001,664	385,061,250	200,000,000	10,800,000	217,580,000	188,122,400	2,844,265,314
	Grant			1,000,000,000							1,000,000,000
	Loans				1,600,000,000						1,600,000,000
	<b>Sub Total</b>	<b>95,000,000</b>	<b>-</b>	<b>2,039,700,000</b>	<b>2,308,001,664</b>	<b>385,061,250</b>	<b>200,000,000</b>	<b>10,800,000</b>	<b>217,580,000</b>	<b>188,122,400</b>	<b>5,444,265,314</b>
2019/2020	Own	40,000,000	-	1,569,500,000	1,404,285,392	375,918,586	202,000,000	190,500,000	245,780,000	227,400,000	4,255,383,978
	Grant			2,280,000,000							2,280,000,000
	Loans										
	<b>Sub Total</b>	<b>40,000,000</b>	<b>-</b>	<b>3,849,500,000</b>	<b>1,404,285,392</b>	<b>375,918,586</b>	<b>202,000,000</b>	<b>190,500,000</b>	<b>245,780,000</b>	<b>227,400,000</b>	<b>6,535,383,978</b>
2020/2021	Own	29,700,000	-	585,750,000	1,489,485,133	248,106,267	240,900,000	125,730,000	157,132,800	143,616,000	3,020,420,200
	Grant			2,280,000,000							2,280,000,000
	Loans										
	<b>Sub Total</b>	<b>29,700,000</b>	<b>-</b>	<b>2,865,750,000</b>	<b>1,489,485,133</b>	<b>248,106,267</b>	<b>240,900,000</b>	<b>125,730,000</b>	<b>157,132,800</b>	<b>143,616,000</b>	<b>5,300,420,200</b>
2021/2022	Own	35,000,000	219,257,697	381,494,000	1,087,302,053	486,321,250	196,475,000	190,150,000	183,000,000	101,000,000	2,880,000,000
	Grant			4,017,500,000	1,483,361,947	6,680,000,000					12,180,861,947



**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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	Loans										-
	<b>Sub Total</b>	<b>35,000,000</b>	<b>219,257,697</b>	<b>4,398,994,000</b>	<b>2,570,664,000</b>	<b>7,166,321,250</b>	<b>196,475,000</b>	<b>190,150,000</b>	<b>183,000,000</b>	<b>101,000,000</b>	<b>15,060,861,947</b>
2022/2023	Own	38,500,000	233,732,772	524,896,000	1,226,658,322	404,232,906	282,780,000	140,000,000	147,000,000	55,000,000	3,052,800,000
	Grant			4,067,500,000	1,114,394,678	6,680,000,000					11,861,894,678
	Loans										-
	<b>Sub Total</b>	<b>38,500,000</b>	<b>233,732,772</b>	<b>4,592,396,000</b>	<b>2,341,053,000</b>	<b>7,084,232,906</b>	<b>282,780,000</b>	<b>140,000,000</b>	<b>147,000,000</b>	<b>55,000,000</b>	<b>14,914,694,678</b>
2023/2024	Own	42,350,000	273,462,772	652,396,000	1,243,746,322	404,232,906	282,780,000	140,000,000	147,000,000	50,000,000	3,235,968,000
	Grant			3,377,500,000	1,219,482,168	6,680,000,000					11,276,982,168
	Loans										-
	<b>Sub Total</b>	<b>42,350,000</b>	<b>273,462,772</b>	<b>4,029,896,000</b>	<b>2,463,228,490</b>	<b>7,084,232,906</b>	<b>282,780,000</b>	<b>140,000,000</b>	<b>147,000,000</b>	<b>50,000,000</b>	<b>14,512,950,168</b>

