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Sustainable Cycles Programme

SCYCLE

Programme

Utilization of e-waste data

Kees Baldé

22 May, 2019 – Session 2: Waste Statistics



UNU-Vie-SCYCLE – Key Projects & Activities



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1. Policy advice

- European Commission (2007, 2014 & 2015)

2. E-waste Statistics

- Global E-waste Statistics Partnership
- Global E-waste Monitor (2017, 2014)
- Regional E-waste Studies: East and Southeast Asia (2017), Latin America (2018, 2015)

3. Capacity building and training

- E-waste Academies for Managers (EWAM) & Scientists (EWAS) (Global, since 2009)

4. Facilitating International Dialogue

- Hosting StEP Secretariat: Solving the e-waste problem (Global, since 2004)
- UN E-waste: towards a joint e-waste effort of UN organizations (Global, since 2016)



Global E-waste Statistics Partnership

- Improve and collect worldwide e-waste statistics
- Develop guidelines for classification, reporting and indicators
- Raise visibility on the importance of tracking e-waste
- Deliver capacity building workshops
- Publish e-waste data through an online portal: globalewaste.org

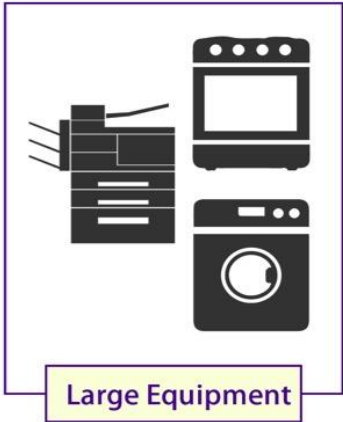
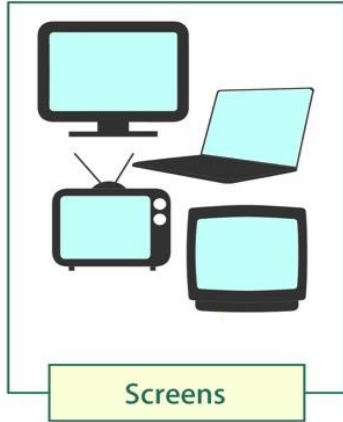
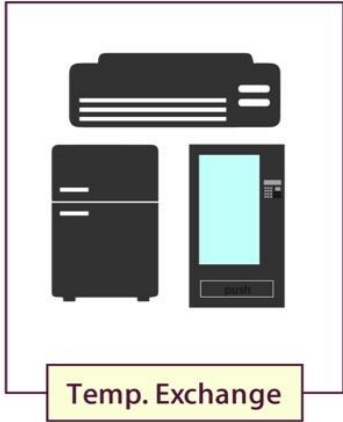
What is e-waste



