

Results of pilot testing – electronic waste



UNSD



environment

United Nations Statistics Division (UNSD) and United Nations Environment

PILOT QUESTIONNAIRE 2017 ON ELECTRONIC WASTE

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United Nations University (UNU)-KEY correspondence

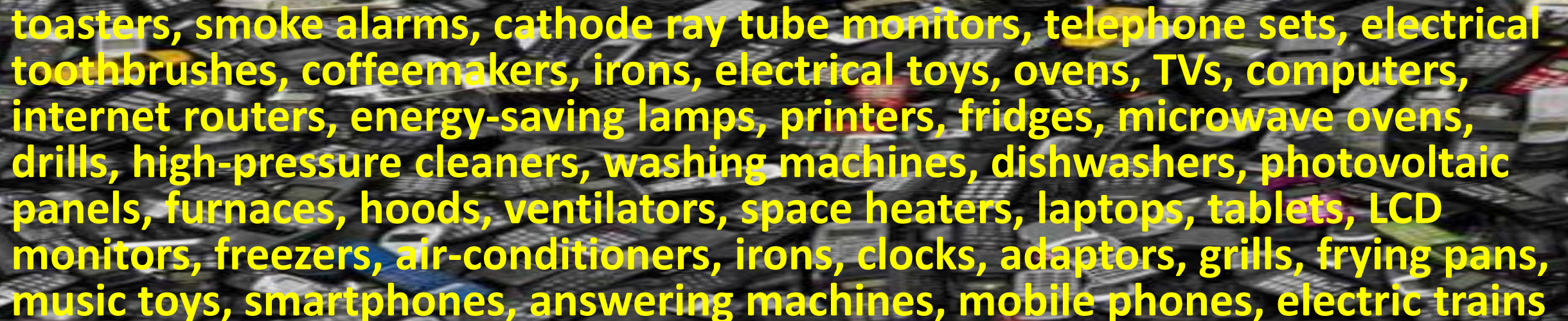
Fifth Meeting of the Expert Group on Environment Statistics

New York, United States of America

16-18 May 2018

The issue of electronic waste

- Definition of electronic waste, or e-waste: “all items of electrical and electronic equipment (EEE) and its parts that have been discarded by its owner as waste without the intent of re-use.”
- Over 44 million tonnes of wastes of electrical and electronic equipment were put on the global market in 2016, and only 20% of this was recycled (UNU, Global E-waste Monitor, 2017).
- Can be toxic or harmful; can also have resource potential
- E-waste take-back programs can be adopted to address the issue though so far these are in operation in only a limited number of countries, may not be enforced, and may only exist for one type of appliance (UN, 2017)
- Lack of data for monitoring developments in e-waste management



toasters, smoke alarms, cathode ray tube monitors, telephone sets, electrical toothbrushes, coffeemakers, irons, electrical toys, ovens, TVs, computers, internet routers, energy-saving lamps, printers, fridges, microwave ovens, drills, high-pressure cleaners, washing machines, dishwashers, photovoltaic panels, furnaces, hoods, ventilators, space heaters, laptops, tablets, LCD monitors, freezers, air-conditioners, irons, clocks, adaptors, grills, frying pans, music toys, smartphones, answering machines, mobile phones, electric trains

Pilot Questionnaire 2017 on Electronic Waste

- March 2017, UNSD sent the pilot questionnaire to 42 countries spanning all regions.
- The e-waste pilot questionnaire contained pre-filled data sourced from best estimates of the United Nations University.
- Countries were encouraged to review the pre-filled data against their own sources, and provide their best available data by 7 April 2017.

The pilot sample

- $n = 42$
- Selection criteria, priority was given to countries...
 - NOT recipient to the UNECE e-waste pilot.
 - with a participant of this Expert Group .
 - with whom UNSD has a counterpart who speaks English (including non-English speaking countries).
 - with an identified focal point for the 2016 round of the UNSD regular data collection (as of Nov. 2016).
 - who replied to the 2013 round of the regular UNSD data collection.

Numerical data
collection table:
E-waste
generated and
collected

Line	Category	Unit
1	Total E-waste generated (=2+3+4+5)	1000t
2	<u>Amounts going to:</u> <u>Large Equipment</u>	
3	<u>Screens, monitors, and equipment containing screens (..)</u>	
4	<u>Temperature exchange equipment (Cooling and Freezing Equipment)</u>	
5	Small E-waste (=6+7+8)	
6	<u>of which: Lamps</u>	
7	<u>of which: Small Equipment</u>	
8	<u>of which: Small IT and telecommunication equipment</u>	
9	Total E-waste collected (=10+11+12+13)	
10	<u>Amounts going to:</u> <u>Large Equipment</u>	
11	<u>Screens, monitors, and equipment containing screens (..)</u>	
12	<u>Temperature exchange equipment (Cooling and Freezing Equipment)</u>	
13	Small E-waste (=14+15+16)	
14	<u>of which: Lamps</u>	
15	<u>of which: Small Equipment</u>	
16	<u>of which: Small IT and telecommunication equipment</u>	

