



REPUBLIC OF RWANDA

National E-Waste Management Policy for Rwanda

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ACRONYMS

EEE	Electrical and Electronic Equipment
EIA	Environmental Impact Assessment
EOL	End of Life
E-waste	Electrical and Electronic Equipment Waste, also called WEEE
FONERWA	Fonds National pour l'Environnement du Rwanda
GoR	Government of Rwanda
ICT	Information and Communication Technology
ICT4D	ICT for Development
MINICOM	Ministry of Trade and Industry
MITEC	Ministry of Information Technology and Communications
NICI	National Information and Communication Infrastructure
NISR	National Institute of Statistics of Rwanda
PPP	Public Private Partnerships
REMA	Rwanda Environmental Management Authority
RISA	Rwanda Information Society Authority
RSB	Rwanda Standards Board
RURA	Rwanda Utility and Regulatory Authority
WEEE	Waste Electrical and Electronic Equipment, also called E-waste
WTO	World Trade Organization
NST1	National Strategy for Transformation

FOREWORD

The demand for electrical and electronic equipment (EEE) has increasing significantly in Rwanda due to the general economic growth and modernization. In addition, the demand for a variety of information communication technologies (ICT) tools such as end-user devices, network equipment, telecommunication devices, cooling-system devices, etc., is bolstered by the Rwandan national strategies that position ICT as the key enabler of the knowledge based economy. As such, there has been an enormous increase in ICT usage, which results in high consumption of EEE.

With the continuing evolution of ICTs, people are eager to acquire newer technologies, which result in high demand for the latest electronic devices and a progressively decreasing usage period of these tools. Outdated EEE are becoming obsolete and being discarded as E-waste in large quantities and at increasing rates worldwide. Accordingly, the lack of clear framework for handling and treatment of E-waste has led to the accumulation of cast-off EEE in offices and warehouses. In most cases, E-waste is mixed with ordinary waste at homes and disposed of at regular landfills.

The E-waste policy was developed to provide comprehensive guidance for the efficient and effective management of discarded EEE through appropriate legal and regulatory instruments, which promote green development and ensure a sustainable economic growth for the country. Therefore, the National E-waste Management Policy for Rwanda will control the end-of-life of EEE, resulting in the protection of human health, the conservation of the environment, the development of a business niche in the E-waste management and recycling industry, and creation of employment for Rwandans.

1. INTRODUCTION

The digital revolution has led to an explosive production and an extensive use of EEE, which has launched the social and economic advancement for most countries in 21st century. However, this rapid economic advancement has resulted into a massive generation of EEE waste commonly known as E-waste.

Due to the current rapid economic growth and modernization, the distribution of EEE has also significantly increasing in Rwanda. Furthermore, the growing dependence on the use of ICT in all sectors of the economy has led to increased utilization of EEE in various domains including mobile communication, education, health, finance, service delivery, etc. On one hand, proper handling of E-waste is an emerging challenge as some EEE contains toxic and hazardous substances such as lead, mercury, arsenic, cadmium, and selenium, among others, which pose severe threats and risks to human health and to the environment if not properly handled and disposed of. On the other hand, there is also an opportunity in adequate E-waste management: recycling and refurbishment allow the recovery of precious metals such as gold, silver, platinum, palladium, copper and tin from disposed components, and creates income and tax generation through new businesses and employment opportunities in E-waste value chain management.

The E-waste policy provides comprehensive direction and framework to the efficacious management of E-waste through appropriate legal, regulatory and strategic instruments. The policy comes into place to complement the existing environment protection policy and legal framework. It addresses the unforeseen challenges and issues brought by economic development, modernization and the digital transformation.

1.1. Context

The National vision 2020 aims to transform Rwanda into a middle-income country with focus on promoting green economic development through implementation of the national green growth and climate resilient strategy programs of action and also highlighted in NST1 in which emphasis shall be put on strengthening monitoring and evaluation of pollution and waste management among other ecosystems. Furthermore, ICT has been identified as an enabling factor for transforming Rwanda into an information society through initiatives such as e-government, e-education, e-health, e-commerce, etc.

