E-WASTE MANAGEMENT IN MALAWI

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Background of Development of E-Waste Strategy

- Reform project under MACRA
- Task Force Established – MACRA & EAD
- Technical Assistance from International Telecommunications Union (ITU)
- Consultant Juan Roldan – assisted through a multi-stakeholder approach
- Strategy developed by March 2018.

What is E- Waste ?

- E- waste refers to discarded electrical and electronic equipment (EEE) i.e. phones tablets, TV, computers, fridges, cookers etc.

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Why Manage E- Waste?

- Exponential growth on EEE that later become e-waste
- Negative impact on human health and environment if not properly treated / discarded i.e. Improper disposal of e-waste can lead to releasing of toxins that can contaminate soil, water, air and danger to human health as it can cause cancers, irritations, brochitis, liver problems etc.

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E-waste As the Fastest growing waste stream but also the richest above ground mine

- 67 million metric tons of electrical and electronic equipment were put on the market in 2013
- 53 million metric tons e-waste were disposed of worldwide in 2013.
- For every one million cell phones that are recycled, 16 tons of copper, 350 kilos of silver, 34 kilos of gold and 15 kilos of palladium can be recovered
- Global industry trends: >50 % of the iron, copper, aluminum, lead and PGM coming from “urban Mining”

Challenges of E- Waste

- High Volume of e-Waste (the highest growing stream of urban solid waste generation),
- Limits or restrictions to dump e-waste with Municipal Solid Waste in Landfills,
- Growing number of Product Types,
- Heavy, Bulky and complex Waste to process,
- Requires special logistics and new handling facilities, with new e-waste processing Technology
- Most of the end users keep the e-scrap in warehouses, garages or attics;

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Challenges …. contd

- So a Challenge is how to seduce end users to turn back e-waste to Recycling Systems;
- Full equipment or spare parts & pieces are regulated as Hazardous waste or not allowed to be dumped in municipal landfills in many countries
- New e-Waste Plants are Required in Developing countries
  - Existing facilities not designed to handle or
  - Need special equipment, new process, and training to be managed
- World is requiring **"urban mining"** to satisfy t materials demand of the Digital Era

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Main Policy Objective for E- waste Management

- Malawi's main objective for e-waste strategy is to promote a safer environment and protect human health through effective , efficient and responsible e-waste management practices that will allow for sustainable development.
- Therefore need to identify an e- Waste Management System that attain this.

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Considerations for An E-Waste Management System

- EEE waste volumes
- Financial resources
- Human resources (E- Waste)
- Availability of refineries / disposal plants
- Governing legal framework

Proposed E-waste Management System for Malawi

- **“Take back System”** -

Components

- ❖Rules
- ❖Operation
- ❖Financing
- ❖Transboundary Movements
- ❖Education & Awareness

Specific Policy Objective

- Establish a ***phased approach*** to including EEE into the e-waste management system. The initial phase will include specific e-waste categories and products and, once the e-waste management system is in place and running smoothly, additional e-waste categories and products should be incorporated
- Include the ***Extended Producer Responsibility principle (EPR)*** in the regulatory framework. Since there are no manufacturers in Malawi, EPR should apply to importers of EEE and EEE parts and components
- Implement a ***national take-back system to collect***, process, i.e., basic dismantling, and export e-waste to locations with adequate facilities and tools, such as refineries, to further treat ewaste, consistent with Malawi's international obligations
- Provide a ***management structure and implement a financing mechanism*** for the sustainability of the e-waste take-back s

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Objectives … Contd

- ***Create and implement awareness and education programs*** to sensitize Malawians to the importance of responsible e-waste treatment, from purchase until the EEE becomes e-waste (i.e., policies to reduce, reuse and recycle).
- ***Comply with international treaties and regulations,*** primarily the Basel Convention, to both export e-waste and avoid the import of second hand or used EEE near its EoL or with obsolete technology.
- ***Create quality jobs in the recycling sector*** while ensuring compliance with technical standards for the protection of the environment and those involved in the collection, transportation and processing of e-waste.

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E- Waste Strategy

- Scope of products
- Management of the e-waste take-back system
- Financing model for the e-waste take-back system
- E-waste collection and transportation
- E-waste storage and manual dismantling
- Education and awareness
- E-waste monitoring and enforcement
- Transboundary flow of e-waste

E-waste Policy and Strategy for Malawi

Initial scope of products

- Screens
- Small IT

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E-waste Policy and Strategy for Malawi

Management of the e-waste take-back system
Government (e-waste technical committee):

- Environmental Affairs Department
- Ministry of Information and Communications Technology
- Malawi Communications Regulatory Authority
- Ministry responsible for local government
- Ministry of Civic Education, Culture and Community Development
- Malawi Revenue Authority
- Malawi Bureau of Standards

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E-waste Policy and Strategy for Malawi

Management of the e-waste take-back system

Third-party Organization:

- Designing the take-back system, i.e., the collection, transportation, dismantling, shredding and storage of e-waste, and its eventual export
- The TPO may decide to directly collect, transport and store e-waste, in which case it will need to apply for a license, or it could hire other third parties to do so through a competitive, open, fair and transparent process
- Funding the collection and transportation of e-waste, either by performing those tasks for itself or enlisting licensed e-waste collectors and transporters, and funding the operating expenses, costs and security of the storage facility
- Funding e-waste education and awareness programs and activities of their own initiative and from obligations imposed by the government