# APPENDIX O

## Operations and Maintenance Expenditures

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

## APPENDIX O: Operations and Maintenance Expenditures

Descriptions	Audited	Audited	Audited	Current Year	Long Term Plans		
	Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
<b>WATER PRODUCTION EXPENSES</b>							
Electricity for Production	792,728,840	781,011,288	831,446,076	873,018,379	916,669,298	962,502,763	1,010,627,901
Chemicals	444,840,270	501,281,140	397,866,500	417,759,825	438,647,816	460,580,207	483,609,217
Water User Fees	23,764,435	35,406,464	13,047,560	13,699,938	14,384,935	15,104,182	15,859,391
Laboratory	3,005,600	5,621,600	15,322,400	16,088,520	16,892,946	17,737,593	18,624,473
New connections	-	-	-	-	-	-	-
	<b>1,264,339,145</b>	<b>1,323,320,492</b>	<b>1,257,682,536</b>	<b>1,320,566,662</b>	<b>1,386,594,995</b>	<b>1,455,924,745</b>	<b>1,528,720,983</b>
<b>DISTRIBUTION COSTS</b>							
Electricity for Distribution	36,299,724	50,420,179	55,541,845	58,318,937	61,234,884	64,296,628	67,511,460
Customer Survey	1,898,000	-	1,075,000	1,128,750	1,185,188	1,244,447	1,319,114
Water Meter Installation	2,413,290	-	7,724,020	8,110,221	8,515,732	8,941,519	9,478,010
	<b>40,611,014</b>	<b>50,420,179</b>	<b>64,340,865</b>	<b>67,557,908</b>	<b>70,935,804</b>	<b>74,482,594</b>	<b>78,308,583</b>
<b>SEWAGE DISPOSAL EXPENSES</b>						-	
Sewage Treatment	16,879,160	22,559,473	10,844,204	11,386,414	11,955,735	12,553,521	13,181,197
Laboratory	2,393,200	1,312,800	5,432,400	5,704,020	5,989,221	6,288,682	6,603,116
Cesspit Emptying	9,446,661	28,317,212	390,000	409,500	429,975	451,474	474,047
Customer Survey	2,068,900	3,220,000	633,000	664,650	697,883	732,777	769,415
Waste Water Disposal Fee	-	-	-	-	-	-	-
New Sewer Connections	-	-	-	-	-	-	-
<b>TOTAL</b>	<b>30,787,921</b>	<b>55,409,485</b>	<b>17,299,604</b>	<b>18,164,584</b>	<b>19,072,813</b>	<b>20,026,454</b>	<b>21,027,776</b>
<b>REPAIRS AND MAINTANANCE</b>							
Repair and Maintenance	<b>595,822,129</b>	<b>682,677,033</b>	<b>719,377,273</b>	755,346,136	793,113,443	832,769,115	874,407,571
<b>PERSONEL EXPENSES</b>							
Basic Salaries	1,006,130,496	1,155,534,366	1,130,058,826	1,186,561,767	1,245,889,856	1,308,184,349	1,373,593,566
Wages	22,410,800	41,502,900	47,236,800	49,598,640	52,078,572	54,682,501	57,416,626