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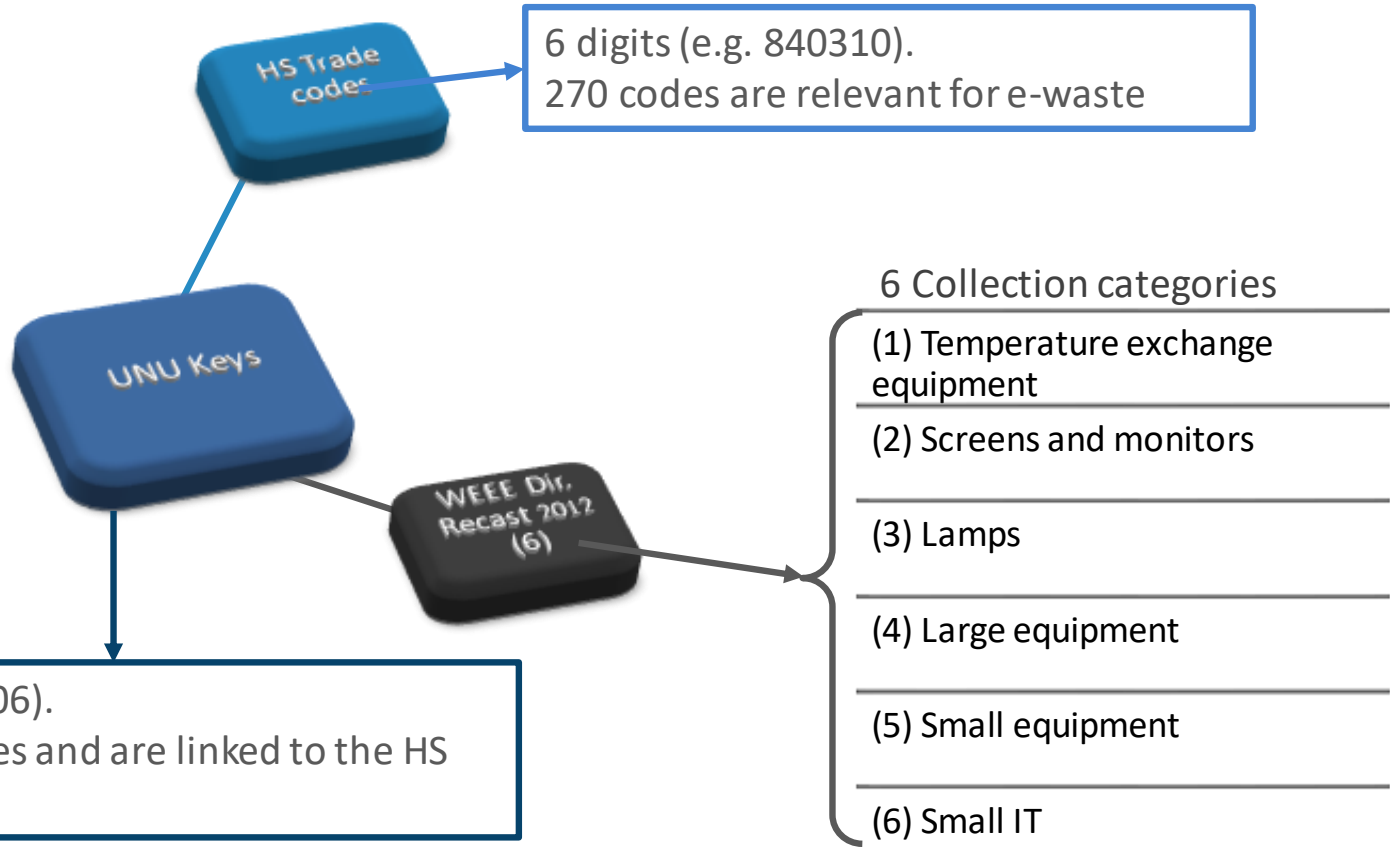
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“E-waste, refers to all items of electrical and electronic equipment (EEE) and its parts that have been discarded by its owner as waste without the intent of re-use”

E-waste classification:

UNU-KEYS Product classification



4 digits (e.g. 0306).
54 product codes and are linked to the HS codes

6 digits (e.g. 840310).
270 codes are relevant for e-waste

6 Collection categories

(1) Temperature exchange equipment

(2) Screens and monitors

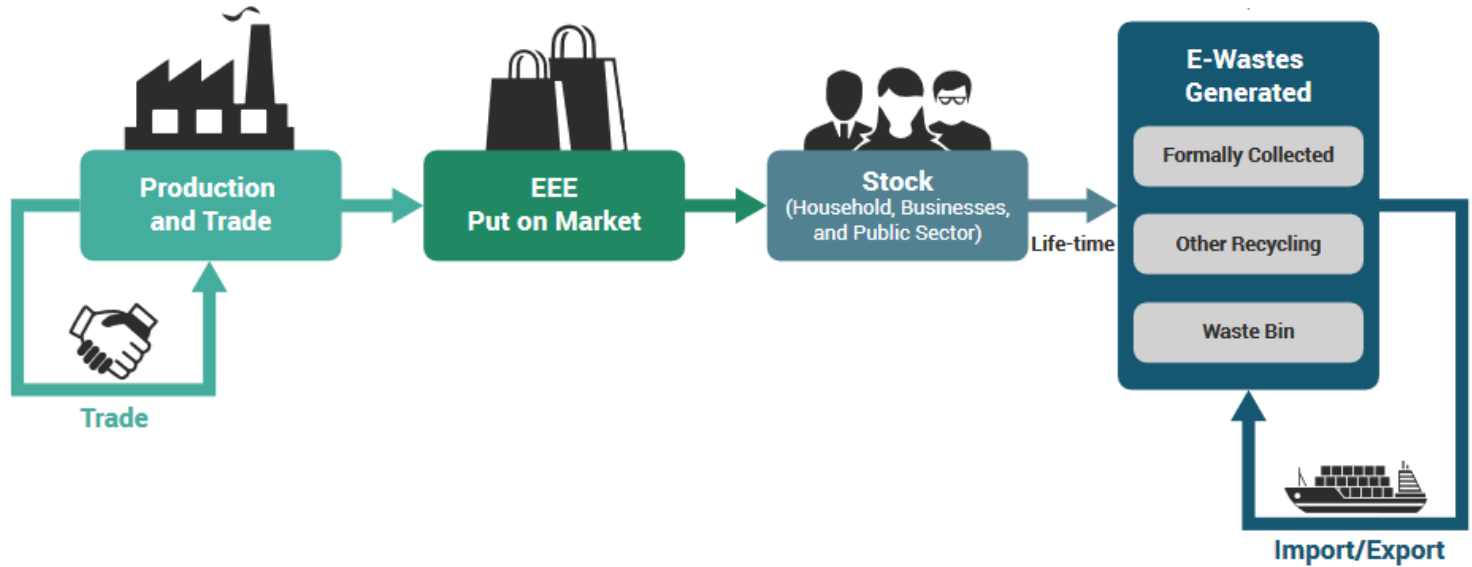
(3) Lamps

(4) Large equipment

(5) Small equipment

(6) Small IT

Framework on e-waste statistics:



Harmonized framework to measure e-waste: The Partnership Measuring ICT for Development



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■ Objectives:

■ Framework based on internationally defined indicators:

1. Total EEE Put on the Market (unit kg/inh)
2. E-waste generated (unit kg/inh)
3. E-waste formally collected (unit kg/inh)
4. E-waste collection rate (%)

■ Statistical guidelines (in 2015 and 2018)

http://collections.unu.edu/eserv/UNU:6477/RZ_EWaste_Guidelines_LoRes.pdf

■ Join forces with UNSD/UNEP, UNECE, OECD and UNSD to improve data coverage. This led to e-waste questionnaires in regular data collection