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E-waste Policy and Strategy for Malawi

Management of the e-waste take-back system

Third-party Organization:

- Composed of EEE importers that represent greater than or equal to 90% of all EEE imported to Malawi, including EEE parts
- Developing educational and awareness programs on e-waste disposal methods for consumers, jointly with the government
- Setting initial and periodic goals for e-waste collection and exports
- Establishing the financing system of the TPO based on the market share of revenue for each importer that is part of the TPO
- Developing the administrative framework of the TPO, e.g., the rules that will govern the TPO, its organogram, TPO management and staff and their functions and responsibilities

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E- Waste Policy and Strategy for Malawi

Financing of the E-waste Take-Back System

- The financing of the system must be the responsibility of the TPO
- Importers of EEE that comprise the TPO should be required to meet the costs associated with the collection, transportation, storage and exports of e-waste
- Importers will have the incentive to minimize the increase in the price of EEE to finance the take-back system so as not to negatively affect sales and profits
- Likewise, the design of the take-back system management will need to be more efficient and effective, so costs do not rise above an acceptable level
- Finally, importers will internalize the costs of the take-back system through efficiently pricing EEE to the consumer since competition in the market will discipline prices

E- Waste Policy and Strategy for Malawi

Collection and Transportation Licensing

- All three forms of e-waste collection, permanent drop-off locations, drop-off events and door-to-door pickup (schedule), should be implemented by various stakeholders
- All three types of e-waste collection must comply with the technical standards developed by the government
- E-waste transportation should be performed by the same entity responsible for collection and it should be done in compliance with the statutory standards and specifications developed by the government

E- Waste Policy and Strategy for Malawi

Storage and Manual Dismantling

- Storage facilities for e-waste should be provided by the government in, at least, the two most populous cities of Malawi, Blantyre and Lilongwe
- Management and administration of such facilities, including operating costs and security, should be responsibility of the TPO
- The location selected for such facilities must allow for future expansion, if necessary, and comply with technical standards developed by the government
- Manual dismantling should focus on the basic separation of e-waste device parts and components, e.g., plastic, circuit boards, screens, etc.
- Allow also for mechanical shredding for some components into smaller parts

E- Waste Policy and Strategy for Malawi

Education and awareness

- The government must develop a communication strategy to raise awareness on how to handle e-waste and the consequences of improper disposal
- A basic explanation of e-waste, including its definition and some examples;
- The importance of properly disposing of e-waste and the consequences for not doing so on the environment and human health;
- Action that should be undertaken by consumers to decrease the generation of e-waste (3R policy: Reduce, Reuse, Recycle);
- What to do with e-waste, i.e., the means available for households to properly dispose of e-waste; • Information on e-waste drop-off locations, drop-off events and the contact numbers for e-waste pickup.

E- Waste Policy and Strategy for Malawi

Monitoring and enforcement

- The government must overlook the monitoring process at each stage of e-waste generation, mainly including:
- Households, government and businesses: government should monitor whether information on how to properly dispose e-waste is reaching households, governments and businesses
- E-waste collection, transportation and storage: government should monitor that e-waste is being collected, transported and stored in compliance with technical standards
- EEE imports and e-waste storage and exports: government should periodically monitor the imports of EEE, the amount of e-waste initially stored and later exported
- It is important to monitoring whether e-waste collection targets are being met and provide data for making any necessary adjustments to the overall take-back system to comply with such targets

E- Waste Policy and Strategy for Malawi

Monitoring and enforcement

- Based on the monitoring of compliance with technical standards, the government must have enforcement capability, e.g., the ability to impose penalties and rescind licenses it granted.
- Regarding the TPO, importers that do not comply with regulations could be banned from importing EEE

E- Waste Policy and Strategy for Malawi

Transboundary Flow of E-waste

- Comply with the international treaties on hazardous waste by exporting all e-waste to legally established extraterritorial refineries for further treatment
- Issue an e-waste regulation under the Environment Management Act, containing provisions that implement the Basel Convention's framework of consents and permissions with respect to the transboundary flow of e-waste
- Malawi must also determine the level of e-waste processing that will occur domestically vis-à-vis outside of the country so that it can streamline the required export processes to the countries with the requisite e-waste processing facilities
- It is key for Malawi to implement international cooperation agreements with the objective of facilitating e-waste exports and complete e-waste processing

E- Waste Policy and Strategy for Malawi

Transboundary Flow of E-waste

- Ban the import of all hazardous waste from developed countries to comply with the Basel Ban Amendment
- Ban all imports of second hand or used EEE that depend on obsolete technologies (e.g., CRT screens, analogue TV sets, first generation mobile phones, and other similar EEE)
- Ban all imports of second hand or used EEE that have been in use longer than a specific number of years, i.e., could potentially become e-waste in the short-term • Increase monitoring and surveillance of EEE imports into Malawi to restrict and penalize the wrongful import of banned second-hand, or used, EEE. • Block the import of certain products containing mercury (e.g., particular types of batteries and fluorescent lamps), and closely monitor the import of EEE containing mercury (e.g., LCD monitors)

CONCLUSION

- The E- Waste Strategy is now recognized as a best practice and has been published by the ITU.
- Other countries have copied and started implementing its recommendations
- Malawi needs to fully implement its strategy