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Descriptions	Audited	Audited	Audited	Current Year	Long Term Plans		
	Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
Employer Pension Fund Contributions	139,774,326	162,502,384	169,238,452	177,700,374	186,585,393	195,914,663	205,710,396
Employer NHIF Contributions	24,805,536	22,519,889	28,691,638	30,126,220	31,632,531	33,214,158	34,874,866
Travelling on Leave	20,480,453	31,906,440	18,284,635	19,198,867	20,158,810	21,166,751	22,225,088
Incentive(Bonus)	19,154,900	7,525,000	56,677,904	59,511,799	62,487,389	65,611,758	68,892,346
Overtime	22,179,300	-	28,362,450	29,780,573	31,269,601	32,833,081	34,474,735
Housing Allowances	133,387,648	158,952,032	167,689,643	176,074,125	184,877,831	194,121,723	203,827,809
Hardship Allowances	18,223,929	19,391,302	20,036,356	21,038,174	22,090,083	23,194,587	24,354,316
Medical Expenses	3,371,900	12,626,900	24,200,400	25,410,420	26,680,941	28,014,988	29,415,737
Acting Allowances	24,258,161	9,832,500	2,538,491	2,665,416	2,798,686	2,938,621	3,085,552
Transport Allowances	146,453,629	174,292,669	179,806,287	188,796,602	198,236,432	208,148,253	218,555,666
Staff Welfare	36,465,060	34,961,860	36,115,500	37,921,275	39,817,339	41,808,206	43,898,616
Gratuity	2,075,986	-	1,126,500	1,182,825	1,241,966	1,304,065	1,369,268
Responsibility Allowances	37,762,689	37,805,100	38,365,725	40,284,011	42,298,212	44,413,122	46,633,779
Financial Risk Allowances	1,800,000	335,000	-	-	-	-	-
Entertainment	35,291,575	37,805,100	37,244,475	39,106,699	41,062,034	43,115,135	45,270,892
Extra Duty Allowances	109,886,762	162,474,529	153,878,117	161,572,022	169,650,623	178,133,155	187,039,812
Air Time Allowance	28,782,621	36,704,485	38,469,529	40,393,006	42,412,656	44,533,289	46,759,953
SDL Expense	60,275,600	83,216,985	73,022,748	76,673,886	80,507,580	84,532,959	88,759,607
WCF exp	7,104,351	15,732,851	8,075,400	8,479,170	8,903,128	9,348,284	9,815,699
Night Duty Allowance	6,876,694	7,462,375		-	-	-	-
	<b>1,906,952,416</b>	<b>2,213,084,667</b>	<b>2,259,119,876</b>	2,372,075,870	2,490,679,663	2,615,213,646	2,745,974,328
<b>ADMIN EXP</b>							
Airtime and Handset	15,685,000	18,693,678	26,677,362	28,011,230	29,411,792	30,882,381	32,426,500
Audit Expenses	7,998,000	7,500,000	4,747,240	4,984,602	5,233,832	5,495,524	5,770,300
Audit Fees	28,000,000	21,300,600	49,526,800	52,003,140	54,603,297	57,333,462	60,200,135
Board of Director's Expenses	51,941,500	62,479,432	42,725,000	44,861,250	47,104,313	49,459,528	51,932,505

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

Descriptions	Audited	Audited	Audited	Current Year	Long Term Plans		
	Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
Burial Expenses	7,365,000	12,076,450	3,400,000	3,570,000	3,748,500	3,935,925	4,132,721
Computer Stationery and Consumables	70,601,222	16,495,100	15,844,416	16,636,637	17,468,469	18,341,892	19,258,987
Directors Emoluments	39,250,000	58,666,250	55,526,250	58,302,563	61,217,691	64,278,575	67,492,504
Electricity/water for Offices	40,106,572	33,301,809	78,555,632	82,483,414	86,607,585	90,937,964	95,484,862
E-Mails and Website	41,800,913	51,007,238	92,448,000	97,070,400	101,923,920	107,020,116	112,371,122
Entertainment Expenses	19,113,800	19,661,400	22,144,110	23,251,316	24,413,881	25,634,575	26,916,304
Provision for Doubtful Debt (Note 29a)	161,419,830	146,025,319	524,228,562	-	-	-	-
Fire Extinguishers	3,129,000	2,085,000	2,037,500	2,139,375	2,246,344	2,358,661	2,476,594
Compensation	1,175,000	-	-	-	-	-	-
HIV/AIDS Measures	4,950,000	3,750,000	2,320,000	2,436,000	2,557,800	2,685,690	2,819,975
Insurance and Motor licenses	33,882,620	30,453,590	8,560,133	8,988,140	9,437,547	9,909,424	10,404,895
Interest expense	1,130,000	-	-	-	-	-	-
IRUWASA Day	1,130,000	-	-	-	-	-	-
Debt collection and comm fee	201,923,637	166,339,693	208,987,644	219,437,026	230,408,878	241,929,322	254,025,788
Management Meetings	14,929,200	7,339,300	21,676,000	22,759,800	23,897,790	25,092,680	26,347,313
Motor Vehicles/ Cycles Fuel	114,838,429	127,298,376	120,138,580	126,145,509	132,452,784	139,075,424	146,029,195
Postages	2,995,586	2,282,100	2,561,900	2,689,995	2,824,495	2,965,719	3,114,005
Printing and Stationery	81,531,572	89,380,750	82,650,035	86,782,537	91,121,664	95,677,747	100,461,634
Professional Fees and Consultancy	9,658,500	44,372,222	16,355,143	17,172,900	18,031,545	18,933,122	19,879,779
Computer Software and Maintenance							
Legal Fees	-			23,251,316	24,413,881	25,634,575	26,916,304
Rent and Rates	500,000	220,000	162,000	170,100	178,605	187,535	196,912
Fumigation	-	-	-	4,200,000	4,410,000	4,630,500	4,862,025
Security Guard Services	146,324,998	209,615,500	195,210,170	204,970,679	215,219,212	225,980,173	237,279,182
Seminars and Conferences	13,999,750	14,713,200	36,972,900	38,821,545	40,762,622	42,800,753	44,940,791
Telephone	8,156,746	6,067,060	5,026,488	5,277,813	5,541,703	5,818,788	6,109,728
Tender Board Expenses	22,011,500	38,343,000	29,565,000	31,043,250	32,595,413	34,225,183	35,936,442

