Environmental Sound Management of E-Waste

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The e-waste problem

Bridging the digital divide

Managing efficiently finite natural resources

Rapid growth of ICTs

Improving quality life

Lack of awareness among consumers and recyclers

Often informal working condition

Rapid growth of e-waste

Negative impact on human health

Environmental hazards and inefficient recovery of harmful materials
E-waste is the fastest growing waste stream

67 million metric tons of electrical and electronic equipment put in the market

53 million metric tons e-waste disposed of worldwide

For every 1 million cell phones that are recycled, 16 tons of copper, 350 kilos of silver, 34 kilos of gold and 15 kilos of palladium can be recovered.

Source: United Nations University and United States Environmental Protection Agency
The best way to deal with e-waste is ... 
... avoid it!

- Designing for easy disassembly and recycling of equipment
- Avoiding use of heavy pollutants
- Minimization of the use of resources
  - Regulations and standards
- Prolonging lifetime of equipment
- E-waste management

Standardization can fill the gap and lead the market
What ITU does to improve environmentally sound management of e-waste...

- **Assist countries** to develop and implement policies on e-waste management
- **Help companies** becoming more sustainable and socially responsible
- **Research** and development
- **Raise awareness**
Leading with vision... .... envisioning a sustainable future

**Raising awareness** on the role of global standards in facilitating an integrated waste management approach to:

- generate decent employment,
- curb health problems,
- cut greenhouse gas emissions and
- recover a wide range of valuable metals including silver, gold, palladium, copper and indium – by **turning an e-challenge into an e-opportunity**.
ITU-T Study Group 5
“Environment & Climate Change”

Lead study group on ICTs and climate change

- Q 13/5 - Environmental impact reduction including e-waste
Ongoing activities of Q13/5

- International standards (ITU-T Recommendations)
- Technical report on life-cycle management of ICT equipment
- Best practices on e-waste management in developing countries including information on country success stories
- Implementation guide on e-waste management
One adapter size fits all

- Saves 82,000 tons of e-waste per year
- Saves at least 13.6 million tonnes of CO2 emissions annually
Recycling Rare Metals in ICT Products

Recommendation ITU-T L.1100 provides information on the recycling procedures of rare metals in ICT goods.
Research & development:
Identifying standards and policy needs

An Energy-Aware Survey on ICT Device Power Supplies
An outline of the various EOL stages (and accompanying legislation), and support for creating a framework for environmentally-sound management of EOL ICT equipment.

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Global Portal on ICTs, Environment and Climate Change

Launched in February 2014
Next steps for policy makers

- Policy makers should have **long-term sustainability ambitions**
  - Consider e-waste management in the **design** of ICT policies
  - Implement **international standards** at the national level
  - Encourage concerted cooperation in handling e-waste at the national, regional and international level

- Foster public-private **partnerships**

- Raise **awareness** at consumer level

- Encourage concerted cooperation in handling e-waste at the national, regional and international level

Get engaged in ITU’s activities!
Background Information
Resolution 79 – “The role of telecommunications/ information and communication technology in handling and controlling e-waste from telecommunication and information technology equipment and methods of treating it”.

- Consented at World Telecommunication Standardization Assembly (Dubai, 2012);
- Contribute to alleviate the negative impact of e-waste on the environment and health.
ITU-T Recommendations

Power Supply series

- Recommendation ITU-T L.1000: Universal power adapter and charger solution for mobile terminals and other hand-held ICT devices.
- Recommendation ITU-T L.1001: External universal power adapter solutions for stationary information and communication technology devices.
- Recommendation ITU-T L.1002: External universal power adapter solutions for portable information and communication technology devices.

Batteries

- Recommendation ITU-T L.1010: Green batteries solution for mobile phones and other hand-held information and communication technology devices.

E-Waste

- Recommendation ITU-T L.1100: A method to provide recycling information of rare metals in ICT products.
- Recommendation ITU-T L.1101: Measurement methods to characterize rare metals in information and communication technology goods.
Links & Additional Information

- ITU-T/SG5 “Environment & Climate Change”
  itu.int/ITU-T/studygroups/com05/

- ITU-T and Climate Change
  itu.int/ITU-T/climatechange

- ITU Symposia & Events on ICTs and Climate Change
  itu.int/ITU-T/worksem/climatechange