Regional E-waste Monitor Project CIS + Ukraine, Turkmenistan and Georgia

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10 March 2021
UNEP-UNECE-EAA regional webinar on the use of SDG 12 data for policy-making
Key projects/ activities

1. Policy advice
   - 2007 Review of the EU WEEE Directive
   - 2017 E-waste in Latin America
   - 2020 Common methodology WEEE Directive

2. E-waste quantification studies
   - ProSUM (Prospecting the Urban Mine, 2017)

3. Capacity building and training
   - E-waste Academies (Global, 2009-now)

4. Facilitating International Dialogue
   - Main driver UN E-waste Coalition
   - Global E-waste Statistics Partnership
   - Hosting StEP Secretariat to 2019

5. Co-custodian e-waste SDG indicator
What is electronic waste?

- All appliances working on a battery or a plug
- Valuable substance
- Toxic substances
E-products
Improving quality of life

Challenges
Sustainable consumption and production
Waste Management
Economic supply chain risks

Need materials for:
Clean Energy Transition
Smart Cities

SDG
E-waste has a sub-indicator under SDG
12.5.1 - national recycling rate
12.4.2 - hazardous waste management
CIS Regional E-waste Monitor

- Improve statistics of e-waste
- Analyse statistics policies and national stakeholders
- Publication of Regional E-waste Monitor
- Countries: Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Ukraine, Uzbekistan, Tajikistan, Turkmenistan
- Funded by: German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety, and Umwelt Bundesamt
- Co- funded by UNU, ISWA and ITU
- Implementation by UNU, UNEP
- In collaboration with Focal Points: Ministries of Environment, National Statistical Offices – environment Statistics, ITU Members
Indicators for e-waste statistics

- EEE Placed on Market (kg/inh or tonnage)
- E-waste Generated (kg/inh or tonnage)
- Formal E-waste collected and recycled (kg/inh or tonnage)
- E-waste recycling rate (%)
- Based on international guidelines

**SDG 12.5.1 National recycling rate and tons of material recycled (e-waste sub-indicator)**

The e-waste sub-indicator in SDG 12.5.1 has been defined as:

\[
\text{SDG 12.5.1 Sub-indicator on e-waste} = \frac{\text{Total e-waste recycled}}{\text{Total e-waste generated}}
\]
Methodology for legal & policy assessment

- E-waste management characteristics in country
- Map national Stakeholders
- Key statistics
- Assess legal Framework
- During project, analyse and if possible group during project in three countries
  - Starting countries
  - Emerging countries
  - Established countries
Where are we in the project?

- **Realized**
  - Developed E-waste Statistics Toolkit + translated to Russian
  - Training on toolkit in Moscow Jan 2020 + remote assistance till May 2021
  - Second workshop in November
  - Inventory among stakeholders and literature review

- **Now**
  - Regional analysis phase + validation with countries

- **To come**
  - Final event: May 2021 + first draft of Regional e-waste monitor
  - Publication date Autumn 2021
  - New follow-up activities in preparation
<table>
<thead>
<tr>
<th>Indicator</th>
<th>ARM</th>
<th>AZB</th>
<th>GEO</th>
<th>BLR</th>
<th>KAZ</th>
<th>KYZ</th>
<th>MDA</th>
<th>RUS</th>
<th>TJK</th>
<th>TKM</th>
<th>UKR</th>
<th>UZB</th>
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<td>E-waste legislation</td>
<td>N</td>
<td>N</td>
<td>?</td>
<td>Y</td>
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<td>Minamata Convention</td>
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<tr>
<td>Basel Convention</td>
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# Preliminary Statistics