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Descriptions	Audited	Audited	Audited	Current Year	Long Term Plans		
	Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
Town Service Levy	21,397,272	20,706,231	22,446,246	23,568,559	24,746,987	25,984,336	27,283,553
Training of Staff	50,297,100	93,226,750	59,015,530	61,966,307	65,064,622	68,317,853	71,733,746
Travelling on Duty	138,047,260	67,527,280	104,966,269	110,214,582	115,725,312	121,511,577	127,587,156
Uniforms	4,005,930	30,246,030	49,175,460	51,634,233	54,215,945	56,926,742	59,773,079
Upkeep of Offices	68,371,922	70,831,369	76,179,551	79,988,528	83,987,954	88,187,352	92,596,720
Workers Council	11,508,000	27,830,000	10,631,500	11,163,075	11,721,229	12,307,290	12,922,655
Working tools	15,533,760	1,820,500	967,440	1,015,812	1,066,603	1,119,933	1,175,929
HoD's Furniture Allowance	-	-	114,000,000		-	-	-
Revaluation Survey	-	-	2,160,000		-	-	-
	<b>1,292,159,789</b>	<b>1,355,629,908</b>	<b>1,595,504,410</b>	<b>1,589,504,410</b>	<b>1,547,011,630</b>	<b>1,624,362,212</b>	<b>1,705,580,322</b>
<b>BUSINESS PROMOTION</b>	<b>45,090,000</b>	<b>63,208,300</b>	<b>68,550,020</b>	72,663,021	129,000,000	135,450,000	142,222,500
Information, Advert and Publicity	39,193,111	61,193,300	59,585,020	62,564,271	65,692,485	68,977,109	72,425,964
Newspapers and Periodicals	2,016,058	3,015,000	3,065,000	3,218,250	3,379,163	3,548,121	3,725,527
Documentary and Upkeep of Audio visual	3,880,830	-	5,900,000	6,195,000	6,504,750	6,829,988	7,171,487
	<b>45,090,000</b>	<b>64,208,300</b>	<b>68,550,020</b>	<b>71,977,521</b>	<b>75,576,397</b>	<b>79,355,217</b>	<b>83,322,978</b>
<b>EVENTS AND DONATIONS</b>							
Maji Week Expenses	12,703,700	12,024,600	2,244,000	2,356,200	2,474,010	2,597,711	2,727,596
May Day Expenses	4,400,000	4,370,000	-	-	-	-	-
Annual UWSA Meeting	-	-	5,000,000	5,250,000	5,512,500	5,788,125	6,077,531
Other Donations	32,756,084	15,745,000	53,765,925	56,454,221	59,276,932	62,240,779	65,352,818
Protection of Water sources	-	-	-				
ATAWAS COST					-	-	-
	<b>49,859,784</b>	<b>32,139,600</b>	<b>61,009,925</b>	<b>64,060,421</b>	<b>67,263,442</b>	<b>70,626,614</b>	<b>74,157,945</b>
<b>FINANCE COST</b>							
Bank Charges	38,887,573	13,071,000	18,423,511	19,344,687	20,311,921	21,327,517	22,393,893

