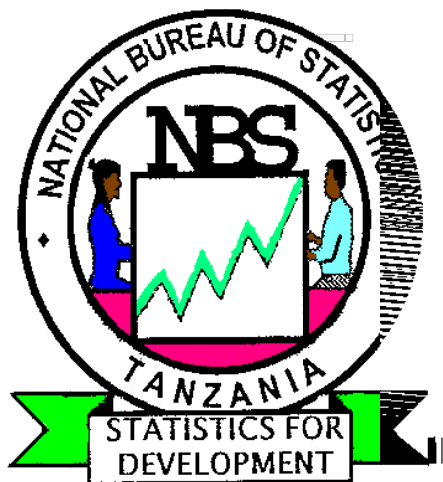




Tanzania's Experience in Compilation of e-waste Statistics

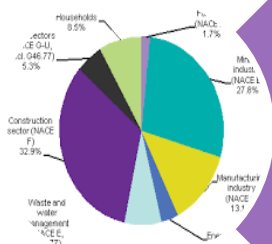


Presented by: Presented by: Ruth Minja, Principal Statistician, NBS - Tanzania
Workshop: Sixth Meeting of the Expert Group on Environment Statistics - New York
Date: 21-23 May 2019
Venue: Secretariat Building Room 2727

Contents



Background Information



Compilation of e-waste
Statistics

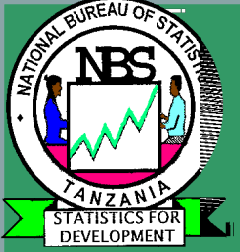


Challenges,
Recommendations and the
Way Forward

1. Background Information

- Tanzania's economy is growing at the rate of 7% and the **power of modern technology is immense**
- **The indiscriminate use of technology** has altered the environment in ways that were **unimaginable** only a few decades ago
- **There is rapid growth of IT sector** in the country which contributes to the pace of e-waste generated. *(e.g. Percentage of households having a mobile phone doubled from 25 % in 2007 HBS to 57% in 2011/12 HBS)*



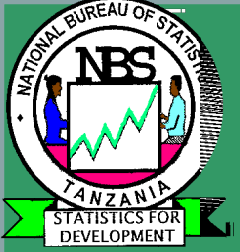


National Bureau of Statistics Tanzania



1. Background Information

- Tanzania is a consumer and a destination of **global flows of used EEE which became obsolete in a very short period** of time and contribute to the rapid growth of e-waste stream
 - There is no effective monitoring, sound e-waste management and regulation in Tanzania
 - Increasing demand and use of e-products without sound e-waste management is a challenge as many electronic products contain **both hazardous to human health as well as valuable materials**
 - The presence of valuable recyclable components in e-waste **attracts informal and unorganized sector** which are unsafe and environmentally risky -- *left piles of unattended end of use EEE both in streets and in office stores*

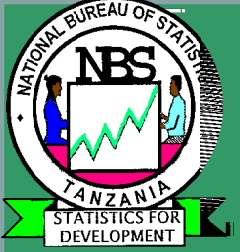


National Bureau of Statistics Tanzania



1. Background Information - - Institutional framework

- **The Environmental Management Act No. 20 of 2004** sets up the institutional framework for environmental management in the country
- The key institutions involved in the general waste management in Tanzania are the **Vice President's Office; Division of Environment and the Local Government Authorities**
- The Act also provides for the establishment of the **National Environmental Advisory Committee (NEAC)** which advises the Minister responsible for environmental and other sector ministries on matters related to environment degradation including waste management

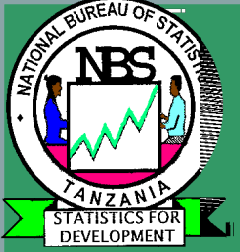


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1. Background Information - - Legislation

- Tanzania has **no specific e-waste management legislation**.
- E-waste is managed through the **solid waste and hazardous regulations** prescribed under the Environmental Management Act (2004).
 - Part VIII of the Environmental Management **(Hazardous Waste Control) regulations, 2009** of the Environmental Management Act (2004) addresses the issue of **electrical and electronic waste**.

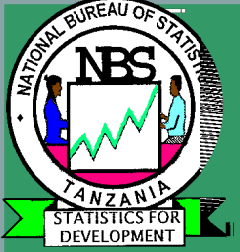


National Bureau of Statistics Tanzania



1. Background Information - - International Conventions

- Tanzania is **party to a number of international and regional Convention** related to environmental management issues
 - **The Basel Convention** on the Control of Transboundary Movement of Hazardous Wastes and their Disposal and;
 - **The Bamako Convention** on Ban of the Import into Africa and Control of Trans boundary movement and Management of Hazardous wastes within Africa.



