ITUPublications

International Telecommunication Union
Development Sector

Study on scoping the existing policy and regulatory framework for the management of e-waste under extended producer responsibility in Uganda 2023

THE REPUBLIC OF UGANDA
MINISTRY OF ICT & NATIONAL GUIDANCE

Study on scoping the existing policy and regulatory framework for the management of e-waste under extended producer responsibility in Uganda 2023

THE REPUBLIC OF UGANDA
MINISTRY OF ICT & NATIONAL GUIDANCE

中国援助
CHINA AID
FOR SHARED FUTURE

ITU

Acknowledgements

This report was developed by the Ministry of ICT and National Guidance and the International Telecommunication Union (ITU), with the support of Divisions and Services in ITU Headquarters and ITU Regional Office for Africa under the Technical Assistance and Training to Uganda on National ICT Development Strategy' (2021-2024) project. The project is a collaboration between the Government of Uganda and ITU, supported by the Global Development and South-South Cooperation Fund (GDSSCF) and ITU's ICT Development Fund (ICT-DF).

The research was undertaken by ITU expert Hermenegilde Ntahomvukiye under the framework of the project and its deliverables. Technical input, feedback and guidance have been provided by ITU and the Ministry of ICT and National Guidance project team members and experts in government ministries, agencies, institutions, and across Uganda's digital ecosystem.

Disclaimers

The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of the International Telecommunication Union (ITU) or of the ITU secretariat concerning the legal status of any country, territory, city, or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by ITU in preference to others of a similar nature that are not mentioned. Errors and omissions excepted; the names of proprietary products are distinguished by initial capital letters.

All reasonable precautions have been taken by ITU to verify the information contained in this publication. However, the published material is being distributed without warranty of any kind, either expressed or implied. The responsibility for the interpretation and use of the material lies with the reader.

The opinions, findings and conclusions expressed in this publication do not necessarily reflect the views of ITU or its membership.

ISBN

978-92-61-39671-8 (Electronic version)
978-92-61-39681-7 (EPUB version)

Please consider the environment before printing this report.

Foreword

The management of electronic waste (e-waste) is an urgent issue in Uganda's journey toward sustainable development. With the increasing adoption of technology, the volume of e-waste generated continues to grow, posing significant environmental, health, and socio-economic challenges. This report, **Study on scoping the existing policy and regulatory framework for the management of e-waste under extended producer responsibility in Uganda 2023**, represents a critical step toward addressing these challenges by providing actionable insights and a clear roadmap for reforming Uganda's e-waste management system.

This work highlights the Government of Uganda's commitment to safeguarding the environment and promoting sustainable practices in the ICT sector. The inclusion of the Extended Producer Responsibility (EPR) principle is a bold and necessary move to ensure that the burden of managing e-waste is shared fairly between producers and consumers. The proposed reforms, including the creation of standalone e-waste regulations and the establishment of a hybrid Public-Private Partnership model for managing EPR schemes, demonstrate our government's resolve to integrate global best practices into local solutions.

This report is more than just a regulatory guide; it is a testament to Uganda's proactive stance in addressing emerging challenges associated with digital transformation. By empowering the informal sector, enhancing institutional collaboration, and ensuring financial sustainability, the proposed measures will not only improve e-waste management but also create opportunities for economic growth, job creation, and environmental protection.

I urge all stakeholders including government agencies, private sector actors, and development partners to actively engage in implementing the recommendations outlined in this report. Together, we can build a sustainable, inclusive, and innovative framework for e-waste management, ensuring that Uganda's digital progress does not come at the expense of our environment and future generations.

Hon. Dr. Chris Baryomunsi
Minister of ICT and National Guidance

Foreword

It is my pleasure to present this report under the project 'Technical Assistance and Training to Uganda on National ICT Development Strategy', a collaboration between the Government of Uganda and the International Telecommunication Union, supported by the Global Development and South-South Cooperation Fund and ITU's ICT Development Fund.

Through carefully co-crafted interventions in support of the country's vision to transform Uganda into a digitally enabled society that is innovative, productive and competitive, the project has applied a three-pronged approach focusing on the development of policy recommendations, enabling capacity development, and the implementation of pilot projects.

In recent years, Uganda has witnessed tremendous growth in its digital economy, reflecting broader trends across the Africa region and globally. The increased access to digital technologies, new opportunities that connectivity has brought, and the surge in digital services are fueling rapid advancements on how citizens engage with one another and with vital government services. These developments also bring new challenges, requiring policy-makers and regulators to rethink strategically and build enabling policy and regulatory frameworks that are future-ready and adaptable to this ever-changing landscape. Moreover, digital skills remain essential for citizens to meaningfully participate in the digital space and for professionals to fully leverage the potential of digital technologies in addressing socio-economic challenges. This has been a critical aspect of the implementation of the policy interventions within this project.

Co-created and initiated in support of Uganda's ambitious digital transformation journey, this project stands as an example of how focused and meaningful partnerships can lead to impactful change. We have witnessed the results of the policy interventions and the impact of the significant capacity development in the country. I believe the efforts will continue to impact Uganda's transformation for years to come.

I encourage ITU Member States across Africa and globally as well as development partners to join forces and invest in digital transformation for social and economic growth. The Telecommunication Development Bureau stands ready to continue supporting countries on their digital transformation journeys with impactful project implementation and partnerships that are essential for achieving universal and meaningful connectivity and digital transformation for all.

Dr Cosmas Luckyson Zavazava
Director of the Telecommunication Development Bureau
International Telecommunication Union

Foreword

The report, **Study on scoping the existing policy and regulatory framework for the management of e-waste under extended producer responsibility in Uganda 2023**, is the product of a collective effort by various stakeholders dedicated to establishing a sustainable and efficient e-waste management system. It delivers comprehensive insights and actionable recommendations designed to reform Uganda's regulatory framework and ensure the effective integration and implementation of the Extended Producer Responsibility (EPR) principle.

I extend my sincere gratitude to the International Telecommunication Union (ITU) for their technical and financial support, which has been pivotal in the development of this report. Their partnership under the Technical Assistance and Training to Uganda on National ICT Strategy project has provided invaluable expertise and resources to ensure that this study aligns with international standards and best practices. The Global Development and South-South Cooperation Fund (GDSSCF) also deserves recognition for the financial contribution to this project.

A special acknowledgment goes to the technical team at the Ministry of ICT and National Guidance. Their contributions, including stakeholder engagement, prior research, and technical analysis, were instrumental in shaping the recommendations and roadmap presented in this report. I particularly commend their commitment to addressing the challenges in e-waste management and their role in ensuring that the recommendations are both actionable and relevant to Uganda's unique context.

Additionally, I wish to recognize the collaborative efforts of stakeholders from both the public and private sectors who participated in consultations and workshops. Their insights and feedback enriched the report and ensured that the proposed solutions reflect the realities faced by all actors in the e-waste management ecosystem.

This report sets the stage for a transformative approach to e-waste management in Uganda. By advocating for standalone e-waste regulations, financial sustainability, and inclusive governance structures, it provides a robust foundation for achieving an efficient and sustainable e-waste management system. The roadmap outlined in the report offers a clear path for implementing these reforms, emphasizing stakeholder collaboration and capacity building.

As we embark on the next steps, I encourage all stakeholders to remain actively engaged and committed to the vision of a cleaner, healthier, and more sustainable Uganda. We can work collaboratively to ensure that e-waste management becomes more than just a regulatory requirement, transforming it into a shared responsibility that brings tangible benefits to all Ugandans.