As Rwanda becomes an information-rich society with swollen ICT deployment and increasing access to electrical energy, alongside the ever-growing innovations that create new technological solutions for diverse demands, outdated EEE are being accumulating and are rapidly becoming obsolete and discarded in large quantities as E-waste.

In most countries, especially in developing countries, the generated E-waste levels are alarming. This is due to markets open to second hand EEE, and a rush to the promotion of technologies susceptible to acquisition of cheap and sub-standard EEE. The high volumes of E-waste generated and the lack of adequate facilities to manage this type of waste basically means that the E-waste generated mostly end up being discarded in the general waste stream, which endangers the environment.

Considering the above challenges, the environmental degradation and human health protection, we developed a National E-waste Management Policy to address E-waste challenges, to create awareness of E-waste management, to promote capacity building and knowledge in E-waste management, and to prevent an E-waste crisis.

1.2. E-waste Definition

E-waste encompasses all discarded and disposed electrical and electronic equipment (EEE), which is defined as equipment dependent on electric currents or electromagnetic fields in order to work properly, but also any for the generation, transfer and measurement of such currents and fields. Some of the major categories of electrical and electronic equipment are:

1. ICT Equipment e.g. desktop computers, laptops, mobile phones, printers, iPads etc.
2. Large and small household equipment's e.g. fridges, electric kettles, microwaves, etc.
3. Lighting equipment e.g. compact fluorescent tubes, solar equipment etc.
4. Consumer equipment e.g. TVs, Radios etc.
5. Electrical and electronic tools (with the exception of large-scale stationary industrial tools) e.g. sewing machines, drills, saws etc.
6. Toys, leisure and sports equipment e.g. the electric toys, gym equipment etc.
7. Medical devices (with the exception of all implanted and infected products) e.g. dialysis machines etc.
8. Monitoring and control instruments e.g. CCTV cameras
9. Automatic dispensers e.g. water, money dispensers etc.

A more detailed scope of EEE and E-waste will be articulated in the rules and regulations under this policy and will be constantly updated by the regulatory authority in consultation with the agency in charge of environment protection.

1.3. Background

Rwanda's Vision 2020 which recognized environmental degradation and climate change as one of main barriers to the realization of medium and long-term development aspirations. Hence, environmental protection and its management is a priority to the country's economic growth.

However, Rwanda developed an ICT for Development (ICT4D) plan, which recognizes the importance of ICT as a key driver for socio-economic development. Accordingly, there is growing demand of ICT's by most government institutions, individuals and corporate as means to upgrade their technological advancements. The generation of E-waste is becoming worrying in most countries and specifically in developing countries such as Rwanda, where E-Waste is still discarded via general waste stream due to the lack of a holistic and appropriate approach to E-waste as well as lack of adequate facilities.

The National E-waste Policy for Rwanda recognizes the need to develop a green economy by defining and implementing an E-waste management framework to properly handle the increasing volume of E-waste, acquiring appropriate facilities and technologies used for E-waste managing, as well as developing the necessary human capacity in E-waste management disciplines.

1.4. Current status of E-waste in Rwanda

Though Rwanda has procedure that deal with waste in general, these do not include specific provisions for E-waste management. However, E-waste is distinct in terms of its generation and treatment. Currently, the municipality is responsible of the management of general waste and citizens are only required to pay for collection and disposal services. However, E-waste cannot be handled in the same way as general wastes because of its unique composition, which include non-biodegradable materials and hazardous components that can be harmful to the environment and human health. This requires specialized disposal methods, skills and special treatment facilities.

1.4.1 Current operations and practices

There is growing number of personal electrical and electronic devices in institutions, households, business facilities, etc. Moreover, with the growth of the telecommunication sector, the number of citizens subscribing to the mobile network has been firmly growing over the years.