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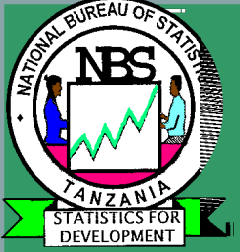
2. Compilation of e-waste Statistics

- NBS is mandated to coordinate production and dissemination of Statistical Information within the NSS in Tanzania
- Compilation of Environment Statistics including solid waste is done in close collaboration with the NTWG
 - Members for NTWG were drawn from Government MDAs responsible for environment issues
- In addition, NBS has Regional Statistics Offices in all regions with **Statisticians working close with the Regional Administrations and LGAs** production of official statistics

2. Compilation of e-waste Statistics – Support from UNU

- NBS received **training and Technical Support** from UNU to Strengthen compilation of e waste statistics in the country.
- UNU developed **three main tools to support countries** in compilation of e-waste statistics:-
 - i. The E-waste statistics Guidelines on classification, reporting and indicators 2015
 - ii. The EEE Put on Market Tool and
 - iii. The "UNU E-waste calculation tool" and





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2. Compilation of e-waste Statistics – Support from UNU

The E-waste statistics Guidelines

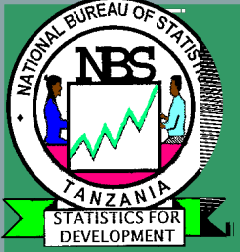
- *provides for a comprehensive Framework on e-waste statistics to compile e-waste statistics that are comparable between countries worldwide*

The EEE Put on Market Tool

- *help the user to prepare, adjust and convert the available country data on Put on Market (POM) of EEE prior to inserting it in the E-waste Generated Tool*

UNU E-waste calculation tool

- *is an integral part of the methodologies for the calculation of the weight of electrical and electronic equipment (EEE) placed on the market, imported, exported, collected and recycled*

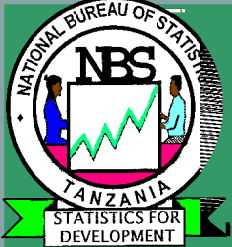


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2. Compilation of e-waste Statistics – Support from UNU

- The UNU E-waste calculation tool is **customised for each country** in the world **except** for the countries in the European Union, that have developed their own E-waste calculation tools
- **The tool can be used in multiple ways:-**
 - Overwrite the pre-populated data of sales, lifespan and rerun the calculations with real country data
 - Insert data on imports, exports of e-waste
 - Insert data on collected and recycled amounts of e-waste
 - Perform forecasts on e-waste generated



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2. Compilation of e-waste Statistics – Support from UNU

Tanzania Experience in using the Tool – General Overview

October, 2017; November,
2018 and May, 2019

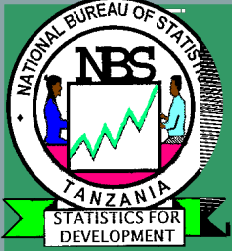
January – June, 2019

Training

**Data
Collection**

**Data
Processing
and report
writing**

Training, coordination, implementation, and technical development & backstopping



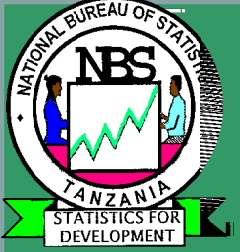
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2. Compilation of e-waste Statistics – Support from UNU

Tanzania Experience in using the Tool – Data Collection

- Required data in the Calculations tool:-
 - **POM**
 - Import of WEEE
 - Export of WEEE
 - WEEE Collected and Recycled
- *The main data source used to calculate e-waste generated is from **administrative data on importation of EEE (POM)** from Tanzania Revenue Authority*



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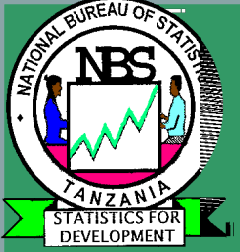
2. Compilation of e-waste Statistics – Support from UNU

Tanzania Experience in using the Tool – Classification

- Options to select different classifications:-
 - EU-6 classifications: **6 categories**
 - EU-10 classifications: **10 categories**
 - UNU classifications: **54 categories**

- Once the user has entered into the tool the POM data for a year of reference, the tool can calculate the quantity of WEEE generated.