Dr. Amina Zawedde (PhD)
Permanent Secretary
Ministry of ICT and National Guidance
Government of Uganda

Table of contents

Background

The Government of Uganda has embarked on a substantial digital transformation endeavour with the broad objective of transforming its society into a digitally enabled one. The programme is embedded in the Digital Uganda Vision and Digital Transformation Roadmap, in line with the Third National Development Plan. The digital transformation programme will undoubtedly lead to an increase in the use of electrical and electronic equipment (EEE) which, at the end of its useful life, will most likely become electronic waste (e-waste).

Hazardous substances contained in e-waste constitute a threat to the environment and affect human health, as they can contaminate the environment if not managed correctly. In fact, e-waste comprises components and parts made up of substances such as lead, mercury, cadmium and arsenic, which are harmful to human beings and the environment, as they can contaminate the air, water and soil.

In order to mitigate the already-existing threat of e-waste, and to manage the growing quantities of e waste being disposed in landfills, a sound e-waste management system must be put in place.

E-waste collection is performed by local authorities in Uganda, as stipulated by section 42 of the National Environment (Waste Management) Regulations (2020): "The local government shall ensure that the waste is exported or delivered to a waste handler authorized to handle that waste who shall ensure that the e-waste is recycled."

The existing framework for financing e-waste management is based on a model whereby the public sector finances the whole value chain. The model has demonstrated its weaknesses, and as of now, very little quantity of e-waste has been collected and recycled.

The financing model must therefore be improved by creating a new model based on a financially sustainable framework with the involvement of key stakeholders – such as EEE producers (importers, distributors, manufacturers and resellers); retailers and collectors; and recycling companies – through a fair and economically viable extended producer responsibility (EPR) framework for the EEE sector. This model would ensure sustainable financing and greater public–private partnerships. Furthermore, the model would promote the creation of a circular economy, whereby resources and waste products are minimized through longer-lasting design, maintenance, repair, reuse, remanufacture, refurbishment and recycling.

Uganda has developed a number of legal instruments for e-waste management, but particular challenges remain when it comes to the implementing phase, notably due to a lack of financial resources. A hybrid system, whereby all stakeholders from the private and public sectors are contributing to e-waste management through the framework of a producer responsibility organization (PRO), is seen by many stakeholders as the best model.

It is against this background that a study has been commissioned to conduct a comprehensive review of the existing e-waste management policies, laws and regulations, and to suggest possible revisions.

The Government of Uganda – through the Ministry of Information, Communication and Technology (ICT) and National Guidance, along with the ITU Technical Assistance and Training on National ICT Development Strategy to Uganda – has prepared this report, which is divided into four chapters:

- Chapter 1 is an introductory chapter which includes key definitions and terms used in the report and that are also applicable for use in the model regulation.
- Chapter 2 reviews the current e-waste management status in Uganda and the existing e-waste policy and legal framework and analyses the gaps and positioning of the EPR principle.
- Chapter 3 gives a summary of the stakeholder consultation workshop on the regulation of e waste management and electronics producers extended producer responsibility, held 9 and 10 November 2023 in Kampala to gather stakeholder opinions on the subject.
- Chapter 4 contains recommendations and a roadmap to key reforms to improve e-waste management under the EPR principle.

Abbreviations

ARF	advanced recycling fee
CRT	cathode ray tube
e-waste	electronic waste
EEE	electrical and electronic equipment
EPR	extended producer responsibility
GPS	global positioning system
ICT	information and communication technology
ITU	International Telecommunication Union
kt	kiloton
LCD	liquid crystal display
LED	light emitting diode
PPP	public – private partnership
PRO	producer responsibility organization
UNITAR	United Nations Institute for Training and Research

Chapter 1: Key definitions used in the report and model regulation

The following are the definitions of key terms used in the document. The categorization of EEE and scope of products concerned is included in Annex B of this report.

1 EEE/e-waste means a wide range of products with circuitry or electrical components with a power or battery supply. EEE becomes e-waste once it has been discarded by its owner as waste without the intent of reuse.

2. Recycling means the processing of used materials (waste) into new products to prevent the waste of potentially useful materials, reduce the consumption of fresh raw materials, reduce energy usage, and reduce air pollution and water pollution, by reducing the need for "conventional" waste disposal or producing a new product from a recyclable material.

3. Reuse refers to items from the waste stream that are reused for a similar or different purpose without changing the form or properties of the items.

4. EPR means a policy principle to promote total life-cycle environmental improvements of product systems by extending the responsibility of the manufacturers of the product to various parts of the entire life cycle of the product, especially through mechanisms such as of take-back schemes, recycling and final disposal of the product.

5. A PRO is an organization authorized or financed collectively or individually by producers that can take responsibility for the collection and channelization of e-waste generated from producers' products to ensure the environmentally sound management of such e-waste.

6. Producer means any natural or legal person, established in a State, who manufactures, markets or resells EEE under their own name or trademark; places on the market of that State, on a professional basis, EEE from a third country or from another State; or sells EEE by means of distance communication directly to private households or to users other than private households in a State; and is established in another state or in a third country.

7. Informal sector means any worker or economic unit carrying out economic activities along the e-waste value chain – in law or in practice – not covered or insufficiently covered by formal arrangements.

8. Importer means any person under the jurisdiction of the State of import who arranges for hazardous wastes or other wastes to be imported.

9. Exporter means any person under the jurisdiction of the State of export who arranges for hazardous wastes or other wastes to be exported.

10. Collector means a natural or legal person or organization that picks up or accepts discarded EEE from a consumer.

11. Manufacturer means an organization involved in the making or production of EEE either locally or internationally.

12. Retailer means a person or organization that sells EEE to the public for use or consumption rather than for resale.

13. Refurbisher means a person who repairs, renovates or processes e-waste for reuse, with an existing recycling programme.

Chapter 2: Mapping the existing policy, legal and regulatory framework for e-waste management

Uganda has developed a number of legal and policy instruments to address the issue of e-waste management, including:

- The National Electronic Waste Management Policy (2012);
- The National Environment Act (Act 5, 2019);
- The National E-waste Strategy (2014);
- Guidelines for E-waste Management (2016);
- The National Environment (Waste Management) Regulations (2020).

Uganda has also ratified a number of international conventions and adopted some standards related to the management of e-waste.

This chapter will give a summary of the current status of e-waste management, a review of the existing e-waste management legal framework, the institutional framework, international conventions ratified by the Republic of Uganda, existing national standards on e-waste management, and the status of incorporation of the EPR principle in the ecosystem.

2.1 The current status of e-waste management in Uganda

2.1.1 E-waste generation

Recent surveys and studies have shown that the quantity of e-waste generated in Uganda is on the rise. A baseline survey on e-waste conducted in 2022[1] by the Ministry of ICT and National Guidance reported an estimated 14.9 kilotons (kt) of e-waste being generated from ICT equipment only. Globally, a baseline study conducted in 2021 by ITU and the United Nations Institute for Training and Research (UNITAR), in collaboration with the East African Communications Organisation, reveals that in 2021 Uganda generated 37 kt of e-waste.[2] The data were compiled using the e-waste-generated tool.

The study revealed that the majority of e-waste was from large equipment (15.7 kt). Temperature exchange equipment and small equipment were second and third, with 7.4 kt and 7.2 kt, respectively. Lamps represented 4.0 kt, while screens and small equipment represented 1.4 kt and 1.0 kt, respectively.

Several challenges to ensuring sound e-waste management have been identified, such as lack of adherence to mechanisms for enforcement of e-waste laws and regulations, insufficient formal e-waste facilities, and a low level of awareness of e-waste and its dangers.