Between November 2014 and January 2015, a survey was carried out to determine the status of E-Waste in Rwanda¹. The survey revealed that for the period ranging from 2010 to 2014:

- Import of ICT equipment increased by 5 times.
- The annual growth in the importation of EEE to Rwanda was estimated to about 5.95%
- Rwanda has potential annual E-Waste generation of 9,417 tons of which 7,677 tons (81.52%) are contributed by individuals, 1,143 Tons (12.14%) by public institutions, and 597 tons (6.34%) by private institutions.
- In 2014, UN Environment Agency estimated that Kenya generated about 44,000 tons of e-waste per year, while Tanzania generates around 45,000 tons, Uganda 25,000 tons, while Burundi generates 9,000.
- According to ITU, Global E-waste monitor 2017, 44.7 Million metric tons of e-waste were generated in 2016. Globally, only 8.9 Mt of e-waste are documented to be collected and recycled, which corresponds to 20% of all the e-waste generated.
- Globally e-waste can be a source of business opportunity of 55 billion Euros known worth the value of raw-materials.

The solid waste contractors collect waste from different places and discard it to allocated landfills without any distinct segregation of E-waste. In some instances, valuable components of E-waste are recovered and non-valuable components which are in most cases toxic for the environment are left mixed with other types of waste, causing health and environment hazards. The public sector, one of the key contributors of the E-Waste, has over years accumulated enormous amounts of E-waste while awaiting a method for its proper management and disposal.

In effort to the reduce the E-Waste generation in the country, Rwanda Standard Board (RSB) in collaboration with the Ministry in charge of Information Technology and Communications established Ministerial Guidelines No: 1 of 25/10/2011 related to importation of used electronics/ICT equipment's, aimed to restrict and regulate importation of used computers and electronic parts, in order to minimize EEE's potential adverse effect on human health and the environment. Furthermore, the Ministry of Trade and Industry supported by Rwanda Green Fund (FONERWA) has established an e-waste dismantling and recycling facility in Bugesera Industrial Park to tackle the challenges posed by poor management of e-waste. The e-waste dismantling and recycling facility is currently managed by a private investor through a public private partnership agreement with the government of Rwanda. The private investor has already established collection centers/e-waste drop off points in Kigali and Musanze and has a plan to set up at least 30 collection centers (one in each district) to facilitate the proper collection of e-waste in Rwanda.

¹ Rwanda E-Waste inventory, March 2015 Ministry of Trade and Industry

1.4.2 Current Legal framework

The National Sanitation Policy that was approved by Cabinet in December 2016 provides guiding principles for all aspects of Waste Management and also recognizes the uniqueness of E-Waste which requires a specific policy governing proper management of Electrical and Electronic waste in Rwanda.

The draft environment and climate change policy highlight e-waste among the key emerging challenges and fastest growing of pollution. Furthermore, the draft environment law recognizes e-waste as hazardous and toxic waste and must be collected, treated and changed in a manner that does not degrade the environment in order to prevent, eliminate or reduce their adverse effects on human health, natural resources and environment.

The draft ministerial order determines the modalities for management of e-waste management and shall set the conditions for e-waste importation.

It is worth noting that Rwanda is a signatory to many agreements and conventions on environmental management. These include support for the provisions of Agenda 21 amongst other declarations and statements of principles, such as the Rio Declaration in 1992 on Environment and Development. Rwanda is also a party to the Basel and Bamako Conventions on the control of trans-boundary movements of hazardous wastes and their disposal, which was developed with purpose to ensure that: the generation of hazardous wastes and other wastes is minimized; that adequate disposal facilities exist for sound environmental management of wastes; and that managers of waste minimize the risk to human health.

Therefore, since the available waste related legislations under Rwanda Legal framework are broad and do not specifically provide a comprehensive approach to E-Waste management, there is a need to review existing legal framework with a holistic plan for include E-waste management in order to protect the environment and health of Rwandans.

This policy is developed to comply with the national and international agreements and conventions and to address challenges posed by the changing environment in technology.

1.4.3 Current institutional framework

Although the Government of Rwanda (GoR) has dedicated agencies in charge of the protection of environment, there is no clear mandate and capacity to effectively manage E-Waste. Additional, there is no formal procedure/policy for E-waste management in the private sector.