- Results can be exported to a separate excel file named **“Result.xlsx”** for further analysis



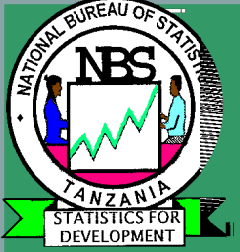
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2. Compilation of e-waste Statistics – Support from UNU

Tanzania Experience in using the Tool – Challenges and Recommendations

- The parameters of the products lifespan (*Weibull distribution*) used in the tool are based on European Countries which **might not be the same in Tanzania for some EEE POM;**
 - Parameters for life span are based on **new items** while large proportion of EEE importation in Tanzania **are second hand goods**
 - **The tool does not adjust the quality for new items;** e.g. EEE goods from China in Tanzania are of low quality and have shorter life span than goods from other parts of the world
 - **Tanzanians' repair** their EEE good several times before they became waste which affects the life time
 - ***Need to conduct case study in the country to update the parameters***



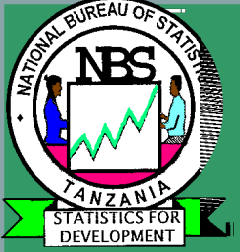
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2. Compilation of e-waste Statistics – Support from UNU

Tanzania Experience in using the Tool – Challenges and Recommendations

- **There is no flexibility for National clustering of the EEE;** all of the country EEE should be mapped to either of the three predefined classifications.
 - *Add flexibility to incorporate national clustering of the EEE*
- **Other General Challenges in e-waste compilation**
 - **Lack of reliable data for:-**
 - Import of WEEE
 - Export of WEEE
 - WEEE Collected and Recycled



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2. Compilation of e-waste Statistics – Support from UNU

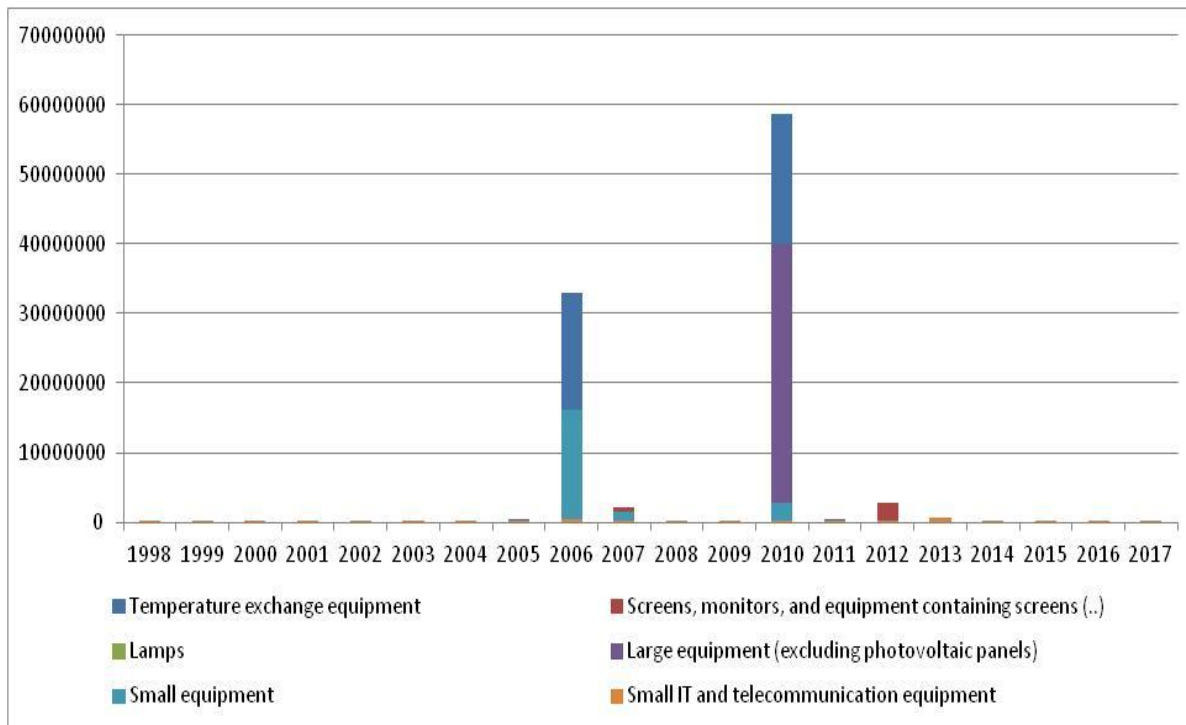
■ Other General Challenges in e-waste compilation

- Illegal trade is not measured which may lead to underestimation of the real quantities of EEE POM
- Misreported shipments are not taken into account
- Quality of raw datasets POM:-
 - *Require sector validation which is expensive*
 - *For some years was not easy to separate used and new EEE imported*