2.1.2 National legal and regulatory framework

In response to the growing e-waste challenges, Uganda has developed a number of policy and regulatory instruments, including the National Electronic Waste Management Policy (2012), the

[1] Uganda Ministry of ICT and National Guidance, "Baseline survey of waste from electronic and electrical equipment", 2022.
[2] ITU and UNITAR Sustainable Cycles (SCYCLE) Programme, "Towards the harmonization of data collection – A baseline study for e-waste in Africa", Geneva/Bonn 2023.

Strategy for Electronic Waste Management (2013), the Guidelines for E-waste Management (2016), the National Environment Act (2019) and the National Environment (Waste Management) Regulations (2020).

2.1.3 International conventions

Besides the aforementioned instruments at the national level, Uganda has ratified most of the international instruments dealing with hazardous wastes in general and referring to e-waste in particular. Those conventions are:

1. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, adopted in 1989 and ratified by Uganda in 1999. The objective of the Convention is to control the flow of hazardous wastes (including e-waste) across borders, and more specifically the flow of toxic waste from developed to less developed countries.
2. The Stockholm Convention on Persistent Organic Pollutants, signed in October 2001 and ratified by Uganda in 2004. The Convention seeks to eliminate or restrict the production and use of persistent organic pollutants.
3. The Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, signed in January 1991, which entered into force on 20 March 1996. The Bamako Convention was opened for signature on 22 March 1989 and entered into force on 5 May 1992. It was ratified by Uganda in 1999. The Convention intends to ban the import into Africa of hazardous waste, including e-waste, especially radioactive waste, which is not covered by the Basel Convention.
4. The Minamata Convention on Mercury (2013), ratified by Uganda in 2019. The Convention seeks to control the supply and trade of mercury, reduce its use, raise public awareness of its dangers and reduce its emission and release into the environment.

2.1.4 The institutional framework

The issue of e-waste management needs to be addressed through a multi-stakeholder partnership approach within a relevant and appropriate framework in order to clarify the role and responsibility of each actor in e-waste management. Clear responsibilities must be placed on each stakeholder group to ensure that each plays its role effectively and efficiently.

Strengthening coordination structures for e-waste management is essential for ensuring the effective implementation of priority e-waste management programmes and projects. The current institutional framework outlined in the National Electronic Waste Management Policy (2012) should be updated to reflect new developments and emerging issues.

2.1.5 E-waste management infrastructure

The lack of e-waste processing facilities has been identified as one of the missing links in e-waste management in Uganda. In June 2021, the Ministry of ICT and National Guidance led an initiative comprising the National Environment Management Authority and National Enterprise Corporation, in collaboration with other stakeholders, in which the first National E-waste Management Centre for Uganda, located in Kampala City, was established.

The E-waste Management Centre is intended to collect, sort, dismantle and dispose of e-waste, with plans to subsequently progress to the refurbishment and recycling of e-waste in the long term. However, this is only realistic once a functioning system for e-waste collection is in place

and well financed nationally. There are plans to establish regional e-waste collection centres to facilitate effective and sustainable e-waste collection. Despite the motivation to establish a facility, the current facility is not fully operational due to limited e-waste input, competition with informal actors, and lack of a sustainable financing mechanism.

2.2 The existing policy, legal and regulatory framework for e-waste management

Uganda has achieved important milestones by putting in place the policy, legal and regulatory framework for e-waste management. Five key national instruments have been put in place to address the issue of e-waste management: the National Electronic Waste Management Policy (2012); the National Environment Act (Act 5, 2019); the National E-waste Strategy (2014); Guidelines for E-waste Management (2016); and the National Environment (Waste Management) Regulations (2020).

The following sections give highlights on e-waste policy, and legal and regulatory instruments, focusing especially on the incorporation of the EPR principle in the ecosystem. The full mapping report of the existing e-waste management policy and regulatory framework in Uganda is provided in Annex A.

2.2.1 The National Electronic Waste Management Policy (2012)

This policy provides for an e-waste fund to be financed through the collection of an advanced recycling fee (ARF) on EEE, and an e-waste levy on electronic communications and services (provision 2.6.6).

During the consultation workshop, participants suggested that the fund be removed and replaced by an EPR scheme with a different governance model, to include the participation of the private sector (producers) in the management of the EPR scheme through a PRO.

2.2.2 The National Environment Act (Act 5, 2019)

This Act contains some provisions on EPR.

According to Article 96 of the Act, a person who generates or handles waste shall:

1. Be responsible for its proper management in accordance with the Act;
2. Promote the principles of the circular economy and the waste management hierarchy.

The Minister may, by regulation, require a person who manufactures, imports, distributes or sells a substance, preparation or other product to (Article 98):

1. Take back the product after use;
2. Ensure that measures are taken to recover or dispose of the product in a manner prescribed by regulations;
3. Ensure that the product, once received, is transferred to a person who is required by law to be responsible for its proper disposal.

2.2.3 The National E-Waste Strategy (2014)

Regarding the establishment of an e-waste fund, the National E-Waste Strategy proposes the following actions:

1. Engage the Ministry of Finance, Planning and Economic Development on the set-up and management of the e-waste fund.
2. Prepare a detailed resource mobilization plan for implementation of the e-waste strategy.
3. Facilitate formation of e-waste collection schemes and regulate their functioning, with licence fees payable to the e-waste fund.
4. Facilitate the setting up of a PRO in liaison with the Ministry of Trade, Industry and Cooperatives.
5. Liaise with the Ministry of Finance, Planning and Economic Development and the Uganda Revenue Authority to review legislation to include an ARF for imported EEE.
6. Issue operational licences to all e-waste collectors and facility operators/owners, and regulate their operations.
7. Advocate for inclusion of e-waste management in budgetary allocations at various levels of governance.
8. Engage manufactures of various EEE brands to support e-waste recycling, treatment and disposal activities, and contribute to the e-waste fund.

2.2.4 Guidelines for E-waste Management (2016)

The Guidelines provide instructions to the various e-waste managers on how to handle and manage the different categories and elements of e-waste. With regard to producer responsibility, they stipulate how producers should organize themselves.

For example, producers are encouraged to:

1. Get organized into sectoral or subsectoral PROs that encompass EPR roles;
2. Implement individual take-back schemes.

Roles of the producer responsibility organization

The Guidelines propose that the role of the PRO be established as follows:

1. The PRO will have overall responsibility for the complete recycling process of e-waste with different levels of engagement in various processes.
2. The PRO will take on direct responsibility of collection and storage of all e-waste that may be delivered to dismantlers/recyclers and priced.
3. Goods being classified as e-waste have an intrinsic material value, and this value is key to the complete financial plan of this structure.
4. The PRO will pay the manufacturers for the materials collected, and provide a collection mechanism. The fee to be paid for different end-of-life products will be fixed by the PRO from time to time.
5. The revenue generated by the PRO through sales of this e-waste to recyclers will be utilized for financing the take-back process from the consumers (cost paid for the e-waste) as well as the collection and storage of the e-waste.
6. Dealers selling such household products will take back the old products and users will get discounts on new purchases of electrical and electronic goods (the end-of-life cost may

be fixed based on product type). The products will then be transferred back to the PRO, and this process will be well documented.

The producer responsibility organization structure

The Guidelines propose a structure for the PRO that shall function on a non-profit basis, and involves the participation of all stakeholders. The consultation workshop, however, suggested a different structure that would be based on a public–private partnership (PPP) model.

The following is the proposed structure proposed by the Guidelines:

1. The PRO will be expected to operate as a non-profit committee premised on corporate social responsibility, and be an active participant in this sector.
2. The cost of establishing these structures shall be supported by manufacturers. The details on the contribution made by individual companies can be worked out through detailed deliberation. Additional revenue to support operations should be generated through the sale of e-waste by the recycler.
3. The PRO should operate with comprehensive stakeholder participation (including representatives of the informal sector) and with full operational transparency to ensure efficacy in its implementation.