Table collecting descriptive information

Table EW2: Electronic Waste legislation, management and miscellaneous			
Is there a legislation on e-waste collection and recycling in your count		Yes <input type="checkbox"/>	No <input type="checkbox"/>
If yes, please describe the content and scope of the legislation:			
Which agency or ministry in your country is in charge of establishing laws on e-waste?			
Which agency or ministry in your country is in charge of monitoring e-waste?			
What is the main approach for e-waste management used in your country?			
How is the collection and processing of e-waste primarily undertaken?			Please describe as necessary:
Separate e-waste collection type:	mainly carried-out by municipalities through municipal container parks	<input type="checkbox"/>	
	mainly carried-out by retailers at points of sale	<input type="checkbox"/>	
	carried-out by retailers and municipalities	<input type="checkbox"/>	
	Informal sector takes care of it	<input type="checkbox"/>	
	Non-separate (mixed) collection, followed by landfilling	<input type="checkbox"/>	
	Other, please specify:	<input type="checkbox"/>	
What measures, if any, have been implemented in your country to support reuse and remanufacturing of e-waste?			

Information which UNSD shared with EGES 12 months ago...

2015 and 2016: UNU, OECD and UNECE conducted e-waste pilots in OECD and CIS regions

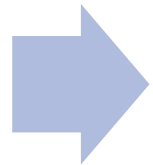


2nd half of 2016:UNSD in discussions with collaborative partners



December 2016: Foreshadowed the UNSD/UNEP e-waste pilot via Envstats newsletter; promoted e-waste issue

Early March 2017: UNSD/UNEP pilot sent to 42 NSO focal points.




7 April 2017: Initial requested deadline by which several responses received



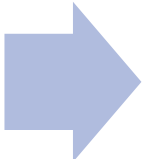
24 April 2017: 85% corresponded on Questionnaire

Activity following EGES 2017

EGES, May 2017: Status of e-waste pilot shared among EGES for discussion and feedback.



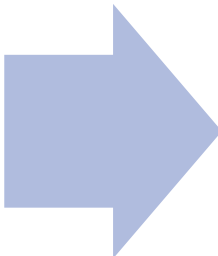
October 2017: Final response and follow-up completed



December 2017: Summary of results shared via Envstats newsletter; validated data shared with key user only.

Data cited in the Global E-waste Monitor 2017 for global total estimates. No direct citation of any country's data.

(Balde et al; International Telecommunications Union, UNU, International Solid Waste Association)



2nd half, 2018: UNSD/UNEP regular Questionnaire to add a two-variable table on electronic waste. Once validated, these data will be published by UNSD.

What data was obtained?

40/42 countries corresponded with UNSD.

Descriptive information on legislation, policy, etc. was provided by most countries. Many countries gave information about recently drafted or enacted, or soon to be enacted/enforced legislation.

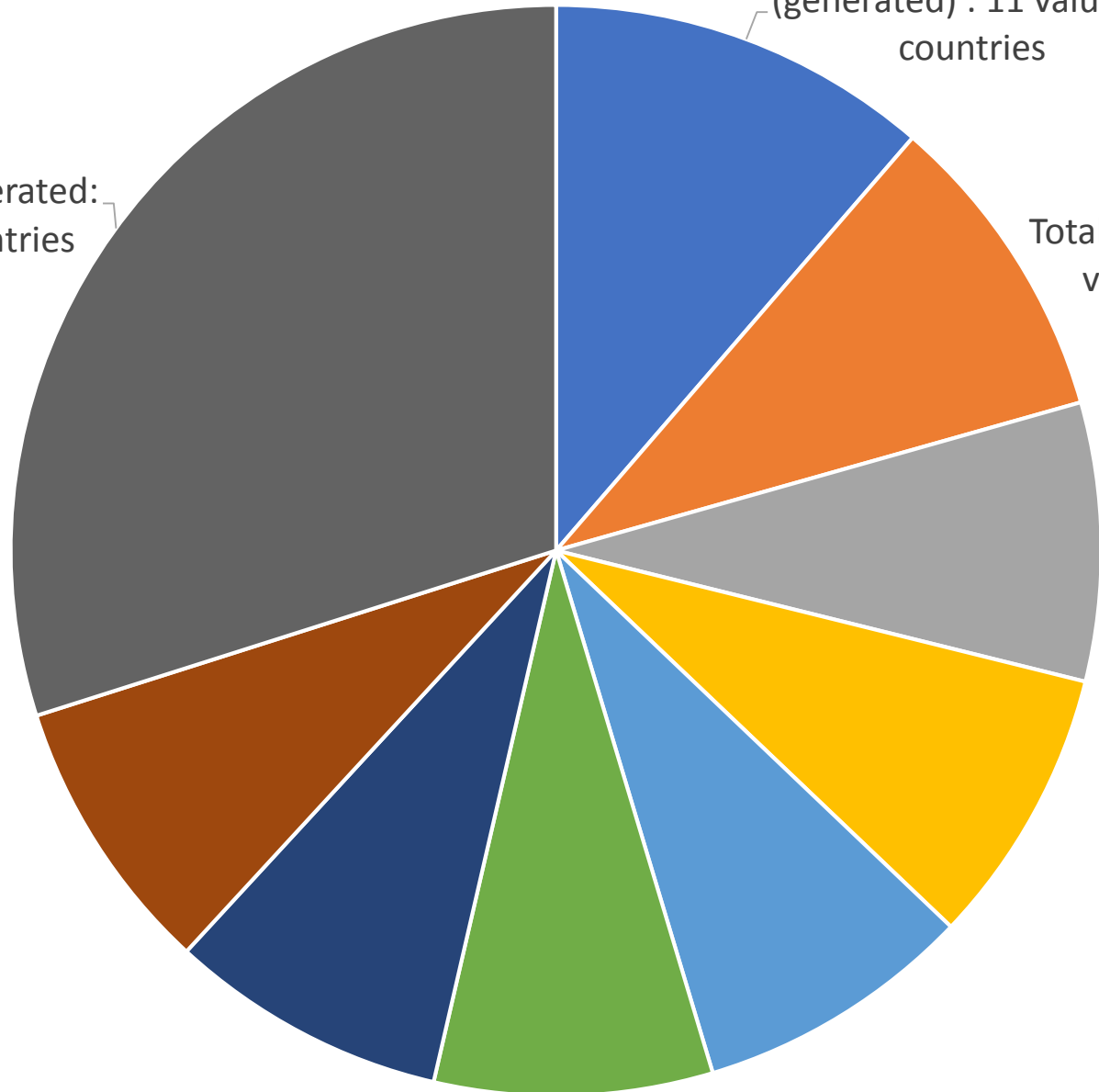
Many countries had no numerical data available.

