THE
GLOBAL
E-WASTE
STATISTICS
PARTNERSHIP

Workshop Focussing on Statistics for Electrical & Electronic Waste

Amman, Jordan

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Background and Rationale

The digital age has brought many advantages in service delivery efficiency; nevertheless, the rising consumption of electrical and electronic equipment (EEE), unfortunately coupled with increasingly rapid obsolescence due to technological advances and decreasing product lifetimes has led to significant increases in the global levels of e-waste. The issue of e-waste is covered by the Sustainable Development Goals (SDGs), where there is a sub-indicator under target 12.4.2 on hazardous waste. Therefore, it is important to track the progress of gathering e-waste data as part of the 2030 Agenda for Sustainable Development.

To date, only 41 countries produce e-waste statistics. This workshop was performed by the Global E-waste Statistics Partnership (GESP) and is aimed to follow up with two selected countries. The selected countries were Tanzania and Jordan. The former was already present in the e-waste statistics workshop which took place in Arusha, in November 2017. Jordan was already present at the environment statistics meeting which took place in New York, in May 2018. Both countries have expressed interest to the United Nations University (UNU), to more closely follow up on developing e-waste statistics respectfully, at the national level. Since the national implementation of e-waste statistics in countries outside the European Union and the OECD is limited, the workshop was a first step in showcasing the development of national e-waste statistics.

Opening Remarks

The workshop was organized in conjunction with the Jordan National Statistical Office (Department of Environmental Statistics).

Representatives from various authorities were present: statisticians from the National Statistical Offices (NSOs), customs, a representative from the Ministry of the Environment, and a representative from the greater Municipality of Amman.

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

Workshop Purpose, Objectives and Expected Outcomes

The purpose of the workshop was to strengthen the capacity of two National Statistical Offices to assist them in the compilation of internationally comparable e-waste statistics. Prior to setting the objectives and outcomes of this project, an inventory was made with the countries and the expected outcomes were formulated. All the expected results have been achieved successfully during the

three day workshop. The audience demonstrated to be very interested in the subject, proactive and willing to build on the knowledge gained during the workshop.

Achieved outcomes:

i.   Enhanced capacity in the countries to compile e-waste statistics using the e-waste tool

ii.   If national data on e-waste is available, using the e-waste tools from UNU to update national data to the GESP

iii. Use the e-waste tool for national policy and statistical purposes

iv.   Increased skills of the human resource to carry out national e-waste inventories and develop pilot questionnaires to collect data in the country

v.   Country feedback on clarifications/improvements to the current e-waste tool and e-waste manual from UNU

Project Approach

The guidelines on e-waste statistics from UNU, and UNU's e-waste tools were used as a starting point to improve e-waste statistics in Jordan.

In relation to the 54 UNU-KEYS (or the six categories of e-waste used by the European Union (EU-6)), the workshop focused on statistics relating to:

• New electrical and electronic equipment (EEE) and used EEE put on the market

• E-waste generated

• The environmentally sound management of e-waste (formal collection)

• Other e-waste recycling

• Imports and exports of e-waste

The participants were trained in the three-day workshop. At the end of the workshop, the effectiveness was evaluated, and action items were identified for the following years. All the presented material was made available to the participants to be used for other follow-up activities.

Actions Defined

Actions to be taken in the short-term:

1) Make correlation between national e-waste classification and the international classification (UNU_KEYS and EU-6)
2) Analysis of the national put on market data
   a. Calculate stocks by using long time series
3) Analysis of the households expenditures → useful to gather stock data
   b. Compare stock data at point a. to stock data at point b.
4) Analysis of the systems of national accounts → in order to get domestic production data and make comparisons with put on market estimations through the UNU e-waste tool
5) Look at imports and at the price to distinguish between used or e-waste imports (data are available from Jordan customs)
6) Ask the license of importers of used goods
7) Facilitate the coordination with a focal point for environmental statistics in the Gulf area and a focal point in the Middle East (Jordan could be the example)

Actions to be taken in the long-term:

1) Develop legislation on e-waste
2) Develop a system of extended producer responsibility (EPR) using the national registers to create a list of producers
3) Develop a market for the recycling of e-waste
4) Establish collection points
5) Build capacity on how to recycle e-waste
6) Raise awareness among the population
7) Develop a questionnaire to be distributed to the public and after a few years distribute it again to check how the consumer behavior has changed
8) Make an assessment of:
   - environmental and human health impact caused by the improper recycling of the e-waste
   - opportunities linked to the recycling of critical raw materials
   - employment opportunities (creation of green jobs)
   - CO_2 and the release of persistent organic pollutants
9) Feasibility study to understand the benefits of domestic vs global e-waste recycling