2.2.5 The National Environment (Waste Management) Regulations (2020)

The management of electrical and electronic waste is regulated by the National Environment Waste Management Regulations, with specific articles on the management of electrical and electronic waste (articles 40 to 44). Electrical and electronic waste is under this instrument and is hence regulated under normal solid waste in Uganda.

The listed articles (40 to 44), indicate how the collection of e-waste should be carried out and, in addition, how it should be disposed of and managed.

These regulations define EPR as follows: "Extended producer responsibility means the responsibility of a producer for the entire life cycle of the product, including responsibility for take back, recycling and final disposal of the product."

2.2.6 National standards on e-waste

Uganda has developed and approved two national standards related to e-waste management.

The first (US662:2008) is related to the code of practice for inspection and acceptance of audio, video and similar electronic apparatus.

The standard is intended to form a reference document for acceptable used electronic apparatus in Uganda, and promote the safe usage and dumping of used electronic apparatus to safeguard the environment.

The second standard is a code of practice for repair and service of electric and electronic machines/devices (US735:2008).

The standard specifies requirements for repairers of electrical and electronic machines/devices. It provides the essential elements and conditions for service points centres or workshops undertaking servicing or repairing of electrical and electronic equipment or devices.

In conclusion to this chapter, and as the consultation workshop revealed, all the legal and policy instruments are supportive of the EPR principle. They all have defined it as a key component of the e-waste management ecosystem.

Chapter 3: The stakeholder consultations

As shown in the mapping exercise, the Government of Uganda has put in place a set of legal instruments, but environmentally sound e-waste management is still at an inadequate level when it comes to the collection and treatment of e-waste.

In order to gather opinions from stakeholders on how the situation can be improved, a consultation workshop was organized on 9 and 10 November 2023 in Kampala, focusing mainly on the implementation of the EPR system.

The following is a summary of key recommendations from the consultations. The full report is available on the ITU website: www.itu.int.

3.1 Participation

The stakeholder consultation was conducted comprehensively with the participation of stakeholders from the public and private sectors. The participants to the workshop represented a cross-section of 50 participants from government ministries, departments and agencies, including regulatory and standards development authorities, academia, private sector stakeholders in the Uganda electrical and electronic industry, industry associations and civil society.

The theme of the workshop was "Regulation of Electronic Waste (E-Waste) Management and Electronics Producers' Extended Producer Responsibility (EPR)".

The expected outcome of the workshop was a comprehensive set of recommendations for a stronger regulatory framework for the governance of e-waste management guided by the EPR principle.

3.2 Objectives and outcomes from the workshop

Five objectives were set for the consultation workshop. Below are the objectives and outcomes.

No.	Objective	Outcome
1	Raise stakeholder awareness about the issues surrounding e-waste and the process of developing a sound regulatory framework for managing this waste stream, in particular the application of the principle of EPR, and obtain stakeholders' opinions and recommendations on the subject.	The workshop saw the participation of more than 50 participants, who all recognized the importance of sound e-waste management and the producer's responsibility in the value chain. Participants looked at all the questions surrounding the issue of a well-organized EPR system, including a clear definition of the producer in the context of Uganda, the PRO ecosystem and the financing mechanism.
2	Define the scope and key terms and definitions of the e-waste regulatory framework and EPR system for implementation in Uganda.	The scope was defined as applying to all producers inventoried through the country with no exception (manufacturers, importers, assemblers, remanufacturers and reconditioners), distributors and consumers of EEE, as well as to all e-waste managers of different classes (such as collectors, transporters, dismantlers, refurbishers and recyclers).

(continued)

No.	Objective	Outcome
3	Scope specific regulation of managing e-waste, as well as the potential institutional framework for implementing e-waste management through EPR.	Uganda has developed a number of legal documents and policy instruments for managing the e-waste stream. As highlighted during the workshop, Uganda developed its National Electronic Waste Management Policy (2012) and its National E-waste Strategy (2014). Guidelines for E-waste Management (2016) were later developed. The National Environment Act (Act 5, 2019) and the National Environment Waste Management Regulations (2020) were also enacted. All those instruments are supportive of the EPR principle. The National Electronic Waste Management Policy (2012) is implemented through collaboration among stakeholder institutions from the public and private sectors. Currently, the implementing entity is the National Steering Committee on E-Waste Management.
4	Facilitate a coordinated plan across the Government, with input from the electronics Industry, to implement EPR.	A transparent legal regime shall be in place to allow an appropriately financed EPR system. After the legal framework is in place, there should be put in place administrative arrangements on how to collect and manage fees, through a PRO. An implementation plan shall be put in place after adoption of the legal framework.
5	Identify where the existing regulatory framework for e-waste management and EPR needs strengthening, and define the producer in the context of Uganda.	The existing legal and regulatory framework has been reviewed and suggestions made, notably with a focus on viable and implementable solutions. It has been suggested that e-waste management shall be done through, for example, a standalone regulation that encompasses all provisions from key definitions, key principles, financial mechanisms, technical requirements for e-waste managers, a licensing regime and sanctions for noncompliance.

Key recommendations from the workshop

The following is a summary of the recommendations that emerged from the participants' discussions in the two co-creation sessions that were organized during the workshop:

1. Participants agreed on how the producer should be defined in the context of Uganda: "Any person who places a product into the market should be considered as a producer; the product could be new or used; it could be introduced externally or internally, if it is introduced within the Ugandan market. The categories of producers are importers, domestic manufacturers (refurbishing, re-assembling, primary manufacturer), network operators such as for telecommunication networks, distributors/retailers, businesses and industries, government institutions, branders and individuals."

2. When it comes to retailers, the definition of producer needs to be clear enough, depending on their role in the EPR system, as opposed to pure producers or producers who are also retailers.
3. Participants suggested that the e-waste fund be abolished and replaced by a rebranded EPR scheme.
4. Determine the entity to manage the EPR scheme and implementation.
5. A hybrid system is seen as the best route, provided that the role of each stakeholder is clearly defined in a PPP model.
6. The contributions and obligations of the producers must be reconsidered.

The existing legal framework provides for three kinds of fees to be paid by the producers are ARF, electronic equipment levy and EPR schemes. Participants agreed that the payments should be unique and should not go to the e-waste fund as provided in the current regulations.

Participants also advised as follows:

1. E-waste should not be sold or auctioned to unlicenced recyclers. If a sale or auction occurs, it should only be to licenced facilities.
2. Some e-waste holders do hesitate before giving their old equipment to collectors and recyclers, as they believe e-waste has an intrinsic material value which can constitute profit through reselling the recovered materials. Therefore, incentives should be put in place but need not necessarily be in monetary exchange. For example, there can be an exchange for another product.
3. In order not to duplicate efforts, equipment from security bodies should be included in the EPR scheme. However, equipment containing confidential information should be cleaned before being sent to recyclers.

The fees to be paid by producers should include the following:

1. They should include a percentage of the initial cost, depreciation of product value and degree of recyclability. The fee cannot be uniform, even for the same product, because people have different values for the material in it that can be recycled/reused.
2. The percentage should not be too big compared with cost, as it could cause an increase in the net cost of the product.

Penalties should be high enough to discourage fraud, but also not too high so as to overpenalize small unintended mistakes, especially during the maturity of the EPR system.

