THE GLOBAL E-WASTE STATISTICS PARTNERSHIP

Meeting Focusing on Statistics for Electrical and Electronic Waste for the East African Community Region

Arusha, Tanzania

28 October 2017

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Workshop Purpose

The workshop was designed to allow people working in national statistical offices or in selected ministries of the countries partners of the East African Community Region to learn about the global e-waste problem and to have a better knowledge of the e-waste statistics and the official measurement framework currently in use in EU. See Appendix 1 for the workshop agenda and Appendix 2 for a list of participants.

Opening Remarks

The workshop was organized in conjunction with the United Nation Statistical Division (UNSD) in the context of the Final Workshop on Environment Statistics for the East African Community Region (Arusha, Tanzania 23-27 October 2017).

The East African Community Region comprises of 6 countries: Burundi, Kenya, Rwanda, South Sudan, Tanzania and Uganda. All the 6 countries were represented in the workshop on e-waste statistics.

The workshop was presented by Kees Balde' (balde@unu.vie.edu) and Vanessa Forti (forti@unu.vie.edu), respectively Associate Programme Officer and Programme Associate in UNU-ViE-SCYCLE.

Workshop Format and Participants' Expectations

The workshop lasted for one day. It comprised of an introduction on e-waste, 5 modules, 2 countries examples and a final group discussion.

The meeting was opened by the National Bureau of Statistics Tanzania, United Nations Statistical Division (UNSD) and United Nations University (UNU). After a brief introduction of the presenters, participants were asked to introduce themselves, give an insight about their background and share their expectations of participating in the workshop. Many expectations were similar and were aligned to the overall purpose of the workshop; among this: better knowledge and understanding of the e-waste problem and its consequences on health and environment and better knowledge of e-waste statistics (methodologies, guidelines and tools to collect data on different e-waste flows). The workshop was also seen as an opportunity to learn how e-waste regulations can be developed and improved in the region.

Rwanda and Tanzania had the opportunity to present to the participants what is the current e-waste situation in the country, what are the challenges they are facing and the achievements they have reached so far.

At the end of the workshop, the participants had the opportunity to have a group discussion on the status of e-waste statistics in their countries, the e-waste challenges, the legislation and the

infrastructure status. The group discussion turned to be useful for the participants because they had the chance to learn the good progresses that the neighbor countries have done so far. Participants were also asked to fill in a worksheet containing both question on the current e-waste situation and on future plan of action to establish or solve the e-waste problems in the country.

Topics Discussed

Introduction: Electronic waste (e-waste) and its global problems

The aim of this session was to introduce the participants to the global e-waste problem, illustrate the consequences on health and environment of the improper management of e-waste. In addition, data on the global and national e-waste quantities was presented.

Module 1: General Principles of E-waste Statistics

Module 1 gave a general overview of the key principles and core indicators of E-waste statistics. The presenters introduced the harmonized framework to measure e-waste statistics and the "Guidelines on E-waste Statistics" developed by the task group on measuring e-waste of the Partnership for Measuring ICT for Development. The benefits of using the framework were also presented along with the e-waste classifications: the official UNU_KEYs and various links with other classifications. In addition, the presenters listed the core indicators of e-waste statistics which enable the measurement of the various e-waste flows:

- Total EEE put on market (sales) (unit kg/inh)
- Total e-waste generated (unit kg/inh)
- E-waste collection (unit kg/inh)
- E-waste collection rate

Module 2: How to track "sales of electronic equipment", and how to measure "e-waste generated"

Module 2 provided a methodological guidance on how to obtain data on the two indicators (sales and e-waste generated) of e-waste statistics. All the methodological steps developed by UNU have been described in detail. In addition, the open source software written in R by Statistics Netherlands and United Nations University were made available to give the opportunity to the participants to replicate the calculations using country data.

Module 3: How to measure e-waste collected and recycled

Module 3 described in detail the different e-waste collection scenarios and introduced the good recycling technologies for e-waste. During this module, the presenters listed all possible data sources useful to gather data on the e-waste collected and recycled and explained how to combine different data sources.

Module 4: How to measure imports and exports of e-waste

Module 4 helped the participants to understand which consumer's or collector's behavior lead to an export of used electric and electronic equipment (UEEE) and which flow needs to be measured. In addition, the presenters summarized the current the state of reporting transboundary movements of e-waste under Basel convention and listed five novel methods to detect imports and exports of used-EEE and e-waste.

Module 5: how to use the e-waste toolkit

The Excel calculation Toolkit was introduced in this module. The Tool has been developed by United Nations University to assist countries to compile e-waste statistics and it 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.

The tool had been distributed to the participants beforehand to give them the opportunity to try to use it and come up with feedbacks during the workshop. After the presentation of the toolkit, the participants were encouraged to overwrite the prepopulated data and rerun the calculation with real data from the country and to insert data on imports, exports and quantities of e-waste collected and recycled in the country, where available.

Countries presentations: Rwanda and Tanzania

Both countries gave a presentation on the status of e-waste in their country, the presentation covered the following points: legislation for e-waste management, achievements in collection and recycling of e-waste, challenges in the country in developing an e-waste management system and in compiling e-waste statistics.

Group discussion:

The representors of the six countries were divided into three groups and were asked to discuss about the following topics:
- Legislation on e-waste
- Who is responsible for e-waste take back
- E-waste management situation (is there an informal recycling sector?)
- Situation of imports of e-waste (e.g. which products, from which countries)
- Studies on illegal intercepted e-waste or e-waste management
- Potential data sources that fits into the UNU measurement framework
- How UNU can help in solving the e-waste problems?

