Possible mechanisms for harmonizing regional strategies and efforts in sustainable management of e-waste

By

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Advancement in ICT sector is playing a critical role in improving productivity and efficiency in service delivery.

Connect 2020 agenda complements infrastructure in achieving SDGs 2030.

Smart Africa Manifesto transforms the region into a digital world.

- ICT mainstreamed in the public operations
- Computer for schools
Increased population is exposed to hazardous materials through inappropriate management practices associated with handling, storage, recycling and disposal of e-waste.

Contamination of environment and human health through disposal (Dadora Dumpsite Kenya)

Contamination through storage (Stockpiles)
E-waste contains valuable and potentially hazardous materials

Contamination of environment through open burning (poor methods of recycling)

Contamination of environment through poor methods of recovery
Life cycle of E-waste along value chain is very complex

Sales of E-equipment → Use → Repair → Re-use

Stockpiles

E-waste generation

Recycling of e-waste

Disposal

Importation of E-equipment
Draft regulation on sound management of e-waste (2013) in Kenya

Provides a detail framework for:

- Identification
- Collection
- Sorting/segregation & temporal storage
- Transportation
- Recycling
- Disposal
Responsibilities of e-waste management along the supply chain

- Generators
- Collectors
- Importers/producers/manufacturers
- Repairers
- Transporters
- Recyclers
### Some of associated challenges of sound environmental management of e-waste a cross the region

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<th>Challenge</th>
<th>Description</th>
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<td>Limited implementation of sound management of e-waste under guidance of</td>
<td>Basel, Rotterdam, Stockholm and Bamako Conventions due to inadequate resources</td>
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<td>Inadequate enforcement of extended producer responsibility programme</td>
<td>based on the complexity of supply chain of e-waste</td>
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<td>Limited accessibilities to services and application of best available</td>
<td>technologies and practices in remote areas</td>
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<td>E-waste is potentially hazardous and have some economical value</td>
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A survey in Kenyan public institutions on challenges facing sound management of e-waste (2014)

- Lack of policy and legislation: 32%
- Others: 1%
- Cost: 6%
- Lack of infrastructure within public institutions: 17%
- Lack of recycling possibilities: 44%
The willingness of public institution to pay for e-waste management was at 5% if proper disposal is guaranteed.

Take-back or implementation of Extended Producer Responsibility may be an appropriate solution to this.
| Limited national e-waste policies and legislation to set standards, guidelines and related responsibilities |
| Lack of capacities and poor record keeping on stocks and imported products |
| Lack of reliable information on relevant stakeholders involved e-waste |
| Limited recovery of valuable materials from e-waste |
| Inconsistent data on stocks and e-waste generation from the stakeholders |
| Lack of disposal options for hazardous components of e-wastes |
| Limited public awareness on e-waste and its potential risks to the environment and human health |
| Limited of infrastructure for collection and recycling of e-waste |
Significance of harmonization of efforts and strategies

Provides comprehensive overview of global e-waste data, trends and related challenges

An indication of recycling potential to recover secondary resources and setting of environmental targets

Provides policymakers with detailed information to track progress and identification of challenges in the region to achieve SDGs

Enhances information sharing to link the challenges to potential solutions

Reduces duplication of efforts in the region and enhances trade in settings that have limited resources
Possible mechanisms for harmonization of efforts and strategies

Regional capacity-building workshops to enhance cooperation in establishment and formalization of e-waste recycling facilities

Collaboration with key stakeholders: the driving force of policy and regulations, CSR programmes, take back programmes, large global ICT manufacturers, agenda 2020, Smart Africa Manifesto, EACO, UNIDO, UNEP

Capacity building and training in setting standards to promote best available practices and technologies in management of e-waste, and recycling opportunities in the region

Establishing social-economic aspects in increasing collection of e-waste and strengthening regional capacities to monitor and control transboundary movements of e-waste
Establishing elaborate financial mechanism and resource mobilization through BRS/B, UNEP, Connect 2020 agenda and SDG 2030, Smart Africa Manifesto and EACO

- Supporting collaborative e-waste projects, programmes and efforts as well as disseminating findings across the region
- Development of e-waste implementation plan, setting standards, targets and commitments
- Participating in international arena in e-waste related exchange programmes
- Addressing challenges across the region and converting e-waste into a resource
- Supporting comprehensive public awareness programmes and establishing repository for information sharing
Some collaborative efforts

- UNEP focused on volumes of personal computers, mobile phones, TVs generated in Tanzania and Kenya
- National Universities and Research Institutions have carried out some baseline research to quantify e-waste
- Series of National awareness programmes and collection of e-waste have been documented mainly in urban areas with involvement of key stakeholders
- EACO (2016) established National and Regional Steering Committees to have Implementation Plan and Establish Regional Strategies on Sound Management of Related E-waste
Donation of collection container for laptops, mobile phones, USBs, CDs, DVDs by Safaricom in Kenya
Integrated with the Existing Environmental Sound Management E-waste Capacities:

- Adopt Appropriate Take Back Scheme
- Warranty/Offering Free after Sell Services, Repairs and Technical Advise
- Increasing Retail Outlets for Electronic Equipment that Serve as Collection Centres
- Collaborations with Regulators, Researchers, Academia, Policy Makers, Suppliers, Collectors, Consumers, UNEP, NGOs among other Key Stakeholders

- Maximum Collection of E-waste
- Partnership with EE Importers/Suppliers/Distributors, and E-waste Sellers
- Diverse Mass Media for Wider Coverage
- Capacity Building and Funding

Diverse Mass Media for Wider Coverage
What is needed

- Generation of comprehensive reliable and comparable data on volumes of e-waste to expand the scope across the region
- Close co-ordination, commitment and involvement of key stakeholders along life cycle of e-waste management
- Enforcement of existing legislation, while developing comprehensive regional regulatory framework for e-waste recycling
- Building existing capacities at all levels of participation while taking into consideration the specific legislation, technical, economic, financial, environmental, social and cultural factors
- Establish suitable strategies that will adopt take back schemes alongside massive awareness
Conclusion

- Comprehensive regional regulatory framework for e-waste recycling and extended producer responsibility targeting maximum collection at all levels

- Designing suitable strategies in tracking life cycle of e-waste in collaboration with relevant stakeholders for the development of environmentally sound management of e-waste

- Capacity building in the application of Global E-waste Monitor 2017 tool kit to establish trends in e-waste management in the region
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