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Descriptions	Audited	Audited	Audited	Current Year	Long Term Plans		
	Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
Interest on loan	-	-	-	-	160,000,000	120,000,000	110,000,000
interest on over draft			-		-	-	-
	<b>38,887,573</b>	<b>13,071,000</b>	<b>18,423,511</b>	<b>19,344,687</b>	<b>180,311,921</b>	<b>141,327,517</b>	<b>132,393,893</b>
<b>Depreciations</b>							
Buildings	378,680,801	56,550,165	56,993,531	57,746,285	62,131,439	66,806,094	72,275,350
Plant and Machinery	478,993,507	379,871,644	156,187,005	226,048,887	314,028,767	405,876,687	486,474,607
Distribution Network Water Supply	1,902,406,743	798,450,894	816,175,670	1,113,499,631	1,164,912,911	1,211,733,971	1,260,998,541
Sewerage Network	144,662,345	87,830,821	88,636,633	90,875,225	234,201,650	375,886,308	517,570,967
Motor vehicles	84,776,518	89,238,440	93,935,200	106,508,200	125,523,200	139,523,200	153,523,200
Working Tools	6,196,565	6,522,700	6,866,000	27,293,264	51,083,264	70,193,264	89,303,264
Office equipment's	191,595,489	313,433,324	196,560,073	167,948,387	207,243,387	263,799,387	320,355,387
Amortizations	19,375,507	57,781,185	30,332,377	31,774,162	41,874,162	47,374,162	52,374,162
	<b>3,115,714,392</b>	<b>1,693,918,033</b>	<b>1,344,885,289</b>	<b>1,821,694,042</b>	<b>2,200,998,781</b>	<b>2,581,193,074</b>	<b>2,952,875,478</b>

## Depreciation workings

Asset category	Depreciation rate	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024
Distribution Charge	2%	1,116,506,910	1,113,499,631	1,164,912,911	1,211,733,971	1,260,998,541
Sewer Charge	2%	89,442,449	90,875,225	234,201,650	375,886,308	517,570,967
Building charge	2%	60,017,159	57,746,285	62,131,439	66,806,094	72,275,350
Plant Charge	2%	168,733,887	226,048,887	314,028,767	405,876,687	486,474,607
M vehicle charge						
20%	20%	93,935,200	106,508,200	125,523,200	139,523,200	153,523,200
Working Tools	13%	6,866,000	27,293,264	51,083,264	70,193,264	89,303,264
Office equipment's	20%	119,768,387	167,948,387	207,243,387	263,799,387	320,355,387
Software charge	10%	31,774,162	31,774,162	41,874,162	47,374,162	52,374,162

***Iringa Water Supply & Sanitation Authority (IRUWASA)***  
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<b>Total</b>		<b>1,687,044,154</b>	<b>1,821,694,042</b>	<b>2,200,998,781</b>	<b>2,581,193,074</b>	<b>2,952,875,478</b>
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## APPENDIX P

### Project Financing



**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

## APPENDIX P: Project Financing

		Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
<b>A. Interest Payment</b>								
Loan 1 Amount	Million TZS	N/A	1,600,000,000	1,066,666,666. 7	533,333,333.3			
Year								
Duration of the loan	Years	N/A	3			3		
Rate of interest	%	N/A	14%	0.14	0.14	10%	10%	10%
Grace period	Years	N/A	0					
Annual interest payment	Million TZS	N/A	224,000,000	149,333,333	74,666,667	160,000,000	106,666,667	53,333,333