Hence, there is an imperative need to develop a clear framework to address the emerging problem of E-Waste management in a sustainable manner as well as assign roles and responsibilities to different players in the E-waste ecosystem. With this, the authority in charge of standards (RSB) has developed the E-waste management standards that prescribes handling, collection, transportation and storage of various categories of E-waste to ensure the environment and human health is protected against the potential adverse impacts of e-waste. Also, the Authority in charge of ICT regulations(RURA) has in April,2018 launched the regulation that applied to every producer, retailer, importer, collector, transporter, dismantler, recycler, refurbisher, consumer assembly, sale, purchase and processing of e-waste in Rwanda. A notable contribution by the GoR is the establishment of a fund for Environment and Climate Change (FONERWA). This fund is supporting the establishment of basic infrastructure, the mobilizing and channeling of domestic and international funds to the public and private sectors as well as climate change projects. This green fund is already supporting projects that align with the country’s commitment to a strong and prosperous green economy including the establishment of sustainable E-waste management system. With this regards in December 2017, GoR established and launched E-waste recycling and dismantling plant aiming at mitigating environmental hazards as result of E-wastes and contribute to the economic development and green job creation.

<i>Ministry / Agency / Authority</i>	<i>Options implemented by different stakeholders</i>
Ministry of ICT	Lead the development of ICT Bill and E-waste management policy In collaboration with RSB established guidelines
Ministry of Infrastructure	Lead the development of the National sanitation policy which is an umbrella policy for all waste management aspects in Rwanda
Ministry of Environment	Revision of Environment law and policy to cater for e-waste management Currently leading the development of a Ministerial order for e-waste management
Ministry of Trade and Industry (MINICOM)	Lead the establishment of e-waste recycling and dismantling facility and signed a PPP agreement with the private

	investor to manage and operate the facility
Rwanda Standards Board (RSB)	Developed standards on e-waste handling, storage, transportation, collection, treatment and disposal
Rwanda Utilities Regulatory Authority (RURA)	Developed E-waste regulations and licencing framework for operators in e-waste management sector
Rwanda Environment Management Authority (REMA)	Enforcement of environmental laws and regulations Conducted initial assessment of e-waste quantities in Kigali
Rwanda Green Fund (FONERWA)	Funded the establishment of e-waste facility, assessment and development of legal instruments for e-waste management

1.4.4 Awareness and Education

The Ministry of ICT in collaboration with Ministry of Trade and Industry (MINICOM) have carried out preliminary awareness of E-waste management initiatives among government institutions. Nevertheless, there is still a need to extend this awareness to the private sector and other civil communities. There is also a need to enhance collaboration and partnership with local and international agencies and manufacturers to ensure increase in knowledge capacity and skills for E-waste management and control to address the existing gap in skills for E-waste handling and disposal.

This policy also suggests to introduce E-waste management skills by starting with Technical Vocational schools (TVET), where centers refurbish and reuse electronic equipment's can be established. This can serve as hands-on technical practice for students in TVET, while also extending the life span and usability of discarded electronic devices.

2. THE NATIONAL E-WASTE MANAGEMENT POLICY

2.1 Vision

The vision of this policy is to ensure the effective and efficient management of E-waste for a safe environment and human health protection towards a sustainable green economic development.

2.2 Policy Objectives

The objectives of this Policy are as follows:

- 1) To minimize the adverse effects of E-waste on the environment and human health through appropriate legal and regulatory framework for E-waste management;
- 2) To promote the establishment of e-waste management facilities and investment in E-waste management to ensure sustainability of E-waste management in Rwanda;
- 3) To increase the knowledge capacity of stakeholders by promoting the investment, education and awareness in effective E-waste management.

2.3 Guiding principle

This policy is built on the following principles:

- 1) **Device life cycle:** Reduce, re-use and recycle: Reduce and reuse approach can help minimize E-waste through expanding the life span of electronic devices and reusing those EEE which are still in good condition. Example: electronic devices that have been discarded by government institutions can be refurbished and reused by academic institutions.
- 2) **Resource recovery:** E-waste recycling involves collection and dismantling to recover valuable metals from EEE such as gold, copper, etc. These can be used as raw materials for the manufacturing of other products.
- 3) **Protection of human health and environment:** all hazardous materials in E-waste should be treated properly to avoid harming or endangering human health and the environment.

