









Version: December 12th, 2019

Regional Training Workshop on E-waste Statistics in Arab Region

Tunis, Tunisia, 16-18 December 2019

Centre International des Technologies de l'Environnement de Tunis Boulevard du Leader Yasser Arafet, Tunis, Tunisia

1. Introduction

Digital age has brought many advantages in services 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 global e-waste levels. E-waste closely relates to the SDGs, and has a sub indicator under 12.5.1 on the national recycling rate. Therefore, data on e-waste is important to track progress on this SDG. To date, only 41 countries produce e-waste statistics.

In the framework of the implementation of the objectives and expected results of the ITU Arab Regional Initiative on "Environment and Climate Change and Emergency Telecommunications", the Arab Regional Office in cooperation with the United Nations University (UNU) and its specialized Sustainable Cycles (SCYCLE) Programme have signed a regional project on e-waste monitor in the Arab Region. United Nations Environment Programme (UNEP) supports Member States in developing and implementing policies and legal and institutional and fiscal strategies and mechanisms for waste prevention and sound management including E-waste. This regional training workshop is jointly organised by ITU, UNU, UNEP and UN ESCWA.

2. Workshop Objectives and Expected Outcomes

The objectives of the following workshop are to:

- strengthen the capacity of Arab countries on electronic waste (e-waste) collection,
- assist them in the compilation of international comparable e-waste statistics,
- learn about the methods of e-waste statistics,
- share experiences, knowledge and challenges, and











- improve national coordination.

The expected outcomes of the following workshop are to have:

- a trained team with stronger technical capacities on e-waste collection
- an overview of the different methods on e-waste statistics
- a clear understanding of the gaps and needs in the e-waste sector in the region that enables an improved identification for future activities.

3. Workshop Approach

The entry point to improve the statistics of e-waste in two countries based on the guidelines on e-waste statistics from UNU and UNU's developed E-waste tools.

It will focus on statistics of:

- New EEE and used EEE put on the market;
- E-waste generated;
- Environmental sound management of e-waste (formal collection);
- Other e-waste recycling; and
- Imports and exports of used EEE and e-waste.

The participants will be trained in a three-day workshop. At the end of the workshop the effectiveness will be evaluated and action items will be identified for the next years. The questionnaires + developed material will be made available online and be used for other follow-up activities.

4. Requirements for participants:

- Laptop with EEE Put on market Tool and E-waste Generated Tool (the tools are provided by UNU);
- Dealing with e-waste or waste statistics, or e-waste legislation; and
- Good command of English preferable, but interpretation to Arabic is provided.

5. Preparation of the country prior workshop

- Get relevant data regarding e-waste statistics in the country
- Download trade statistics for 1995 to 2018 for the HS codes in ANNEX 1
- Fill out questionnaire prior 1 December 2019









6. Target beneficiaries

ICTs ministries, environmental agencies and regulators, MNOs, NSOs, other government agencies dealing on e-waste data (municipalities, ministries, and customs)

7. Contact information

Should you require any further information or need clarification on the workshop, please do not hesitate to contact: Eng. Mustafa Al Mahdi, Programme Administrator, ITU Arab Regional Office, E-mail: (<u>mustafa-ahmed.al-mahdi@itu.int</u>), Dr. Kees Baldé, Senior Programme Officer, UNU-ViE-SCYCLE, E-mail: (<u>balde@vie.unu.edu</u>), Mr. Abdouraman Bary, UNEP Regional Office for Africa, E-mail: (<u>abdouraman.bary@un.org</u>), Mr. Iyngararasan Mylvakanam, UNEP Regional Office for West Asia, E-mail: (iyngararasan.mylvakanam@un.org).

For any practicalities during your stay, please contact Mr. Jawhar Abdelkrim, CITET, E-mail: (<u>financement@citet.nat.tn</u>).