The amount of e-waste is growing

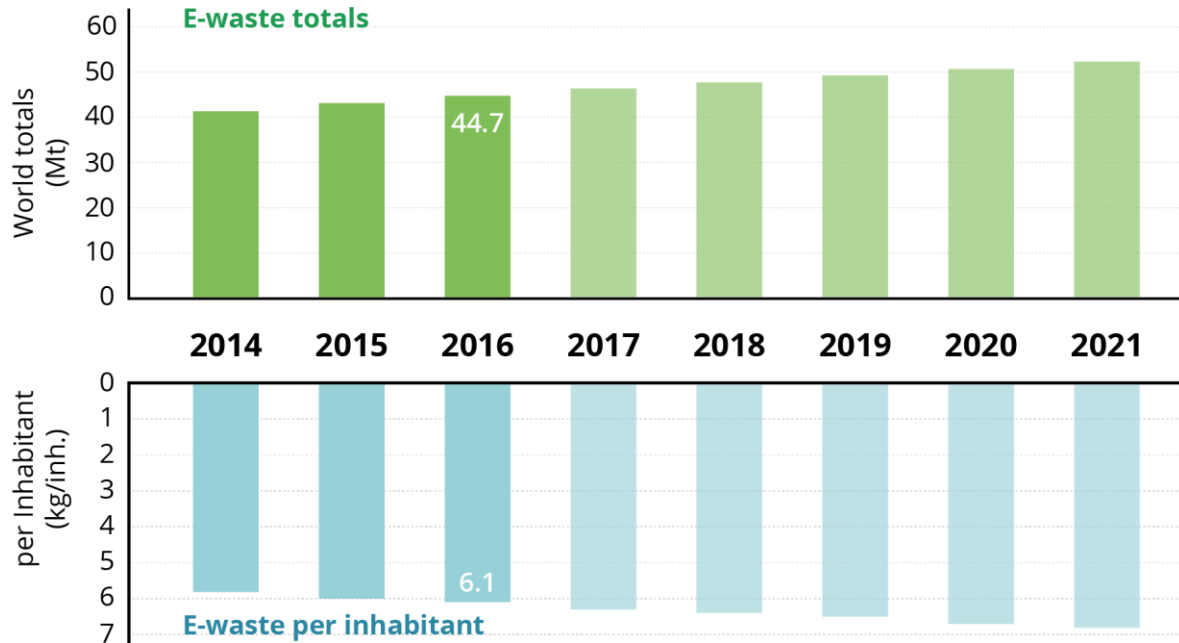


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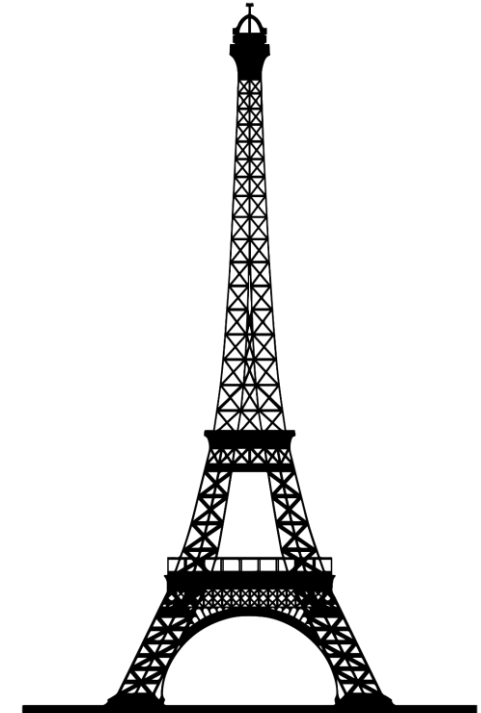
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- Amount of e-waste grew by 8% between 2014 and 2016
- 44.7 million metric tonnes of e-waste (2016)



Note: 2017-2021 are estimates



Source: global e-waste monitor 2017, UNU/ITU/ISWA

E-waste quantities:

Overview of global e-waste quantities



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20% (8.9 Mt) of e-waste is documented to be collected and properly recycled



44.7 Mt of e-waste generated in 2016



Outside official take-back systems

80% (35.8 Mt) of e-waste is not documented

- 4% (1.7 Mt) of e-waste in the higher income countries is thrown into the residual waste
- The fate of 76% (34.1 Mt) of e-waste is unknown; this is likely dumped, traded, or recycled under inferior conditions



E-waste quantities 2016:

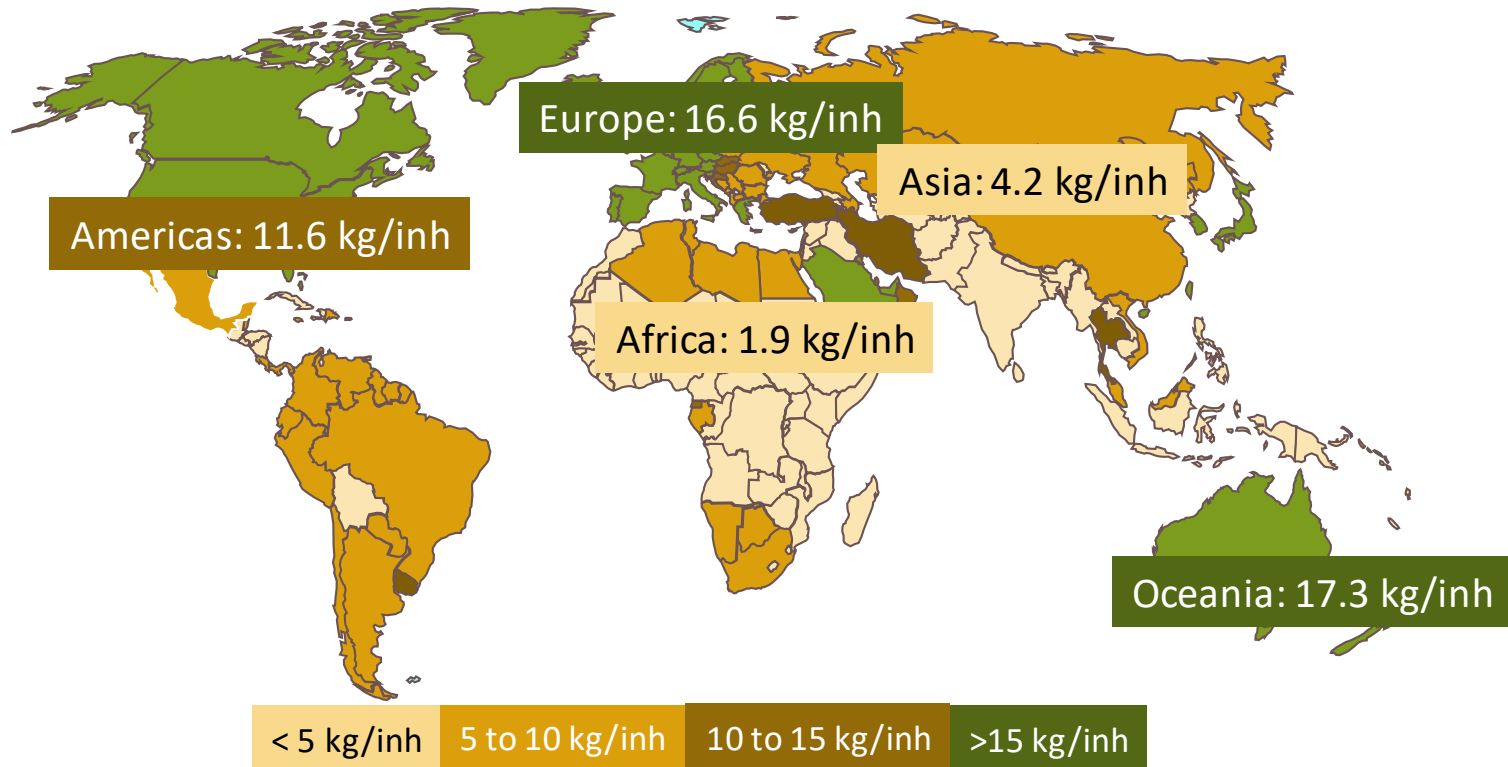
Overview of global e-waste quantities



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E-waste quantities 2016:

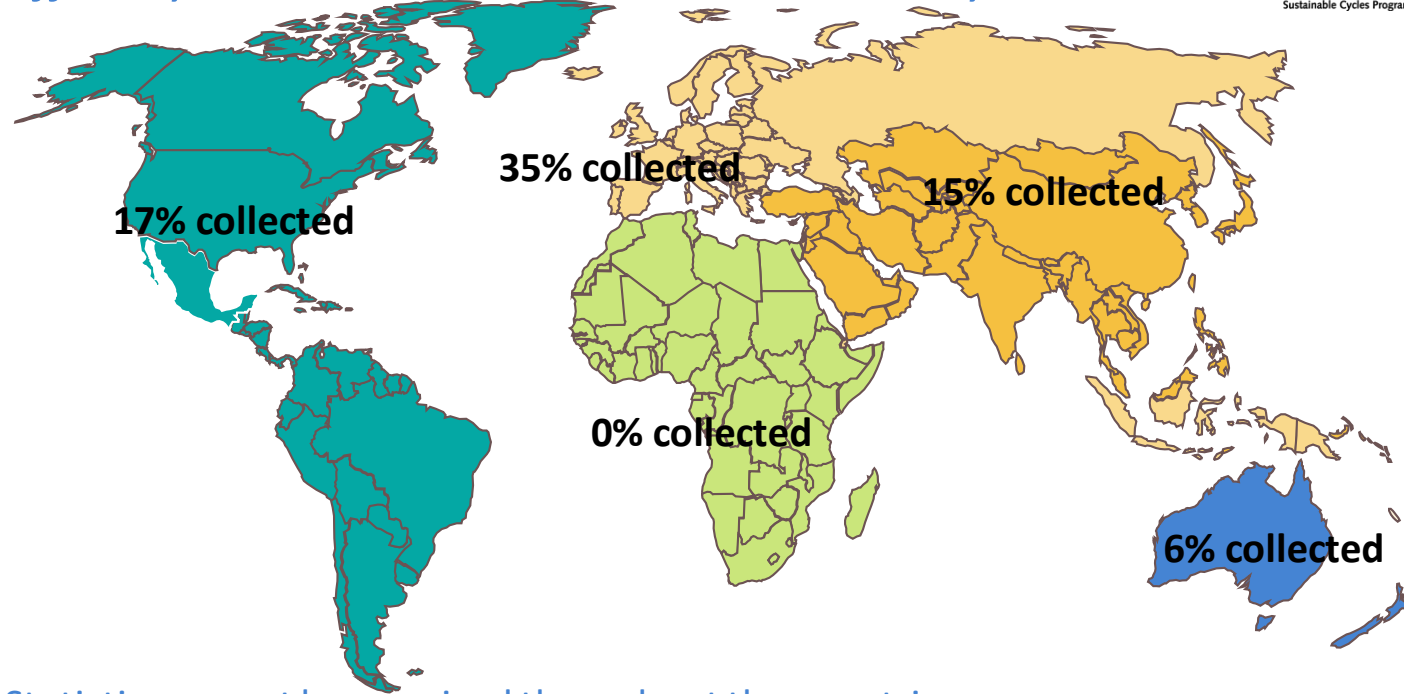
E-waste officially documented to be collected and recycled