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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		Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
<b>Loan 2 Amount</b>	Million TZS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Year								
Duration of the loan	Years	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Rate of interest	%	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Grace period	Years	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Annual interest payment	Million TZS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Total interest payment per year</b>	Million TZS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>B. Principal payment</b>								
Loan 1 Start Year Balance	Million TZS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Repayment per year	Million TZS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Closing loan balance	Million TZS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Loan 2 Start Year Balance	Million TZS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Repayment per year	Million TZS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Closing loan balance	Million TZS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Loans	Million TZS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Principal Payment Per Year	Million TZS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Closing Balance	Million TZS	N/A	N/A	N/A	N/A	N/A	N/A	N/A

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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		Year 2017/2018	Year 2018/2019	Year 2019/2020	Year 2020/2021	Year 2021/2022	Year 2022/2023	Year 2023/2024
Total Annual Payment (Principal + Interest)	Million TZS	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Donor Grants Ministry of Water		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Government Capital Contributions (Subsidies)			1,000,000,000	2,280,000,000	2,280,000,000	10,697,500,000	10,697,500,000	10,697,500,000
Own source of financing (from tariffs - Depreciation + Return on Investment)		3,427,073,516	2,544,265,314	4,255,383,978	4,576,394,242	4,763,361,947	4,667,194,678	4,455,450,168

# APPENDIX Q

## Average Tariff

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

## APPENDIX R: Average Tariff

Description	Audited			Current Year	Projections		
	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024
<b>Water Tariff</b>							
<b>Average water tariff TZS/m<sup>3</sup></b> **	<b>933</b>	<b>1,170</b>	2,100	2,300	2,100	2,200	2,200
<b>Service Charge (TZS/Month)</b>							
Domestic	2,000	3,000	0	0	0	0	0
Institutional	3,000	3,000	0	0	0	0	0
Commercial	3,000	3,000	0	0	0	0	0
Industrial	6,000	3,000	0	0	0	0	0
Kiosk	-	3,000	0	0	0	0	0
<b>New water connection fees (TZS)</b>							
Domestic	20,000	20% of recoverable expenditure as stipulated in Section 24 of Water Supply regulation, 2013			20% of recoverable expenditure as stipulated in Section 24 of Water Supply regulation, 2013		
Institutional	30,000	20% of recoverable expenditure as stipulated in Section 24 of Water Supply regulation, 2013			20% of recoverable expenditure as stipulated in Section 24 of Water Supply regulation, 2013		

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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Description	Audited			Current Year	Projections		
	2017/2018	2018/2019	2019/2020	2020/2021	2021/2022	2022/2023	2023/2024
Commercial	30,000	20% of recoverable expenditure as stipulated in Section 24 of Water Supply regulation, 2013			20% of recoverable expenditure as stipulated in Section 24 of Water Supply regulation, 2013		
Industrial	50,000	20% of recoverable expenditure as stipulated in Section 24 of Water Supply regulation, 2013			20% of recoverable expenditure as stipulated in Section 24 of Water Supply regulation, 2013		
<b>Reconnection Fees (TZS)</b>							
Domestic	10,000	15,000	15,000	15,000	15,000	15,000	15,000
Institutional	20,000	15,000	15,000	15,000	15,000	15,000	15,000
Commercial	20,000	15,000	15,000	15,000	15,000	15,000	15,000
Industrial	20,000	15,000	15,000	15,000	15,000	15,000	15,000
Kiosk	10,000	15,000	15,000	15,000	15,000	15,000	15,000
<b>Sewerage Tariff</b>							
<b>Average sewerage tariff (% of water Consumption)</b>	58.75	40	40	40	40	40	40
New Sewerage charges bowser	45,000	100,000	100,000	107,500	80,000	80,000	80,000