2. Compilation of e-waste Statistics – Support from UNU

Tanzania Experience in using the Tool – Preliminary Key Findings

EEE POM (EU-6) in Tonnes



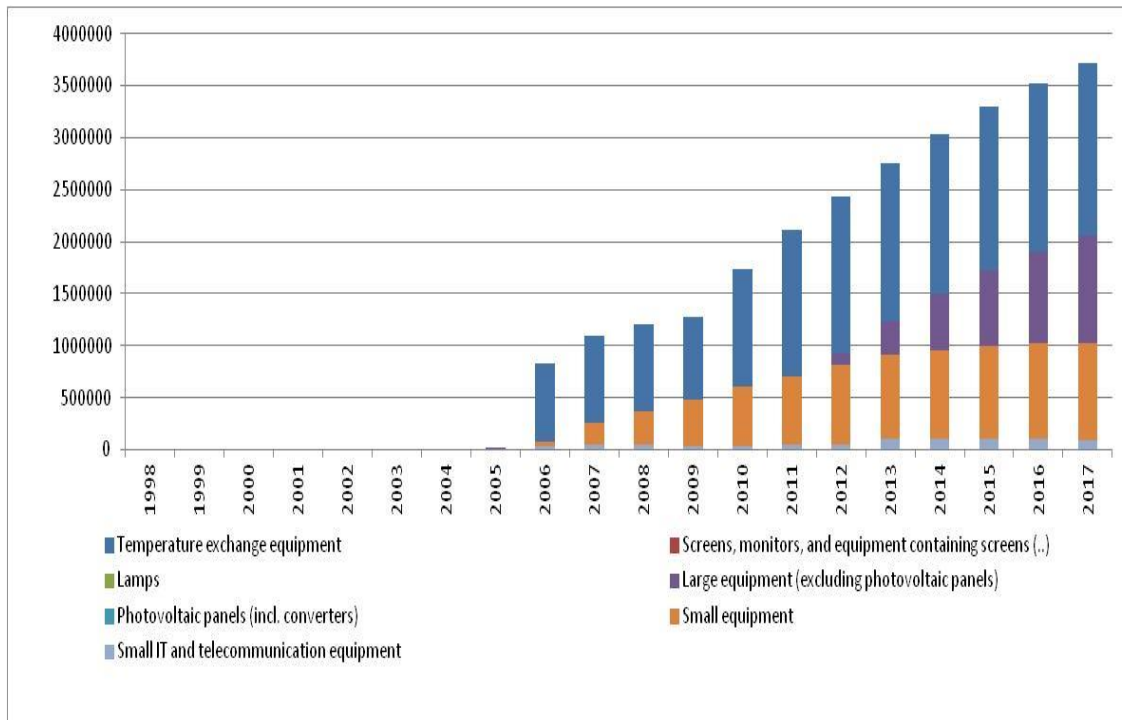
Message:-

For the past 20 years; Temperature exchange equipment dominated the importation of the EEE market (52.7%), followed by Large equipment (excluding photovoltaic panels) (23.8%) and Small equipment (12.3%)

2. Compilation of e-waste Statistics – Support from UNU

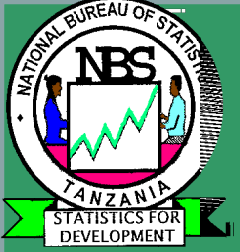
Tanzania Experience in using the Tool – Preliminary Key Findings

E-Waste Generate (EU-6) in Tonnes



Message:-

-Over the past 20 years There is **an increasing trend** of e-waste generation in the country with higher proportions in **Temperature exchange equipment (50.3%)**, followed by Large equipment (excluding photovoltaic panels) **(19.3%)** and Small equipment **(15.4%)**



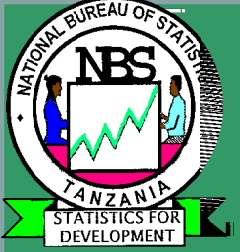
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2. Compilation of e-waste Statistics – Support from UNU

Tanzania Experience in using the Tool – The Way Forward

- Design the e-waste module of questions to be appended to the household or establishment based surveys
- Identify other data sources such as **domestic production of EEE** and plan for data collection on e-waste collected, recycled and disposed
- Development of e-waste database
- Develop country specific life span for EEE
- Strengthen the mechanism of e-waste data flow within and outside the country
- Advocate for policy and law on e-waste management and
- Raise awareness on the impacts of e-waste on the environment and health



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**Thank you for your
kind attention!**