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Statistics are not harmonized throughout the countries



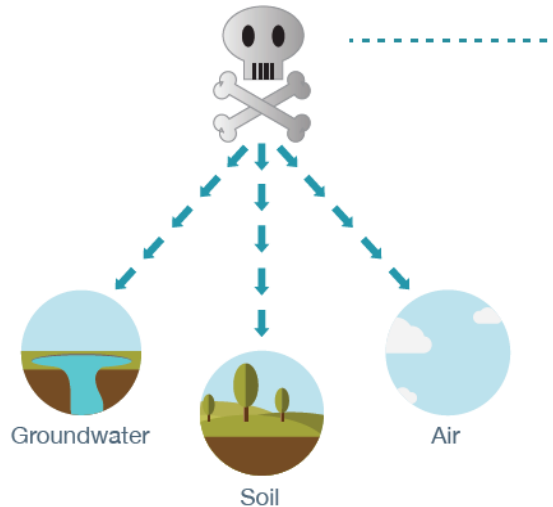
Only **41** countries in the world collect internationally harmonized statistics on e-waste



1. Hazardous materials in e-waste

e.g. fridges, phones, laptops, washing machines, sensors, TVs, lamps

- Heavy metals (such as mercury, lead, cadmium etc.)
- Chemicals (such as CFCs/chlorofluorocarbon or various flame retardants)



E-waste can pose considerable environmental and health risks.



E-waste global problems:



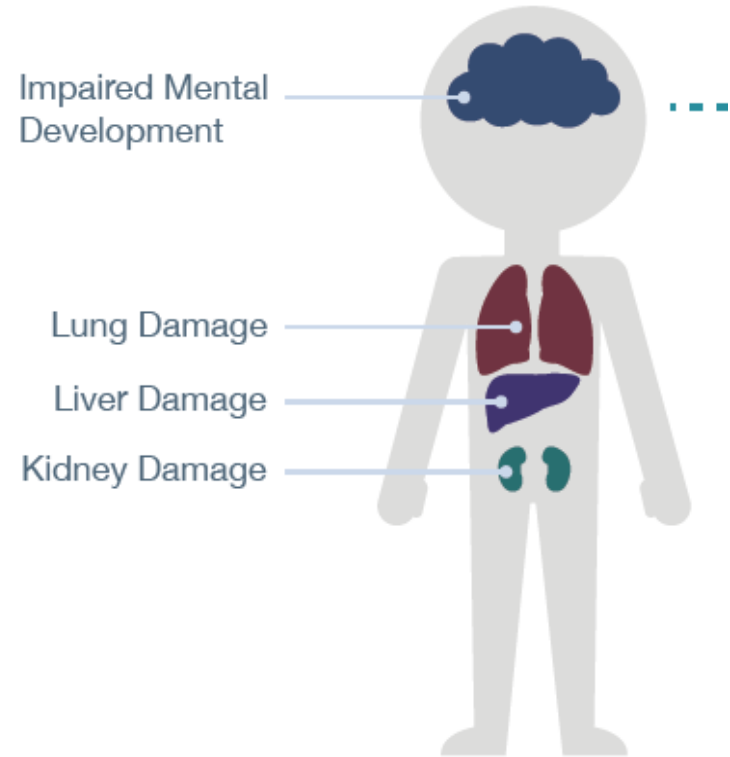
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2. Impact on health