Regarding numerical data...

97 values were received from eight countries.

9/16 variables were provided with data.

Total e-waste generated:
29 values, 5 countries



of which: Lamps
(generated) : 11 values, 2
countries

Total e-waste collected: 9
values, 4 countries

Six other variables each received eight responses from 1-2
countries

1. Large equipment (gen.)
2. Screens, monitors, and equipment containing screens (..) (gen.)
3. Temperature exchange equipment (Cooling and Freezing Equipment) (gen.)
4. Small e-waste (gen.)
5. of which: small equipment (gen.)
6. of which: Small IT and telecommunication equipment (gen.)

Table collecting descriptive information: E-waste legislation, management and miscellaneous

Questions included...

Is there a legislation on e-waste collection and recycling in your country?

Which agency or ministry in your country is in charge of establishing laws on e-waste?

What measures, if any, have been implemented in your country to support reuse and remanufacturing of e-waste?

Various country answers and comments received from countries...

*“**Extended Producers Responsibility (EPR)** was introduced by the (federal level) Code and implies that producers take over the responsibility for preventing, collecting, separating and treating used products (waste) for their eventual recovery... basic mandatory requirements implemented no later than 2019...”*

*“...**a national voluntary partnership for e-waste recycling with interested stakeholders** . The partnership comprises producers and retailers of electronic and electrical products, as well as e-waste recycling service providers.”*

*“**draft e-waste regulations, in line with the principle of Extended Producer Responsibility, are under preparation...** Ad-hoc e-waste collection campaigns are organised by Local Authorities for households, while private and Government bodies make their own arrangements for the collection, recycling and exportation of e-wastes they generate by registered e-waste recyclers and exporters.”*

*“**embarking on a project to collect data on e-waste** and to project the volume of e-waste in order to draft a national policy on e-waste. This policy will include measures for recycling, disposal and re-use.”*

*“**Solid waste only started collection of E-waste data from back in 2014.** They do no form of separation, so no data is available about different categories of e-waste.”*

Observations and lessons learned

- Very happy with the number of responding countries... reflects that UNSD had good history and rapport with most of the member states contacted.
- Volume of numerical data received is more humbling.
- Many qualitative comments were received from countries suggesting they are taking action to address the issue of e-waste (enacting legislation, promoting Extended Producer Responsibility, collecting data on e-waste, etc.)
- Pilot contained pre-filled data from best estimates of the United Nations University
We might have defined the estimation methodology to countries if we were to do a similar exercise in future. Several countries asked about the source of the pre-filled data and its estimation method (which was based on COMTRADE data).

Outcome of the e-waste pilot

Because of:

- The positive tone of written comments from countries regarding recent/near future enactment of legislation on e-waste, and other activity to address the e-waste issue; and
- Commensurate with the number of numerical responses received

UNSD decided to add the following table in the regular biennial UNSD/UNEP Questionnaire on Environment Statistics – waste section (no breakdowns of e-waste will be collected (e.g. small equipment, large equipment, lamps, etc.) in 2018

Table R6: E-Waste Generation and Collection

Line	Category	Unit
1	Total E-waste generated	1000 t
2	Total E-waste collected	1000 t

- Close interaction with key data user and visibility in research publication (UNU, ITU, ISWA, Global E-waste monitor)
- Close collaboration with other partners at the international level (OECD, Eurostat, UNECE)