8. Draft Agenda

Regional Training Workshop on E-waste Statistics in Arab Region

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	Monday, 16 December 2019
SESSION 1	OPENING AND SETTING THE SCENE Session Organiser: Kees Baldé (UNU/UNITAR)
9:00 - 10:40	Welcome and opening addresses
	- Mustafa Al-Mahdi, ITU
	- Kees Baldé, UNU/UNITAR
	 Director General of ANGed, Tunis's National Waste Management Agency (ANGed) - Tunis
	- Director General of CITET- Tunis
	- Iyngararasan Mylvakanam- UNEP
	Opening of the meeting, introduction of the participants and trainers, and setting the objectives of the workshop.
	General introduction to e-waste: What is e-waste, relation with SDGs and global context (<i>Kees Baldé - UNU/UNITAR</i>)
	ITU/UNU Arab E-waste Monitor Project: Explanation of the Arab E-waste Monitor Project – (Kees <i>Baldé – UNU/UNITAR</i>)
10:40 - 11:00	Coffee break
11:00 - 12:00	E-waste statistics in the Region
	Lebanon – (Monia Hamdan – Ministry of Environment) National e-waste statistics, management, and legislation UNIDO Project in Lebanon – (Nada Sabra – UNIDO) National e-waste statistics, management and legislation Presentation of the UNIDO project in Lebanon
12:00 - 13:00	Lunch break







Sustainable Cycles Programme







Tuesday 17 December

SESSION 2	E-waste generated
09:00 - 11:00	Short recap on first day (Kees Baldé – UNU/UNITAR)
	E-waste Generated Tool
	Introduction to the E-waste Generation Tool (Kees Baldé – UNU/UNITAR)
	Group work 3 on how to use the E-waste Generation Tool: how to link national classification to the international classification system (UNU-KEYS and EU6)
	\rightarrow Insert EEE put on Market data provided by the participants, or outcomes of previous group work, or estimates provided by UNU
11:00 - 11:20	Coffee break
SESSION 3	Measuring E-waste Flows
11:20 - 12:30	E-waste Collected and Recycled How to measure e-waste collected and recycled (Kees Baldé – UNU/UNITAR)
	Group work 4: availability of country data (e-waste collected) & how to get data (from formal and informal sector) \rightarrow define action points for the day after and the future
12:30 - 13:30	Lunch
13:30 - 14:00	E-waste imports and exports How to measure imports/exports of e-waste (Kees Baldé – UNU/UNITAR)
	Outcomes of projects about illegal imports of e-waste (Kees Baldé – UNU/UNITAR)
SESSION 4	National E-waste Statistics Implementation Plan
14:00 - 15:00	E-waste statistics National Implementation Plan
	Group work 5: summarize group work 1 to 4 and develop a national implementation plan in PowerPoint or Word document for e-waste statistics in your country, in the context of this project
15:00 - 15:20	Coffee break











SESSION 4	National E-waste Statistics Implementation Plan
15:20 - 16:00	Continuation of group work 5
16:00-16:30	Overview from UNU/ITU questionnaire on e-waste (Giulia Iattoni – UNU/UNITAR)
16:30-17:00	Relevance of E-waste data for SDGs and UNEP/UNSD Environment Statistics Questionnaire (Reena Shah, Marcus Newbury and Xuan Che – UNSD) Connect during coffee break
17:00	End of day 2

	Wednesday 18 December 2019
09:00 - 11:00	Group work 6: discuss the : - scope and extent of the current applicable e-waste legislation in the countries which also includes policies and any other form of legal framework - any existing e-waste import / export bans in the countries - presence of e-waste management standards - role of the formal and informal sector within the country - the relevant national stakeholders involved in the management (collection & recycling) of e-waste which is inclusive of both the formal and informal sector - recycling facilities and initiatives - measures to support and incentivize to collection and recycling of e-waste? <u>Note for organisers:</u> Define order + collect PPT presentations from participants
11:00 - 11:20	Coffee break
SESSION 5	National E-waste legislation and stakeholders
11:20 - 12:00	 National presentations on 1) the National E-waste Statistics Implementation Plans (wrap up from all previous group work 5 and 6) 2) Situation e-waste management situation, national stakeholders, legislation situation
12:00 - 13:00	Lunch