Chapter 4: Recommendations and roadmap to key reforms to improve e-waste management under the EPR principle

4.1 Key improvements to e-waste management and EPR regulation

From the stakeholder consultations and the review of the existing policy, legal and regulatory framework, it is clear that Uganda has done a lot to put policies, laws and regulations in place. EPR has been recognized in many instruments but not implemented. The following are some key measures that should be included in new regulations to improve e-waste management:

1. Given the specific nature of e-waste, and the skills and resources needed to manage it properly, e-waste regulation should be a standalone regulation, separate from other waste regulations and covering all aspects of management.
2. The actual e-waste fund, supposed to be financed by the advanced recycling fees and the levy on communication services, should be abolished and replaced by a single rebranded EPR scheme. Producers should be required to pay a single contribution.
3. The fees to be paid by the producer should not be too high or impact the price to be paid by the end user of equipment. Nevertheless, a study should be taken into account to consider the cost of managing e-waste in Uganda and the volume of imports into the country, to better determine the pricing for producers in the EPR system for EEE.
4. Currently, e-waste management is funded by government ministries, departments and agencies, which allocate part of their budgets to e-waste management activities such as e-waste collection. It has been demonstrated that these resources are not sufficient to support e-waste management. There is a need to find ways and means to ensure sufficient funding for the sector, in particular by introducing the EPR scheme.
5. The producer should be clearly defined to cover all aspects.
6. The entity managing the EPR scheme (PRO) should be of a hybrid nature, designed under a PPP model.
7. The actual informal sector should be empowered to set the foundation of the formalization process. It should be recognized and included in the EPR system.
8. Access to e-waste has always been an obstacle to its collection and management. Access to e-waste should be facilitated by finding appropriate incentives (not necessarily monetary) for e-waste owners.
9. Collaboration between institutions is key in e-waste management and should be strengthened. The actual National Steering Committee on E-Waste Management should be empowered and given more space.
10. The role of the local government is paramount. A person who intends to engage in the business of collecting, transporting, storing, treating or disposing e-waste must obtain the written consent of the local government in which the waste management facility is to be located.

4.2 Proposed regulation model

It is clear from the previous sections that the implementation of the EPR principle is one of the tools that can boost e-waste management by providing financial resources from those who produce e-waste.

It was also noted that legal and policy instruments have been put in place to define and organize EPR, but the implementation part is lacking.

The consultations also suggested that EPR regulations should be standalone regulations and not lost in the general waste regulations, as is the case in Uganda today.

The proposal for a model EPR regulation, taking into account the opinions from the consultation and the mapping exercise has been set out in Annex C.

4.3 Summary and next steps

The expected outcomes of the study included a comprehensive set of recommendations for a stronger legal framework for the governance of e-waste management under the EPR principle.

Several improvements to the current legal and regulatory framework focused on enforcement of the agreed changes.

The EPR regulation should be a standalone regulation, rather than a regulation included in waste in general, in order to provide the most complete, comprehensive and results-oriented framework.

It has been suggested to have a clear definition of the producer, which should include all major producers.

Some key principles on which the new regulation should be based were discussed and agreed, such as financial sustainability, free competition, citizen participation, hierarchy of e-waste management, etc.

As the missing link is the lack of implementation and resource mobilization, participants strongly recommended changing the governance mode of EPR schemes. They agreed that the funds from EPR schemes should not go to the e-waste fund, as foreseen in the current regulations.

A clear licensing regime, with appropriate sanctions, should be established and enforced to allow free competition.

The PRO structure has also been identified as an important element in the EPR regulation. It has been suggested that it should be of a hybrid nature in a PPP model, with a clear role for each stakeholder.

Suggested next steps

The e-waste regulation review programme has been scheduled in two phases: phase one to determine the required revisions to the e-waste regulatory framework, and phase two for the preparation of the new regulation on EPR and its implementation roadmap. The following is the suggested roadmap for the process:

1	Drafting of (and consultation process on) a single two-part regulation on the licensing of e-waste management activities and the application of EPR in the management of e-waste.
2	Public sector consultation workshop to gather inputs on the articles of the draft regulation and to gather feedback on the first draft.
3	Private sector (producer, retailer and e-waste manager) consultation workshop to gather inputs on the articles of the draft regulation and to gather feedback on the first draft.

(continued)

4	Stakeholder validation workshop comprising both public and private sector stakeholders to validate the draft of the regulation.

Annex A: Mapping report of the existing e-waste management policy and regulatory framework in Uganda

No.	Legal framework	Contains
1	**National Electronic Waste Management Policy (2012)**	**In the 2012 National Electronic Waste Management Policy, the following provisions are related to the e-waste fund** **E-waste fund (2.6.6)** In order to ensure sustainability of the e-waste management process, an e-waste fund shall be established as specified in the National Information Technology (IT) Policy, 2011. To this end, the Ministry of Finance, Planning and Economic Development, the Ministry of ICT and National Guidance, together with other stakeholders, shall develop guidelines to provide for the following: (1) Establishment and governance frameworks for the e-waste fund; (2) Financing mechanisms for the e-waste fund, including collection of ARF on electronic equipment, as well as an e-waste levy on electronic communications and services, among others; (3) Criteria for eligibility of access to and utilization of the fund; and (4) Sustainability for the fund.

(continued)

No.	Legal framework	Contains
2	**National E-waste Strategy (2014)**	**In the 2014 National E-waste Strategy, the following actions are proposed (4.10) in relation to the setting up of an e-waste fund:** (1) Engage the Ministry of Finance, Planning and Economic Development on the set-up and management of the e-waste fund. (2) Prepare a detailed resource mobilization plan for implementation of the e-waste strategy. (3) Facilitate formation of e-waste collection schemes and regulate their functioning, with licence fees payable to the e-waste fund. (4) Facilitate the setting up of a PRO in liaison with the Ministry of Trade, Industry and Cooperatives. (5) Liaise with the Ministry of Finance, Planning and Economic Development and the Uganda Revenue Authority to review legislation to include an ARF for imported EEE. (6) Issue operational licences to all e-waste collectors and facility operators/owners and regulate their operations. (7) Advocate for inclusion of e-waste management in budgetary allocations at various levels of governance. (8) Engage manufacturers of various EEE brands to support e-waste recycling, treatment and disposal activities, and contribute to the e-waste fund.

(continued)

No.	Legal framework	Contains
3	**Guidelines for E-waste Management (2016)**	**The Guidelines define what every stakeholder should do to address the issue of e-waste (roles and responsibilities)** **Guidelines for producers/manufacturers** The Guidelines for manufactures are positioned to encourage design of products that facilitate source reduction, reuse and recycling; reduce toxicity; and increase recycled content. Producers and manufacturers need to: (1) Clearly label products for easy identification and show the contents of the product; (2) Implement individual take-back schemes; (3) Get organized into sectoral or subsector PROs that encompass EPR. **Guidelines for operation of producer responsibility organizations** PROs are committees that take responsibility for the end-of-life disposal of products being manufactured or assembled. They can be established with the support of all manufacturers largely responsible for the management of e-waste in an environmentally sound manner. Manufacturers should implement take-back policies for used devices to ensure that they do not turn into e-waste. **Financing the recycling of e-waste** Approaches to financing e-waste recycling depend on many factors, including State legislation and policies, social preferences, commodity prices and available recycling facilities. There are two main financing models for e-waste collecting and recycling efforts: EPR (otherwise known as manufacturers' responsibility) and ARF. The e-waste fund shall be generated as follows: (1) Based on a series of consultations with experts, producers, importers and recyclers related to e-waste generation and treatment, the fee and subsidy rates are set. The rates are adjusted according to the change in cost for collection and disposal of e-waste when needed but should be based on consultations with the relevant enterprises and associations. (2) Advance recycling fee: ARF is a fee paid by the customer at the point of purchase, depending on the size and type of the EEE. The fee is then deposited into a State recycling fund, which is used to pay qualified e-waste collectors and recyclers to cover the cost of managing e-waste.