**\*\* Note:**

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

		<b>2020/2021</b>	<b>2021/2022</b>	<b>2022/2023</b>	<b>2023/2024</b>
RR***		15,052.6	<b>8,880,708</b>	<b>9,580,222</b>	<b>10,272,073</b>
OI		0	0	0	0
Q		6,900	5,879	6,160	6,489
NRW		0.25	0.26	0.26	0.26
AWT	$AWT = (RR - OI) / Q(1 - NRW)$	<b>2,300</b>	<b>2,100</b>	<b>2,200</b>	<b>2,200</b>

**Where,**

<b>Abbreviation</b>	<b>Long Form</b>
AWT	Average Water Tariff
RR	Revenue Requirement
OI	Other income (Including income service charge)
Q	Annual Water Production
NRW	Non-Revenue water

**(\*\*\*)Revenue Requirement (RR )and Tariff computation**

<b>Description</b>	<b>2021/2022</b>	<b>2022/2023</b>	<b>2023/2024</b>
O & M Expenses	6,601,168,069	6,931,226,473	7,277,889,656
Depreciation	2,200,998,780	2,581,193,074	2,952,875,477
Return on Investment (ROI) <b>see note 2 below</b>	78,542,116	67,803,142	41,308,473
<b>Revenue Requirement (RR)</b>	<b>8,880,708,966</b>	<b>9,580,222,689</b>	<b>10,272,073,606</b>
<b>Revenue Requirement from water</b>	<b>8,880,708,966</b>	<b>9,580,222,689</b>	<b>10,272,073,606</b>
Water Production (million m <sup>3</sup> ) (Q)	<b>5,879,930</b>	<b>6,160,640</b>	<b>6,489,214</b>
Non Revenue Water	28%	27%	26%
Water Billed m <sup>3</sup> per Year	4,233,550	4,497,267	4,802,018
<b>Computed WAT( Note 1)</b>	<b>2,100</b>	<b>2,200</b>	<b>2,200</b>

Note 1. Although the tariff computation shows a growing trend from Tsh. 2,100 to Tsh. 2,200 the Authority will not ask for new tariff for the entire period of this Business Plan.

**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
**Business Plan 2021/22 - 2023/2024**

## Note 2. ROI computation

	2021/22	2022/23	2023/24
Property Plant and Equipments	2,880,000,000	3,052,800,000	3,235,968,000
Work in Progress	0	0	0
<b>Sub Total None Current Asset</b>	<b>2,880,000,000</b>	<b>3,052,800,000</b>	<b>3,235,968,000</b>
Current Assets	2,535,828,424	3,841,658,488	4,390,574,284
<b>Total Assets</b>	<b>5,415,828,424</b>	<b>6,894,458,488</b>	<b>7,626,542,284</b>
Grants			
Retained Earnings	14,326,094,650	14,901,282,969	15,270,000,888
<b>Total Equity</b>	<b>14,326,094,650</b>	<b>14,901,282,969</b>	<b>15,270,000,888</b>
Short Term Debt	1,600,000,000	1,066,666,667	533,333,333
Long Term Debt			
<b>Total Debt</b>	<b>1,600,000,000</b>	<b>1,066,666,667</b>	<b>533,333,333</b>
<b>Total Debt and Equity</b>	<b>15,926,094,650</b>	<b>15,967,949,635</b>	<b>15,803,334,222</b>



**Iringa Water Supply & Sanitation Authority (IRUWASA)**  
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<b>Current liability</b>	811,437,021	831,722,946	852,516,020
<b>Regulated Asset Base (RAB)</b>	4,604,391,403	6,062,735,542	6,774,026,264
<b>Weights</b>			
<b>WACC (%)</b> (That is: $\text{Weight Equity} \times \text{Return Equity} + \text{Weight Debt} \times \text{Return Debt}$ )	<b>0.01706</b>	<b>0.01118</b>	<b>0.00610</b>
<b>ROI (Mill TZS)</b> (That is $\text{WACC} \times \text{RAB}$ )	<b>78,542,116</b>	<b>67,803,142</b>	<b>41,308,473</b>