13:00 - 15:00	Continuation of National Presentations
15:00 - 15:20	Coffee break
15:20 - 16:30	Continuation of National Presentations
	Wrap-up UNU (feedbacks, action points, follow up etc.)
SESSION 6	CONCLUSIONS AND RECOMMENDATIONS FOR FURTHER WORK Session Organiser: National E-waste legislation and stakeholders
16:30 - 17:00	Tour de table, open discussion
	Main conclusions and recommended action points
17:00	Closing of the workshop

ANNEX 1:

External Trade Country Profiles:

https://www.unescwa.org/sub-site/external-trade-escwa-2017-country-profiles

Detailed trade data from UN ESCWA:

https://www.unescwa.org/publications/external-trade-bulletin-arab-regionissue26

On Industrial production UN ESCWA has:

https://www.unescwa.org/publications/bulletin-industrial-statistics-arabcountries-ninth-issue

Alternatively, the trade data can be downloaded from the comtrade database from UN Statistical Division, which can be accessed online https://comtrade.un.org/.

If possible, also download the Domestic Production data.

630110	Electric blankets of textile material
840310	Central heating boilers nes
841451	Table, window, ceiling fans, electric motor <125 watt
841460	Ventilating hoods having a maximum width < 120 cm
841510	Air conditioners window/wall types, self-contained
841581	Air conditioners nes with reverse cycle refrigeration



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UNU-VIE SCYCLE Sustainable Cycles Programme

	Sustainable Cycles Programme
841582	Air conditioners nes, with refrigerating unit
841583	Air conditioners nes, without refrigerating unit
841810	Combined refrigerator-freezers, two door
841821	Refrigerators, household compression type
841822	Refrigerators, household absorption type, electric
841829	Refrigerators, household type, including non-elecctri
841830	Freezers of the chest type, < 800 litre capacity
841840	Freezers of the upright type, < 900 litre capacity
841850	Refrigerator/freezer chests/cabinets/showcases
841861	Compression refrigeration equipment with heat exchang
841869	Refrigerating or freezing equipment nes
842112	Clothes-dryers, centrifugal
842211	Dish washing machines (domestic)
842219	
842310	Personal weighing machines, baby & household scales
843311	Mowers, powered, lawn, with horizontal cutting device
843319	Mowers, powered, lawn, nes
844312	Sheet fed, office offset printers, sheet < 22x36 cm
844315	
844319	
844331	Machines which perform two/more of the functions of printing,
	copying/facsimile transmission, capable of connecting to an
	automatic data processing machine/to a network
844332	Other printers, copying machines & facsimile machines,
	whether/not combined , exclud the ones which perform
	two/more of the functions of printing, copying/facsimile
	transmission; capable of connecting to an automatic data
	processing machine/to a network
844339	Other printers, copying machines & facsimile machines,
	whether/not combined , excl. 8443.31 & 8443.32
845011	Automatic washing machines, of a dry capacity < 10 kg
845012	Washing machines nes, capacity <10 kg, built-in drier
845019	Household/laundry-type washing machines <10 kg, nes
845020	Household or laundry-type washing machines, cap >10kg
845110	Dry-cleaning machines
845121	Drying machines, capacity <10 kg, except washer-drier
845129	Drying machines, nes
845130	Ironing machines and presses including fusing presses
845210	Household type sewing machines
846721	Drills of all kinds, for working in the hand, with self-contained
	elec. mot
846722	Saws for working in the hand, with self-contained elec. motor











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847689 Automatic vending mach n	847629	Autom bev-vendng mach ne
	847681	Autom vendng mach h/refr
850810 Drills, hand-held, with self-contained electric motor	847689	Automatic vending mach n
	850810	Drills, hand-held, with self-contained electric motor