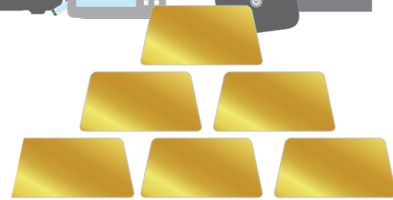
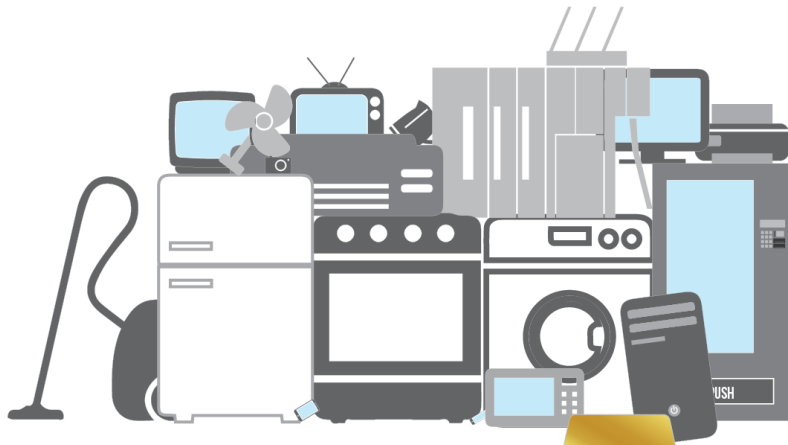
- Exposure to lead
 - Mental development of children, toxic to kidneys
- When burning PVC → dioxins
 - One of the most hazardous carcinogens (cancer)
- Hexavalent Chromium
 - Kidney, liver, DNA
- Brominated Flame retardants
 - Fetal damage
- Cadmium
 - Cancer, toxic to kidneys



E-waste global problems:

3. Losses of valuable material

- Precious metals including gold, silver, copper, platinum and palladium
- Valuable bulky materials such as iron and aluminum, and plastics



Estimated value of raw materials at

55 BILLION EUROS

Realized Statistical Capacity Building



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■ 2017

- UNU/UNSD E-waste Workshop in the East African Community Region

■ 2018

- UNU/ITU Workshop at the Green Standards Week
- UNU national workshop in Jordan
- UNU national workshop in Tanzania
- UNU/UNECE national workshop in Kazakhstan

■ 2019

- UNU/UNEP collaboration in Bosnia Herzegovina
- Validation workshop in Tanzania (13-14 May)

Upcoming capacity building



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■ 2019

- June: Costa Rica/Cameroon together with UNEP
- June: E-waste in SDG training for Uzbekistan (with UNEP/UNECE/FAO)
- July: Southern Africa (with ITU)
- Sept: for MS of the East African Community Organisation - Uganda
- Sept: CIS countries (date and location tbd)
- November: Arab Countries (date and location tbd)

■ 2020

- CIS countries – follow-up training

Use of global e-waste data



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- **SDG Monitoring**
 - 12.5.1. National recycling Rate – sub indicator e-waste
- Global E-waste Monitor (new one to be published early 2020)
- Regional E-waste Monitor (to be published in period 2020-2022)
 - CIS countries (implemented with UNIDO-Russia) support UNECE
 - Arab States(implemented with ITU ARAB Regional Office) support UN ESCWA
 - Latin America
- Regional E-waste Strategy in East Africa Community
- EU Member States – DG Environment implementation of WEEE Directive
- Enterprises (Canon, HP, and various recyclers)
- Investors

Questions

- Your involvement to the projects global e-waste statistics partnership?
- How to improve data for e-waste?