(continued)

No.	Legal framework	Contains
4	**The National Environment (Waste Management) Regulations (2020)**	**Management of electrical and electronic waste is regulated under sections 40 to 44 of the Regulations (Part V)** **Section 40**: Prohibition of disposing e-waste in landfills or unauthorized places. **Section 41**: Obligation of take-back of e-waste, irrespective of volumes or sales period of the product. **Section 42**: Collection of electrical and electronic waste by local governments: (1) A local government may establish collection centres for the receipt of electrical or electronic waste generated within its jurisdiction. (2) A local government may charge a fee for the receipt of electrical or electronic waste from industries, commercial enterprises or institutions. (3) A local government may, in collaboration with other stakeholders, provide incentives to encourage members of the public to deliver electrical or electronic waste to a collection centre for proper management. (4) Where a local government establishes a collection centre in accordance with Subregulation (1), it shall liaise with the manufacturer or product steward to ensure safe storage and disposal of the electrical and electronic waste collected. **Section 43**: Obligation to provide information that electrical or electronic waste should be delivered to a designated collection centre and not be disposed of together with other types of waste. **Section 44**: Received e-waste by local government or product steward: (1) A product steward or local government that receives or collects electrical or electronic waste is not required to obtain a licence for the receipt or collection of that waste. (2) A product steward or local government shall ensure that: (a) The waste is exported or delivered to a waste handler authorized to handle that waste in accordance with the Act and these Regulations; (b) Records are kept of received quantities and types of e-waste. (3) A waste handler who receives electrical or electronic waste shall: (a) Ensure that the received electrical and electronic waste is secured; (b) Put in place a system for the segregation of the different materials and components of the waste; (c) Ensure that the hazardous materials and components in the waste are segregated from other waste and handled in accordance with these Regulations; (d) Ensure that the recycling target, if any, is met.

(continued)

No.	Legal framework	Contains
		The Regulations have defined EPR as follows: Extended producer responsibility means the responsibility of a producer for the entire life cycle of the product, including responsibility for take-back, recycling and final disposal of the product. **EPR and product stewardship (section 35)** (1) A person who develops, manufactures or processes a product shall, in accordance with section 98 of the Act and these Regulations, be responsible for: (a) Using the best available technology and process design that maximizes resource efficiency, and applies the waste management hierarchy in the production processes for the product; (b) Monitoring the product cycle from beginning to end, to prevent mixing of waste; and (c) Take-back of the product after its sale or use for environmentally safe treatment or disposal. (2) The responsibility for take-back of products referred to in Subregulation (1) extends to a product steward who imports, distributes or sells a substance, a preparation or other product. (3) The product steward shall establish and operate collection schemes and shall provide information for the effective return and collection of products or product waste. (4) For purposes of this Regulation, products that may be taken back include: (a) Consumer goods past shelf life; (b) Off specification products; (c) Products that are no longer needed by the user; (d) Discontinued products; (e) Restricted or prohibited products; (f) Glass, plastics, ceramics and associated waste; and (g) Electrical and electronic products destined for disposal in accordance with Regulation 44.
5	**The National Environment Act (Act 5, 2019)**	**Provisions related to waste management** Part VIII – Management of waste **Section 96:** Duty to manage waste (1) A person who generates or handles waste shall be responsible for its proper management in accordance with this Act, the principles of the circular economy referred to in section 5(2)(p), and the waste management hierarchy and measures prescribed by regulations. (2) The person responsible for managing waste under subsection (1) shall take such steps as are necessary to prevent pollution arising from such management and, where pollution occurs, to minimize the consequences of the pollution on human health and the environment.

(continued)

No.	Legal framework	Contains
		(3) A person engaged in petroleum activities under the Petroleum (Exploration, Development and Production) Act, 2013 or midstream operations under the Petroleum (Refining, Conversion, Transmission and Midstream Storage) Act, 2013 shall be responsible for the proper management of petroleum waste in accordance with the applicable law. **Section 98:** Extended producer responsibility and product stewardship (1) A person who develops, manufactures or processes any product shall minimize the waste generated from the production processes by adopting the following measures: (a) Improvement of production processes; (b) Monitoring the product cycle from beginning to end; and (c) Incorporating measures and technologies that deliver the best overall environmental outcome in the design and disposal of a product. (2) The Minister may, by regulations, require a person who manufactures, imports, distributes or sells a substance, preparation or other product to: (a) Take in the product back after use. Ensure that measures are taken to recover or dispose of the product in a manner prescribed by regulations; or (b) Ensure that the product is transferred, after it is taken in, to a person required by regulations to be responsible for its proper disposal.
6	**US 662:2008**	The standard is intended to form a basic reference document for acceptable used electronic apparatus and promote the safe usage and dumping of used electronic apparatus to safeguard the environment. The standard gives, for example, criteria for acceptance of used apparatus. The apparatus shall not be older than four years from the year of manufacture.
7	**US 735:2008**	The standard provides the essential elements and conditions for service points centres or workshops undertaking servicing or repairing of electrical equipment or devices.

Annex B: Proposed scope of products and excluded equipment

No.	Category	Description	Typical equipment
1	**Temperature exchange equipment**	Temperature exchange equipment is EEE with internal circuits where substances other than water – such as gas, oil, refrigerant or a secondary fluid – are used for the purpose of cooling and/or heating and/or dehumidifying.	Refrigerators or freezers, appliances that automatically supply cold products, air conditioners, dehumidification equipment, heat pumps, oil radiators and other temperature exchange devices using fluids other than water.
2	**Screens, monitors and equipment**	Screens, monitors and equipment containing screens having a surface greater than 100 cm^2. Screens and monitors are EEE intended to provide images and information on an electronic display – regardless of its dimension – such as cathode ray tubes (CRTs), liquid crystal displays (LCDs), light- emitting diode displays (LEDs) or other kind of electronic displays.	Screens; televisions; digital photo frames with LCD technology; monitors; tablets; and laptops, including notebook computers.
3	**Lamps**	Lamps are replaceable electrical devices that produce light from electricity, but they can also have other functions. They are intended to be used in luminaires, among other devices. These lamps usually have a base made of ceramic, metal, glass or plastic.	Straight, tubular, compact circular fluorescent lamps (not integrated, integrated, integrated cover, torque); fluorescent lamps of any other type; high-intensity discharge lamps, including pressure sodium lamps and metal halide lamps; low-pressure sodium lamps and LED lamps.
4	**Large equipment**	Any external dimension more than 50 cm EEE that is not allocated to categories 1, 2 or 3. Any external dimension is more than 50 cm.	Washing machines, dryers, dishwashers, gas stoves with electronic devices, electric stoves and ovens, electric hobs or hobs, electric heat plates, large luminaires (tube, ceiling, wall, floor, outdoor and/or indoor, etc.), large sound or image reproduction devices, musical equipment (except pipe organs installed in churches), knitting and sewing machines, large computers, large printers, copiers, large slot machines, large medical equipment, large surveillance and control instruments, large devices that supply products and money automatically, photovoltaic panels.