	Sustainable Cycles Programme United Nations Institute for Training and Research programme
850811	Vacuum cleaners, with self-contained electric motor, Of a
	power not > 1,500 W & having a dust bag/other receptacle
	capacity not > 20 l
850819	Vacuum cleaners, with self-contained electric motor, other
	than of 8508.11
850820	Saws, hand-held, with self-contained electric motor
850860	Other vacuum cleaners, not with self-contained electric motor
850880	Tools, hand-held, with electric motor, not drills/saw
850910	Domestic vacuum cleaners
850920	Domestic floor polishers
850930	Domestic kitchen waste disposers
850940	Domestic food grinders, mixers, juice extractors
850980	Domestic appliances, with electric motor, nes
851010	Shavers, with self-contained electric motor
851020	Hair clippers, with self-contained electric motor
851030	Hair-removing appl w/sel
851210	Lighting/signalling equipment as used on bicycles
851310	Portable battery and magneto-electric lamps
851511	Electric soldering irons and guns
851519	Electric brazing, soldering machines and apparatus ne
851521	Electric resistance welding equipment, automatic
851529	Electric resistance welding equipment, non-automatic
851531	Automatic electric plasma, other arc welding equipmen
851610	Electric instant, storage and immersion water heaters
851621	Electric storage heating radiators
851629	Electric space heating nes and soil heating apparatus
851631	Electric hair dryers
851632	Electro-thermic hairdressing apparatus, nes
851633	Electro-thermic hand drying apparatus
851640	Electric smoothing irons
851650	Microwave ovens
851660	Electric cooking, grilling & roasting equipment nes
851671	Electric coffee or tea makers, domestic
851672	Electric toasters, domestic
851679	Electro-thermic appliances, domestic, nes
851710	
851711	Line telephone sets,cord
851712	Telephones for cellular networks/for other wireless networks,
	other than Line telephone sets with cordless handsets
851718	Other telephone sets, incl. telephones for cellular networks/for
	other wireless networks, other than 8517.11 & 8517.12
851719	Telephone sets, nes
851720	





Sustainable Cycles Programme







851721	Facsimiles machines
851722	Teleprinters
851730	Telephonic or telegraphic switching apparatus
851740	
851750	Apparatus for carrier-cu
851761	Base stations for transmission/reception of voice,
	images/other data, incl. apparatus for communication in a
	wired/wireless network (such as a local/wide area network)
851762	Machines for the reception, conversion &
	transmission/regeneration of voice, images/other data, incl.
	switching & routing apparatus
851769	Other apparatus for transmission/reception of voice,
	images/other data, incl. apparatus for communication in a
	wired/wireless network (such as a local/wide area network) ,
	other than 8517.61 & 8517.62
851780	Elect apparatus for line
851781	
851782	
851810	Microphones and stands thereof
851821	Single loudspeakers, mounted in enclosure
851822	Multiple loudspeakers, mounted in single enclosure
851830	Headphones, earphones, combinations
851840	Audio-frequency electric amplifiers
851850	Electric sound amplifier sets
851910	Coin or disc-operated record-players
851920	Apparatus operated by coins, banknotes, bank cards,
	tokens/by other means of payment
851921	Record-players without built-in loudspeaker, nes
851929	Record-players with loudspeakers, nes
851930	Turntables (record-decks)
851931	Turntables with automatic record changing mechanism
851939	Turntables, without record changers
851940	Transcribing machines
851950	Telephone answering machines
851981	Other sound recording/reproducing apparatus, using magnetic,
	optical/semiconductor media, other than 8519.20, 8519.30,
	8519.50
851989	Other sound recording/reproducing apparatus, other n.e.s. in
	Ch. 85.19
851991	
851992	Pocket-size cassette-pla
851993	Sound repr app, cassette
851999	Sound reproducing apparatus, non-recording, nes