- 4) **Job creation and private sector development:** this policy will foster investment and job creation in E-waste management and control, which will promote creativity and innovation especially for young entrepreneurs.
- 5) **Sustainability:** Through this policy, the prevention of environmental and health-related hazards as well as the creation of income generation opportunities will contribute to the sustainable development of Rwanda.

2.4 Priority Policy Areas

The policy areas below have been developed in consistency with the strategic interventions to cater for the uniqueness of E-waste and its management challenge, enforcement of standards for EEE imported into the country and their registration as well as issuance of licenses to regulate the activities of E-waste collectors, transporters and owners of recovery, dismantling and disposal facilities.

The lack of legislations on E-waste management, weak and/or no enforcement of any existing legal framework on E-waste and poor or no infrastructure for the disposal of E-waste have immensely contributed to the current inadequate E-waste management. In order to implement and achieve the policy objectives mentioned above, a number of priority policy areas have been identified, as described below:

2.4.1 Legal and Regulatory Framework

Recognizing that there exist gaps in the current environment protection legal framework to address the uniqueness of E-Waste as an emerging issue that cuts across different sectors, an adequate legal and regulatory framework governing E-Waste management needs to be established.

The regulatory authority has developed regulations governing E-waste management in Rwanda which was approved in April,2018. The purpose of this regulation is to regulate the operators in the e-waste management sector and frame work for electrical and electronic waste management in Rwanda.

To this end, the GoR shall:

- 1) Develop and enforce relevant laws and regulations for E-waste management, with adequate considerations of the existing legal and regulatory instruments;
- 2) Develop and promote E-waste management standards, regulations and operational guidelines for the sorting, collection, transportation, treatment and disposal of E-waste in n addition to the current rules and regulations including putting in place regulations and procedures for disposal of state private assets;

- 3) Develop E-waste management strategic plan to support the above revisions of rules and regulations. The strategic plan will also focus on attracting private investments in the E-waste management business.

2.4.2 E-waste Management facilities and systems

Considering the exponential growth of E-waste in Rwanda, as well as the lack of facilities and defined mechanisms for collection, treatment and disposal of E-waste that comply with national and international standards, the GoR shall:

- 1) Promote the establishment of E-waste management facilities (dismantling facilities, collection centers and E-waste drop off points) to ensure proper collection, transportation, dismantling, disposal and recycling of E-waste;
 - 2) Develop sustainable models for E-waste management such as Public Private Partnerships (PPP);
 - 3) Engage EEE producers/importers through the Extended Producer Responsibility in strategic partnerships including financing the E-waste collection, transportation and treatment through the extended producer responsibility and advanced recycling fee;
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Establishment of E-Waste collections centers, drop-off points and a dismantling facility will facilitate and provides a secure and environmentally conscious solution for the sorting and segregation of e-waste into reusable streams. Furthermore, the E-waste collected from collection centers, drop-off points or individual institution will be properly transported to the dismantling facility with comply to the e-waste management technical guidelines and regulations that will be established to implement this policy.

The approach to be used in e-waste management facilities is to collect, sort, decontaminate, manually dismantle and recover whatever can be reused or recycled locally. Whatever cannot be reused/recycled locally, but has market elsewhere is to be appropriately collected until when sufficient volumes are obtained and exported to industrialized countries where more optimal technical, environmental and economic outcome could be achieved through end-processing to recover trace elements like gold, mercury, silver, palladium and platinum, etc.

The manual dismantling will create green jobs as workers involved will be trained in required knowledge and skills as well as revenues will be generated from the recovered materials.

2.4.3 E-Waste Management Awareness and Education

The assessment of E-waste Management status and trends in Rwanda revealed that there is limited awareness of the risks associated with inadequate handling and disposal of E-waste

within the public and private sector as well as the general Rwandan community. Increasing the national awareness and capacity of E-waste management has the potential to stimulate investment and create green jobs in the E-waste re-use and recycling industry.