Needs in the country:

1) Cooperation between different institutions (municipality, NSO, ministry of environment)
2) Information/awareness raising to educate the population
3) More standards are needed to distinguish between imports/exports of e-waste or new electronics
4) Instructions to make legislations
5) Update the e-waste questionnaire to get more information from households (because now the questionnaire focuses only on "how many items the household uses")
6) Inform population and stakeholders about the UNDP project
7) Develop a "more formal" pick-up service for EEE in Jordan
8) Limit or stop the import of low-quality goods → need for regulations in place and enforcement

Suggestions for the household questionnaire

- Add questions to gather data on the domestic production
- Select the 10 or 14 most relevant EEE
- Add a description and definition per product
- Customize per type of business
- Add question about measuring devices for hospitals
- Add question about air conditioners
- Look at the quantities of e-waste generated per UNU_KEY (in the e-waste tool) and at the table about e-waste opportunities and combine information to decide which category or product should be included in the Jordan household questionnaire.

Appendix One – Workshop Agenda

Day 1: Start 9:30 to 15:00. Coffee break at 12:00, and lunch at 15:00

Opening and introduction of the participants and trainers, and setting the objectives of the workshop

Session 1: General introduction of e-waste statistics
- General introduction into e-waste, relation with SDGs and global context *(UNU)*

- General principles of e-waste statistics *(UNU)*

Session 2: E-waste statistics in the country / country
- National e-waste statistics/general waste statistics (NSO)
  For example: waste data collection (if relevant for the trainers), e-waste statistics, national classification of e-waste, etc.

- Presentation of a relevant regional e-waste project (EACO project for Tanzania, or the Arabian ITU/UNU project in Jordan)

Session 3: Sales, e-waste generated
- How to track sales of EEE and how to measure e-waste generated (UNU)

- Group work: availability of e-waste related country data (Sales, Stocks, Possession rates, Lifetimes) & how to get data → *define action points for the day after and the implementation plan*

- Exercise: understanding the importance of e-waste related data

Wrap up Day 1

Day 2: Start 9:30 to 15:00. Coffee break at 12:00, and lunch at 15:00

Summary of day 1

Session 4: E-waste Collected and recycled
- How to measure e-waste collected and recycled (UNU)

- Group work: availability of country data (e-waste collected) & how to get data (from formal and informal sector) → *define action points for the day after and the future*

Session 5: E-waste imports and exports
- How to measure imports/exports of e-waste (UNU)

- Outcomes of projects about illegal imports of e-waste (UNU)

- Group work: availability of country data (import/exports) & how to get data → *define action points for the day after and the future*

Session 6: E-waste tool
- Introduction to the e-waste tool (UNU)

- Group work "hands on the tool": how to link national classification to the international classification system (UNU_KEYS and EU6)

- Joint solution, and implementation of the national classification into the tool

Wrap up Day 2

Day 3: Start 9:30 to 15:00. Coffee break at 12:00, and lunch at 14:30

Summary of day 2

Session 7: E-waste tool – National data
- Group work: fill in country data in the e-waste tool → *real data provided by the participants or dummy data provided by UNU*

Session 8: E-waste statistics Implementation Plan

- Presentation of Jordan e-waste questionnaire (NSO)

- Group work: designing a new e-waste questionnaire
  Touching on: feasibility, to whom to address and scope, questions

- Group work: how to link this effort with other efforts in the region

Wrap – up Jordan: A participant presents the summary of data availability + propose an implementation plan for e-waste statistics for the future *(discussed on day 1 and 2)* (NSO)

Wrap-up UNU (feedbacks, action points, follow up etc.)

Appendix Two - List of Participants

S.no	Name	Organization
1.	Lina alnsour	UNDP
2.	Wafaa mahasneh	Customs
3.	Basem hawamdeh	Amman Municipality
4.	Basem souliman	
5.	Hanada Momani	DOS
6.	Hanadi rabai'eh	Ministry of Environment
7.	Dawoud Momani	Customs
8.	Inas arabiat	DOS
9.	Sona abu zahrah	DOS