Key Findings

Overall the countries in the East African Community Region are now aware of the e-waste problem and concerned with the dangers inherent to poor management of e-waste. However, the legal and infrastructural framework for achieving an environmentally sound and sustainable e-waste management still remains far from realized in the majority of countries. Two out of six countries (Uganda and Rwanda) have an e-waste legislation on e-waste and in other two the e-waste legislations are under development (Tanzania and Kenya).

E-waste management is dominated by thriving informal sector collectors and recyclers in all countries, as take-back schemes and modern infrastructure for recycling are non-existent or grossly limited. In this regard, Rwanda has done good progresses, it has now an e-waste dismantling facility in Bugesera Industrial Park. This is the second of its kind in Africa, and can recycle 7,000 tons per year.

The data on e-waste are largely unavailable in the region. Rwanda, Kenya and Uganda have some data available on electric and electronic sales. Of this, only Rwanda has data on stock and have performed few small scale studies to estimate the quantity of e-waste generated in some cities. In addition, Rwanda is the only one country in the region that have few data on the e-waste collected, imported and exported.

In all countries there are big challenges regarding e-waste statistics and e-waste management in general. The most common challenges are the lack of a structured waste management system, the lack of technical capacity and specific e-waste policies. The participants pointed out also the lack of structured data related to e-waste, little awareness of the citizens about the health and environmental issues linked to an unsafe disposal of e-waste and the lack of financial means to carry out surveys or studies.

All the countries showed interest in following up with additional capacity building on e-waste statistics, e-waste policies and enforcement of the legislations. Nearly all pointed out also the importance in following up with awareness rising activities both for the governments and the population. Few countries raised also the attention on the necessity of receiving external financial help to make substantial improvements to the e-waste infrastructure in the countries.

Workshop Feedback

Many of the participants suggested to extend the workshop duration to at least two or three days, because one day is not enough to fully understand and process the many information provided. Few of the country representatives would advise to organize workshops customized per country and to extend the target audience (e.g. policy makers, society etc.).

Conclusion

The workshop turned out to be very useful for all the participants mainly because it raised awareness on the relevance of the e-waste problem. It further provided important information and guidelines to help the countries in the region to start collecting data on e-waste statistics. In turn, UNU-SCYCLE obtained relevant country specific information on the e-waste status and useful feedbacks on the e-tool and on the workshop itself. These information are relevant for the team to improve both future capacity building activities and e-waste statistics. It further helps in identifying the countries needs and how the team can help in improving the e-waste situation in the region.

Appendix One – Workshop Agenda

Meeting focusing on Electronic Waste Statistics for the East African Community Region

Arusha, Tanzania

28 October 2017

Location: The Arusha Hotel

Saturday, 28 October 2017

9:00-9:15   **Opening of the meeting**
- National Bureau of Statistics - Tanzania
- United Nations Statistics Division (UNSD)
- United Nations University (UNU)
- Introduction of presenters (background)

9:15-9:45   **Get to know each other**
- all participants express where they work, their backgrounds, plus what they already know about e-waste and e-waste statistics

9:45-10:15   **What is electronic waste (e-waste) and its global problems**
- What are the general data on e-waste and the relevance on the environment and health

10:15-10:45   *Coffee break*

10:45-11:30   **Module 1: General Principles of E-waste Statistics**
- General overview of the key principles and core indicators of E-waste statistics
- "Guidelines on E-waste Statistics" developed by the task group on measuring e-waste of the Partnership for Measuring ICT for Development

11:30-12:00   **Module 2: How to track "sales of electronic equipment", and how to measure "e-waste generated"**

- Methodological guidance how to obtain data on the two indicators (sales and e-waste generated) of e-waste statistics
- Introduction to an open source software written in R by Statistics Netherlands and United Nations University

12:00-13:00 Lunch

13:00-13:30 Module 3: How to measure e-waste collected and recycled

- Methodological guidance on classifications and how to obtain data on the one indicators (e-waste collected and recycled) of e-waste statistics

13:30-14:00 Module 4: How to measure imports and exports of e-waste

- Methodological guidance on classifications and how to obtain data on imports and exports of e-waste

14:00-14:30 Module 5: how to use the e-waste toolkit

- Explanation of an Excel Tool developed by United Nations University that assist countries to compile e-waste statistics

14:30-15:00 Country 1 - Example of e-waste Statistics and difficulties

15:00-15:30 Coffee break

15:30-16:00 Country 2 - Example of e-waste Statistics and difficulties

16:00-17:00 Group discussion on e-waste statistics in their countries

- E-waste challenges
- Legislations status
- E-waste infrastructure
- Potential data sources for each of the indicators
- Expectation for future workshops

17:00-17:15 Wrap up

- Questions and answers
- Show our expectations that countries use of the e-tool to get data and send to UNU

Appendix Two – List of Participants

Countries	Participant Name	Institution
TNZ	Ms. Ruth Minja	NBS
TNZ	Mr. Saruni Njipay	NBS
TNZ	Mr. Faraja Ngerageza	Other national aut.
RWA	Mr. Modeste Tuyishime Ngondo	Ministry
RWA	Mr. Emmanuel Bareke	Other national aut.
RWA	Mr. Stephane Mugabe	NBS
KEN	Mr. Anthony Nyotu Mugane	Ministry
KEN	Ms. Julia Mayiani Saino	Ministry
BDI	Mr Jean Claude Sibomana	NBS
BDI	Mr. Gerard Barutwanayo	NBS
BDI	Mr. Jonathan Hatungimana	Other national authorities
UGA	Mr. Emmanuel Menyha	NBS
UGA	Mr. Muminu Matovu	NBS
UGA	Mr. Mike Nsereko	Other national aut.
SSD	Ms. Victoria Bepo	NBS