In response to this need, the GoR shall:

- 1) Promote the education and awareness on how to safely handle and dispose E-waste;
- 2) Encourage the procurement of environmentally friendly EEE's across the Public and Private Sector as well as the community at large;
- 3) Support technology development and innovation in the field of E-waste management and control;
- 4) Include E-waste management in educational curriculum at various levels especially in TVETs schools;

2.4.4 Investments in E-waste Management

Currently, there is need to mobilize more funds assigned to the process of collection and treatment of EEE at the end of their use. Therefore, investments will be required to properly handle the increasing volume of E-Waste, to increase the capacity for managing and handling E-waste, and to establish E-waste management facilities that will facilitate the collection, treatment and disposal of E-waste. To attract investments in E-waste management, the GoR shall:

- 1) Adopt a comprehensive strategic plan that aims at attracting private investments in E-waste management;
- 2) Adopt innovative financial models and instruments to finance the sustainable management of E-waste such as the Extended Producer Responsibility (EPR).
- 3) Create job opportunities in the E-waste value chain

3. INSTITUTIONAL FRAMEWORK

Recognizing that the E-waste is generated by activities at the public and private sector as well as the community level, the implementation of this policy requires adequate institutional framework and clear coordination mechanism among all stakeholders.

Therefore, to ensure an effective and sustainable management of E-waste, an advisory committee will be established to fast track and facilitate the implementation of this policy. This committee will also coordinate all procedures that are geared towards enhancing proper management of E-waste in Rwanda. The Minister in charge of ICT in collaboration with the Minister in charge of Environment will establish and co-chair the advisory committee

Therefore, the E-waste policy shall be implemented in collaboration with key stakeholders' institutions, with roles and responsibilities defined below:

3.1 Ministry in charge of Information and Communications Technology (ICT)

The Ministry in charge of ICT shall:

- a) Lead the development of an E-waste policy and strategic plan for the management of E-waste.
- b) Oversee the implementation of the E-waste strategic plan in collaboration with different stakeholders.

3.2 Ministry in charge of Trade and Industry

The Ministry in charge of Trade and Industry shall ensure the development of sustainable E-waste management implementation models such as Public Private Partnerships (PPP) and incentives to attract investments in E-waste control. The Ministry will also lead the process of establishing:

- a) E-Waste management facilities, systems, and sustainable management framework.
- b) E-waste management financing frameworks which shall such as collective producer extended responsibility models long with operational and management procedures.

3.3 Ministry in charge of Environment

The Ministry in charge of Environment will spearhead enactment and enforcement of relevant laws and regulations governing the e-waste management in Rwanda.

3.4 Ministry in charge of Health

The Ministry in charge of Health will integrate E-waste in existing policies to ensure health and safety standards that relate to E-waste management.

3.5 Ministry in charge of Education

The Ministry in charge of Education will take lead in the integration of E-waste management curricula into existing formal education curriculum. The Ministry will focus on growing the required skills at local and nation level of the workforce for proper E-waste handling.

3.6 Rwanda Information Society Authority Infrastructure Implementation

Considering the sensitivity of information stored in government electronic assets, the concerned institution in charge of state assets will develop a procedure for information clean up before decommissioning EEEs to E-Waste management facilities.

3.7 Authority in charge of the Protection of the Environment

The Authority in charge of environment protection will:

- a) Spearhead the mainstreaming of E-waste into existing environmental policies, strategies, legal and regulatory instruments;
- b) Participate in the informative studies on E-waste such as baseline surveys, etc.;
- c) Monitor the implementation of environmental programmes including E-Waste management.
- d) Spearhead the enforcement of the laws and regulations related to E-waste

3.8 ICT Regulatory Authority

The ICT Regulatory Authority will enforce this policy by:

- a) Enforce regulations governing E-waste management in Rwanda;
- b) Enforce the licensing regime for entities dealing with collection, transportation, dismantling, refurbishment and recycling of EEE.