<table>
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<th>TKM</th>
<th>UKR</th>
<th>UZ B</th>
<th>Total</th>
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<tbody>
<tr>
<td>EEE POM</td>
<td>23</td>
<td>114</td>
<td>40</td>
<td>110</td>
<td>244</td>
<td>18</td>
<td>18</td>
<td>1945</td>
<td>27</td>
<td>65</td>
<td>308</td>
<td>172</td>
<td>± 3 Mt</td>
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<tr>
<td>E-waste Generated</td>
<td>16</td>
<td>60</td>
<td>25</td>
<td>71</td>
<td>148</td>
<td>9</td>
<td>13</td>
<td>1473</td>
<td>13</td>
<td>31</td>
<td>266</td>
<td>120</td>
<td>± 2 Mt</td>
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<tr>
<td>ESM of E-waste (formal collection)</td>
<td>Close to 0</td>
<td>Close to 0</td>
<td>?</td>
<td>23</td>
<td>0.13</td>
<td>Close to 0</td>
<td>?</td>
<td>40-70</td>
<td>0.007</td>
<td>Close to 0</td>
<td>?</td>
<td>Close to 0</td>
<td>± 0.1 Mt</td>
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<tr>
<td>Other E-waste recycling</td>
<td>No official data is available.</td>
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<tr>
<td>Import and export of E-waste</td>
<td>Analysis of Basel convention is under going, but data is surely under covered, and not all countries have reports</td>
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Country profiles

- 6 to 12 pages per country
- Now in development and undergoing validation with countries
Formal e-waste management

- In countries that have EPR (Belarus, Kazakhstan, Georgia, Moldova, Russia) - collection and sorting of electronic waste is mandatory. Other countries have no formal sector on e-waste (except for Uzbekistan).

- Not yet a well-developed system for collecting all e-waste (except for Belarus).

- Not sufficient processing capacity to process all e-waste.

- Some exports: for instance: In Moldova, collected e-waste is sent to Romania for recycling, or specific fractions (such as printed circuit boards) to Russia.

- In parallel with the (sometimes existing official sector), there is a large non regulated (informal) sector.

- Unregulated collection and processing in all studied countries, as it is quite a profitable activity, which is associated with low operating costs compared to official processors.

- Mostly e-waste ends up in landfills with other types of waste, or ends up in the hands of illegal recyclers.
Other e-waste whereabouts

- Repair, what can’t be repaired goes to landfill
- Hoarding (storage at home), until it is discarded
- Discarded with rest of household waste, goes to landfill
- Informal / non-regulated sector → (illegal) scavenging of commercially attractive components or items, and the rest is sent to municipal waste landfills.
Challenges for e-waste

- Various degrees of development and implementation of the regulatory legal framework

- Too little financial potential to collect and environmentally sound management of e-waste

- Little statistics on the generation and processing of e-waste for the development of feasibility studies, economic forecasts, resources in e-waste, environmental damage etc

- Vast majority of e-waste in unregulated / informal sector with simple techniques
  - Environmental damage, loss of resources
Recommendations – Starting countries

- Kyrgyzstan, Uzbekistan, Armenia, Tajikistan, Turkmenistan (tentative)
  - Realizing basic toxic controls
  - Develop e-waste infrastructure development
  - Protection of local workers
  - Collection of the most hazardous items
  - Drafting a e-waste law and getting it passed
    - Map legislation and investigate how e-waste, and which policy model and financing mechanism fits into it
Recommendations – emerging countries

- Russia, Kazakhstan, Georgia, Moldova, Ukraine (tentative)
  - expansion of the initial collection and treatment system
    - Improve collection rates
  - upgrading practices to make the system more mature and efficient
  - modernize technologies and find better treatment options
  - incentivize the recycling sector
    - Improve financing mechanism of e-waste
  - Develop a monitoring framework
Recommendations – established countries

- Belarus (tentative)
  - Find more eco-efficient solutions, and maximize collection to cover all e-waste
    - Improve collection rates to EU levels (85% of all e-waste generated or 65% of EEE POM)
    - Improve the quality of the collection and secure high level of depollution
    - Look at stumbling blocks financing mechanism of e-waste
    - Stimulate an innovative recycling industry
    - Adapt the financial system where it is needed
    - Improve implementation and monitoring
    - Monitoring on e-waste and unregulated e-waste flows
All actors’ + fact based approach

- Stakeholder discussion based on building trust
  - Ministries, ministry of environment, customs, finance, etc
  - Recyclers
  - National Statistical Offices
  - Importers / production industry
  - Potential producer responsibility organisations

- Fact based approach
  - make first e-waste statistics on EEE POM and e-waste generated
  - Map e-waste collection
  - Map unregulated e-waste flows