	Sustainable Cycles Programme United Nations Institute for Training and Research programme
852010	Dictating machine requiring external power source
852020	Telephone answering machines
852031	
852032	Magnetic tape rec digita
852033	Magnetic tape rec casset
852039	Non-cassette audio tape recorders, sound reproducing
852090	Audio recording equipment without sound reproduction
852110	Video recording/reproducing apparatus, magnetic tape
852190	Video record/reproduction apparatus not magnetic tape
852520	Transmit-receive apparatus for radio, TV, etc.
852530	Television cameras
852540	Still image video camara
852560	Transmission apparatus for radio-broadcasting/televison
	incorporating reception apparatus
852580	Television cameras, digital cameras & video camera recorders
852711	
852712	Pocket-size radio-casset
852713	Radio apparatus w/sound
852719	Radio receivers, portable, non-recording
852721	Radio receivers, external power, sound reproduce/recor
852729	Radio receivers, external power, not sound reproducer
852731	Radio-telephony receiver, with sound reproduce/record
852732	Radio-telephony etc receivers, nes
852739	Radio-broadcast receivers nes
852790	Radio reception apparatus nes
852791	Other reception apparatus for radio-broadcasting, combined
	with sound recording/reproducing apparatus.
852792	Other reception apparatus for radio-broadcasting, not
	combined with sound recording/reproducing apparatus but
	combined with a clock.
852799	Other reception apparatus for radio-broadcasting, excl.
	8527.91 & 8527.92
852810	
852812	Color television receive
852813	B & W television receive
852820	
852821	Color video monitors
852822	B & w video monitors
852830	Video projectors
852841	Cathode-ray tube monitors , of a kind solely/principally used in
	an automatic data processing system of heading 84.71



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UNU-VIE SCYCLE Sustainable Cycles Programme

 852849 Other cathode-ray tube monitors , not of a kind solely/principally used in an automatic data processing s of heading 84.71 852851 Other monitors, of a kind solely/principally used in an automatic data processing system of heading 84.71 852859 Other monitors, not of a kind solely/principally used in an automatic data processing system of heading 84.71 852859 Other monitors, not of a kind solely/principally used in an automatic data processing system of heading 84.71 	ystem
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852859 Other monitors, not of a kind solely/principally used in a automatic data processing system of heading 84.71	
automatic data processing system of heading 84.71	
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852861 Projectors, Of a kind solely/principally used in an automa	atic
data processing system of heading 84.71	
852869 Projectors, not of a kind solely/principally used in an aut	omatic
data processing system of heading 84.71	
852871 Reception apparatus for televison, Not designed to incor	oorate
a video display/screen	
852872 Other colour reception apparatus for television, whether,	'not
incorporating radio-broadcast receivers/sound/video	
recording/reproducing apparatus,	
852873 Other reception apparatus for television, whether/not	
incorporating radio-broadcast receivers/sound/video	
recording/reproducing apparatus, black & white/other	
monochrome.	
853110 Burglar or fire alarms and similar apparatus	
853120 Indicator panels incorporating electronic displays	
853180 Electric sound or visual signalling apparatus, nes	
853921 Filament lamps, tungsten halogen	
853931 Fluorescent lamps, hot cathode	
853932 Mercury or sodium vapour	
853939 Discharge lamps, other than ultra-violet lamps, nes	
853941 Arc-lamps	
853949 Ultra-violet or infra-re	
854140 Photosensitive/photovoltaic/LED semiconductor devices	
854340 Electric fence energiser	
854370 Other machines & apparatus for electrical machines &	
apparatus, other than than machines & apparatus for	
electroplating/ electrolysis/electrophoresis/signal	
generators/particle accelerators.	
854389 Electrical machines and	
871190	
900661 Photographic discharge lamp flashlight apparatus	
900669 Photographic flashlight apparatus, nes	
900710	
900711 Cinematographic cameras for film <16mm wide	
900719 Cinematographic cameras for film >16mm wide	
900720 Cinematographic projecto	



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Sustainable Cycles Programme