(continued)

No.	Category	Description	Typical equipment
5	**Small equipment**	No external dimension more than 50 cm EEE that is not allocated to categories 1, 2, 3, 4 or 6. No external dimension is more than 50 cm.	Vacuum cleaners, carpet sweeping machines, sewing machines, small luminaires (tube, ceiling, wall, floor, outdoor and/or indoor, etc.), microwave ovens, ventilation appliances, irons, toasters, electric knives, air fryers, electric kettles, watches, electric razors, scales, hair and body care devices, calculators, radios, camcorders, video recording apparatus, hi-fi equipment, musical instruments, small sound or image reproduction apparatus, electrical and electronic toys, sports equipment (cycling, diving, running, rowing, etc.), smoke detectors, heating regulators, thermostats, small power and electronic tools, small medical devices, small monitoring and control instruments, small apparatus supplying them automatically, small appliances with integrated photovoltaic panels.
6	**Small IT and telecommunication equipment**	No external dimension more than 50 cm EEE that is not allocated to categories 1, 2, 3, 4 or 5. Information equipment is equipment that can be used for collecting, transmitting, processing, storing and showing information. Telecommunication equipment is equipment designed to transmit signals – voice, video and data – electronically over a certain distance.	Mobile phones, including cell phones (devices that allow users to make and receive calls) and smartphones (mobile devices that combine the functions of a cell phone and a computer), smart devices, tablets, GPS, pocket calculators, routers, personal computers, printers, telephones and radio communication equipment.
Suggested equipment to be excluded from the scale			
1	Equipment which is necessary for the protection of the essential interests of security, including arms, munitions and war material intended specifically for military and security purposes.		
2	Electric vehicles and batteries.		
3	Large-scale stationary industrial tools and large-scale fixed installations.		
4	Non-road mobile machinery made available exclusively for professional use.		

Annex C: Purpose and scope of the regulation

The purpose of the regulation should be to define and regulate the responsibilities of the actors involved in the comprehensive management of electrical and electronic equipment (e-waste) within the framework of extended producer responsibility and to ensure that producers play an effective and efficient role in the management of e-waste throughout its life cycle.

The regulation shall apply throughout the national territory to producers (manufacturers, importers, assemblers, refurbishers and reconditioners), distributors, marketers and consumers of electrical and electronic equipment (EEE), as well as to waste managers of different classes (e-waste managers). The regulation shall comprise chapters, provisions and articles of an EPR regulation and should be divided into two parts: Part 1 on key definitions and principles, and Part 2 on e-waste managers.

Part 1: Key definitions and principles

1.1 Key definitions

The regulation should contain definitions of key terms to allow the interested parties to clearly determine their roles and responsibilities. Here are some of the proposed terms to be defined in the regulations:

Key terms to be defined	
• Collection	• Importer
• Collector	• Manufacturer
• Collection centre	• Producer
• Collection service fee	• Producer responsibility organization
• Dismantling	• Put on the market
• Distributor	• Recycling
• Electrical and electronic equipment	• Refurbisher
• Take-back	• Refurbishment
• Transporter	• Remanufacturing
• Waste electrical and electronic equipment E-waste	

1.2 Key principles

The regulation should consider the following as key principles in e-waste management:

1. Extended producer responsibility: The responsibility for the EEE should be managed throughout its life cycle, including the post-industrial and post-consumer phases. Producers have responsibility for the EEE.
2. Formalization of waste management activities: All waste management activities, whether carried out by individual or private entities, must have the corresponding authorizations, in order to avoid unfair competition and guarantee responsible management, through the application of measures to prevent detrimental health and environmental impacts.
3. Financial sustainability: All electronic waste management services, as well as environmental damage, must be paid for, including remediation, as an essential condition to guarantee

a quality service. Fees must be based on net cost recovery, including a differentiated rate per item category of each product or class of product.

4. Shared responsibility: It is recognized that e-waste is generated from the performance of activities that satisfy the needs of society, through value chains such as production, processing, packaging, distribution and consumption of products. Consequently, its comprehensive management is a social co-responsibility and requires the joint, coordinated and differentiated participation of government, producers (manufacturers, assemblers, importers, remanufacturers and reconditioners), distributors, consumers and users of by-products, as appropriate, under a scheme of market feasibility and environmental, technological, economic and social efficiency.
5. Hierarchy of waste management: For the purposes of the regulation, comprehensive e-waste management should be carried out in accordance with the following hierarchical order:
   (a) Prevent and minimize the generation of waste as a means to avoid pollution and optimize the use of resources.
   (b) Reuse, giving maximum use to e-waste, whether in the same production chain or in another parallel one, without the need to destroy or dispose of it.
   (c) Assess waste through different procedures, including separation, material recovery and energy use. Priority will be given to the use of recycling material over energy use, according to technical, environmental, economic and social criteria.
   (d) Treat the e-waste generated before sending it to final disposal, when required.
   (e) Dispose of the smallest amount of e-waste, in an environmentally appropriate manner.
6. Citizen participation: The State has the duty to guarantee and promote the right of the people who live in the country to participate in an active, conscious, informed and organized manner in decision-making and actions aimed at protecting the environment.
7. Promotion of green markets: Develop the market for environmental e-waste management, related services, and innovation and development of technologies, as a basis to stimulate private investment in e-waste management, as well as public investment for the development of the necessary infrastructure.
8. Promotion of circular economy: This principle responds to the challenges of current economic and productive growth, since it promotes a cyclical flow for the extraction, transformation, distribution, use and recovery of materials and energy from products and services available on the market. This will allow maximization of production efficiency to conserve the use of the environmental and natural resources, and to control the generation of waste to the greatest extent possible. Promoting circular economy is also one of the key principles of environmental management set out in the Environmental Act of Uganda, 2019.
9. Free competition: Currently, e-waste management is still regulated as a local government responsibility and prerogative in most instances. The proposed EPR scheme is shifting the burden from the public sector to the private sector in the PPP model. The operation of the management systems and the cooperation of managers may in no case undermine free competition.
10. Traceability: In e-waste management, this is the ability to track e-waste from its source to its final destination. Knowing the quantities and location of e-waste helps waste managers to identify the source, its composition and the impact it has on the environment. Traceability is crucial in ensuring that e-waste is managed in a sustainable and responsible manner. It helps to monitor the impact of waste on the environment, which is important in developing policies to protect the environment.
11. Research, development and innovation: Parties interested in the management of e-waste have the responsibility of promoting research, development and innovation through the

design and implementation of strategies aimed at the creation, transfer and appropriation of various technologies that allow prevention in the generation, reduction and reuse of waste electrical and electronic equipment.

Part 2: E-waste managers

2.1 The licensing regime for e-waste managers

In order to ensure free competition in the e-waste management subsector, a solid licensing regime should be established.

The licensing regime shall be introduced for any person carrying out activities related to e-waste collection, transportation, dismantling, recycling and refurbishing, who shall hold an appropriate licence issued by the regulatory authority.

The Authority shall grant three types of licences:

1. Collection and transportation licence;
2. Dismantling service licence;
3. Treatment – refurbishment and/or recycling service licence.

2.2 General requirements for licence application

Any company or cooperative seeking to carry out activities of collection, transportation, dismantling, refurbishment and recycling services shall submit the following:

1. Application letter;
2. Application form filled out by the applicant;
3. A copy of domestic registration certificate or a legal personality;
4. Proof of payment of application and licence fee;
5. An appropriate storage, dismantling, refurbishment or recycling facility.

2.3 Technical requirements of e-waste collection and transportation

The applicant for e-waste collection and transportation license shall comply with the following:

1. The applicant shall ensure segregation at the source of e-waste with other types of solid waste and handle them separately in accordance with national standards.
2. E-waste containers shall not be overfilled and shall be appropriately covered and labelled.
3. The containers shall be immediately replaced once they are worn out.
4. There shall be a collection point adequate to serve the geographical area and the volume of separated e-waste tonnage captured.
5. The applicant shall provide a copy of an environment impact assessment certificate, if the applicant intends to construct a storage facility.
6. E-waste managers must adhere to international standards and best practices existing, as well as equivalent treatment conditions.
7. The applicant shall comply with technical specifications for collection and transportation.