- c) Develop regulations and guidelines for the Extended Producer Responsibility Mechanisms

3.9 Authority in charge of Standards

The authority in charge of Standards will:

- a) Notify World Trade Organization (WTO) member states on established EEE standards, policies and regulations that affect the quality of imports into the country;
- b) Enforce E-waste management standards;
- c) Develop a mechanism to audit and monitor compliance to E-waste management standards.

3.10 Authority in charge of import Inspection

The authority in charge of imports inspection will enforce compliance of all imported electric and electronic equipment at the point of entry using set standards.

3.11 Authority in charge of Customs and Revenues

The authority in charge of customs and revenues will maintain statistical records of both EEE manufactured in Rwanda and imports.

3.12 Private sector

The private sector shall operationalize the E-waste management policy and strategic plan through planning and establishing E-waste collection, transportation, and treatment and recycling facilities. The private sector shall also be responsible for the establishment, operations and financing of the whole E-waste chain.

3.13 EEE Users

The users can either be an individual or a corporate organization that owns a device which falls into one of the e-waste categories and which is considered to have ceased to be of any value.

Users need to:

- i) Separate e-waste from other wastes to facilitate collection, treatment and recycling
- ii) Dispose e-waste generated to the e-waste licensed collection centers or drop-off point
- iii) Be responsible for following recommended disposal methods or procedures especially dates of expiry or end of usage period of the product

4. IMPLEMENTATION PLAN

This strategy and plan is developed to facilitate implementing the policy, and ensure the following issues are adequately addressed:

- Gaps in existing legal and institutional framework for e-waste management to address the uniqueness of e-waste.
- Rapidly increasing e-waste volumes from imports of electrical and electronic equipment and domestically generated e-waste
- Low level of awareness amongst key stakeholders that include users and consumers of the electronic and electronic equipment on the recommended standards for EEE, the hazardous nature or toxicity of e-waste and effects of incorrect e-waste disposal/management.
- Lack of incentives for consumers and enterprises to hand out obsolete EEE, or voluntary take back systems for end of life equipment
- Continuous update on the estimates of the quantity of e-waste generated and recycled to inform e-waste management interventions.

The Table below defines strategic innervations, activities, estimate budget, timeline and responsibility related to implementation of the e-waste Management policy. *Light-blue shade – Represents timeline for completion * Pink-shade – Represents sustaining continuous operation.

ACTIVITIES	STAKE-HOLDERS	2018-2019	2019-2020	2019-2020	2020-2021	2021-2022	BUDGET
Strengthen Legal and regulatory framework for e-waste management.							
Adoption of the e-waste policy by cabinet	MITEC(Lead), MoE						10,000,000
Establish an advisory committee to facilitate and drive the implementation of the e-waste related activities	MiTEC, (lead), MoE, MINICOM						
Enforce the national e-waste regulations, Technical guidelines and licensing process and procedures then conduct a study for assessment of national compliance levels. Develop regulations and guidelines for Extended Producer Responsibility (EPR)	RURA						
Establishment of E-waste management facilities and systems							
Establish framework that promote involvement of private sector in the operations of collection, transportation, dismantling, refurbishment and recycling of e-waste	MINICOM (Lead), All stakeholders						TBD

E-waste Management Awareness and Education							
Annual e-waste management awareness programs for public and private sectors ,communities and homes	MITEC ,MoE, RURA,RISA						100,000,000
Conduct progressive training programs for individuals, private sector, Government and all other target audience involved in E-waste management.	MINICOM(lead),REMA,RURA						
Collaborate with MINEDUC and WDA to develop a clear model for integrating e-waste management courses and trainings in TVET schools curriculum	MINICOM,MITEC						
Promoting Investments in e-waste management							
Develop a comprehensive model for attracting private investments in e-waste management ; and adverse on innovative and suitable financial models and instruments to finance and ensure a sustainable management of e-waste (Extender producer responsibility framework)	MINICOM,RSB,REMA						35,000,000
Statistical Records for E-waste handling ecosystem							
Develop a database to record licensed collection centers, Transporters and recyclers	RURA						50,000,000