	Sustainable Cycles Programme
900721	
900729	
900810	Slide projectors
900830	Image projectors, except slide/microform
900840	Photographic enlargers and reducers, other than cine
900850	
900911	Electrostatic photo-copyers, direct process
900912	Electrostatic photo-copyers, indirect process
900921	Photo-copying equipment with an optical system, nes
900922	Contact type photo-copying apparatus, nes
900930	Thermo-copying apparatus
901010	Equipment for automatic development of photo film
901050	App & equip for ph labor
901060	Projection screens
901510	Rangefinders
901520	Theodolites and tacheometers
901530	Surveying levels
901540	Photogrammetrical surveying instruments, appliances
901580	Surveying, etc instruments nes
901730	Micrometers, callipers and gauges
901811	Electro-cardiographs
901812	Ultrasonic scanning appr
901813	Magnetic resonance imagi
901814	Scintigraphic apparatus
901819	Electro-diagnostic apparatus, nes
901841	Dental drill engines
901910	
902140	Hearing aids, except parts and accessories
902410	Machines for testing mechanical properties of metals
902480	Machines for testing mechanical properties nes
902519	Thermometers, except liquid filled
902580	Hydrometer, pyrometer, hygrometer, alone or combined
902610	Equipment to measure or check liquid flow or level
902620	Equipment to measure or check pressure
902680	Equipment to measure, check gas/liquid properties nes
902710	Gas/smoke analysis apparatus
902780	Equipment for physical or chemical analysis, nes
902830	
903020	Cathode-ray oscilloscopes, oscillographs
903033	Other instruments & apparatus, for measuring/checking
	voltage, current, resistance/power, without a recording device,
	other than 9030.31 & 9030.32,
903039	Ammeters, voltmeters, ohm meters, etc, non-recording











	Sustainable Cycles Programme United Nations Institute for Training and Research programme
903040	Gain, /distortion and crosstalk meters, etc
903081	
903089	Electrical measurement instruments nes
903130	Profile projectors, nes
903149	Optical instruments and
903180	Measuring or checking equipment, nes
903210	Thermostats
910111	Wrist-watch, precious metal, battery, with hands
910112	Wrist-watch, precious metal, battery, opto/electric
910119	Wrist-watch, precious metal, battery, other
910191	Pocket-watch, precious-metal case, battery
910211	Wrist-watch, base-metal case, battery, with hands
910212	Wrist-watch, base-metal case, battery, opto/electric
910219	Wrist-watch, base-metal case, battery, other
910221	Wrist-watch, base-metal case, automatic wound
910291	Pocket-watch, base-metal case, battery
910299	Pocket-watch, base-metal case, non-battery
910310	Clocks with watch movements, battery (except vehicle)
910390	Clocks with watch movements, nes (except vehicle)
910511	Alarm clocks, battery or mains powered
910519	Alarm clocks, non-electric
910521	Wall clocks, battery or mains powered
910529	Wall clocks, non-electric
910591	Clocks, nes, battery or mains powered
910599	Clocks, nes, non-electric
910700	Time switches
910811	Assembled battery watch movement, mechanical display
910812	Assembled battery watch movement,opto-electric displa
910819	Assembled battery watch movement, nes
910890	Watch movements, complete & assembled (excl. electrically
	operated), other
910910	
910911	Clock movements, complete and assembled, battery/alar
910919	Clock movements, complete and assembled, battery nes
910990	Clock movements, complete & assembled, non-battery ne
920590	
920710	Keyboard instruments electrical/requiring amplifier
920790	Musical instruments nes, electric/requiring amplifier
940510	Chandeliers, other electric ceiling or wall lights
940520	Electric table, desk, bedside and floor lamps
940530	Lighting sets of a kind used for Christmas trees
940540	Electric lamps, lighting fittings, nes











Sustainable Cycles Programme

950300	Tricycles, scooters, pedal cars & similar wheeled toys; dolls' carriages; dolls; other toys; reduced-size ("scale") models & similar recreational models, working/not; puzzles of all kinds.
950310	Electric trains, train sets, etc
950350	Toy musical instruments, apparatus
950410	Video games used with a television receiver
950450	
950490	Articles for funfair, table and parlour games, nes
950490	Articles for funfair, table and parlour games, nes