2.4 Technical requirements of e-waste dismantling

Any person who wishes to dismantle e-waste shall:

1. Have an environmental impact assessment undertaken before establishing an e-waste facility;
2. Conduct an environmental audit for existing facilities;
3. Have a state-of-the-art facility complying with all the environmental standards in terms of emissions, effluents, noise e-waste treatment and disposal.

2.5 Technical requirements for e-waste treatment – refurbishment and/or recycling

Any person who wishes to establish a refurbishment or recycling facility shall:

1. Have an environment impact assessment undertaken before establishing an e-waste facility;
2. Have an environmental audit for existing facilities;
3. Have a state-of-the-art facility complying with all the environmental standards in terms of emissions, effluents, noise e-waste treatment and disposal;
4. Comply with technical specifications for establishment of a refurbishment and recycling facility.

2.6 Validity of the licence

A licence for the provision of e-waste management services shall be granted for a renewable period (generally five years).

2.7 Licence renewal

The licensee shall apply for a license renewal within two months before the expiration of the existing licence, in submitting the following documents:

1. Application letter;
2. Copy of the existing licence;
3. Proof of payment of regulatory fees for the previous year.

2.8 Licence transfer

The transfer of licences – including the direct or indirect sale, assignment, conveyance, lease or other transfer of assets or activities to a different individual or institution – shall be subject to a prior written approval of the Authority.

2.9 Revocation or suspension of the licence

The regulatory authority may revoke a licence before its expiration due to:

1. Licensee failure to comply with licence terms and conditions;
2. Licensee abandonment of licence activities;

3. Failure of the licensee to provide the regulatory authority with monitoring and reporting data required for the license, or failure to cooperate with the regulatory authority inspection and audits;
4. Licensee submittal of false or deliberately misleading data or information to the regulatory authority in response to authority requests or in response to the regulatory authority monitoring, reporting, inspection, or audit requirements.

2.10 Licence fees

The licence for e-waste management shall be issued upon the payment of the application and licence fees as determined in the regulation.

Office of the Director
International Telecommunication Union (ITU)
Telecommunication Development Bureau (BDT)
Place des Nations
CH-1211 Geneva 20
Switzerland

Email: bdtdirector@itu.int
Tel.: +41 22 730 5035/5435

Office of the Deputy Director
Operations Coordination Department (DDR)
Place des Nations
CH-1211 Geneva 20
Switzerland

Email: bdtdeputydir@itu.int
Tel.: +41 22 730 5131

Digital Networks and Environment Department (DNE)
Email: bdt-dne@itu.int
Tel.: +41 22 730 5421

Digital Knowledge Society Department (DKS)
Email: bdt-dks@itu.int
Tel.: +41 22 730 5900

Projects, Partnerships and Digital Skills Department (PPS)
Email: bdt-pps@itu.int
Tel.: +41 22 730 5447

Africa

Ethiopia

International Telecommunication Union (ITU) Regional Office
Gambia Road
Leghar Ethio Telecom Bldg. 3rd floor
P.O. Box 60 005
Addis Ababa
Ethiopia

Email: itu-ro-africa@itu.int
Tel.: +251 11 551 4977
Tel.: +251 11 551 4855
Tel.: +251 11 551 8328
Fax: +251 11 551 7299

Cameroon

Union internationale des télécommunications (UIT)
Bureau de zone
Immeuble CAMPOST, 3e étage
Boulevard du 20 mai
Boîte postale 11017
Yaoundé
Cameroon

Email: itu-yaounde@itu.int
Tel.: + 237 22 22 9292
Tel.: + 237 22 22 9291
Fax: + 237 22 22 9297

Senegal

Union internationale des télécommunications (UIT)
Bureau de zone
8, Route du Méridien Président
Immeuble Rokhaya, 3e étage
Boîte postale 29471
Dakar - Yoff
Senegal

Email: itu-dakar@itu.int
Tel.: +221 33 859 7010
Tel.: +221 33 859 7021
Fax: +221 33 868 6386

Zimbabwe

International Telecommunication Union (ITU) Area Office
USAF POTRAZ Building
877 Endeavour Crescent
Mount Pleasant Business Park
Harare
Zimbabwe

Email: itu-harare@itu.int
Tel.: +263 242 369015
Tel.: +263 242 369016

Americas

Brazil

União Internacional de Telecomunicações (UIT)
Escritório Regional
SAUS Quadra 6 Ed. Luis Eduardo Magalhães,
Bloco "E", 10º andar, Ala Sul (Anatel)
CEP 70070-940 Brasilia - DF
Brazil

Email: itubrasilia@itu.int
Tel.: +55 61 2312 2730-1
Tel.: +55 61 2312 2733-5
Fax: +55 61 2312 2738

Barbados

International Telecommunication Union (ITU) Area Office
United Nations House
Marine Gardens
Hastings, Christ Church
P.O. Box 1047
Bridgetown
Barbados

Email: itubridgetown@itu.int
Tel.: +1 246 431 0343
Fax: +1 246 437 7403

Chile

Unión Internacional de Telecomunicaciones (UIT)
Oficina de Representación de Área
Merced 753, Piso 4
Santiago de Chile
Chile

Email: itusantiago@itu.int
Tel.: +56 2 632 6134/6147
Fax: +56 2 632 6154

Honduras

Unión Internacional de Telecomunicaciones (UIT)
Oficina de Representación de Área
Colonia Altos de Miramontes
Calle principal, Edificio No. 1583
Frente a Santos y Cía
Apartado Postal 976
Tegucigalpa
Honduras

Email: itutegucigalpa@itu.int
Tel.: +504 2235 5470
Fax: +504 2235 5471

Arab States

Egypt

International Telecommunication Union (ITU) Regional Office
Smart Village, Building B 147,
3rd floor
Km 28 Cairo
Alexandria Desert Road
Giza Governorate
Cairo
Egypt

Email: itu-ro-arabstates@itu.int
Tel.: +202 3537 1777
Fax: +202 3537 1888

Asia-Pacific

Thailand

International Telecommunication Union (ITU) Regional Office
4th floor NBTC Region 1 Building
101 Chaengwattana Road
Laksi,
Bangkok 10210,
Thailand

Email: itu-ro-asiapacific@itu.int
Tel.: +66 2 574 9326 – 8
+66 2 575 0055

Indonesia

International Telecommunication Union (ITU) Area Office
Gedung Sapta Pesona
13th floor
Jl. Merdeka Barat No. 17
Jakarta 10110
Indonesia

Email: bdt-ao-jakarta@itu.int
Tel.: +62 21 380 2322

India

International Telecommunication Union (ITU) Area Office and Innovation Centre
C-DOT Campus
Mandi Road
Chhatarpur, Mehrauli
New Delhi 110030
India

Email:
Area Office: itu-ao-southasia@itu.int
Innovation Centre: itu-ic-southasia@itu.int
Website: ITU Innovation Centre in New Delhi, India

CIS

Russian Federation

International Telecommunication Union (ITU) Regional Office
4, Building 1
Sergiy Radonezhsky Str.
Moscow 105120
Russian Federation
Email: itu-ro-cis@itu.int
Tel.: +7 495 926 6070

Europe

Switzerland

International Telecommunication Union (ITU) Office for Europe
Place des Nations
CH-1211 Geneva 20
Switzerland

Email: eurregion@itu.int
Tel.: +41 22 730 5467

International Telecommunication Union
Telecommunication Development Bureau
Place des Nations
CH-1211 Geneva 20
Switzerland

ISBN: 978-92-61-39671-8

Published in Switzerland
Geneva, 2025

Photo credits: Adobe Stock