Gender Dimension of e-Waste Management

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BASEL
CONVENTION
Controlling transboundary movements of hazardous wastes and their disposal

ROTTERDAM
CONVENTION
Sharing responsibility in the trade of hazardous chemicals

STOCKHOLM
CONVENTION
Protecting human health and the environment from persistant organing pollutants (POP)

Picture: Kai Loeffelbein

Consumed electrical and electronic equipment (EEE) will generate:

A rapidly growing problem:

The volume of obsolete PCs generated in developing regions will exceed that of developed regions by 2016-2018.


Picture: Kai Loeffelbein

By 2030, the obsolete PCs from developing regions will reach 400-700 million units, far more than from developed regions at 200-300 million units.

Yu et al., 2010

BASEL CONVENTION

Preambule

…

to protect, by strict control, *human health* and the environment against the adverse effects which may result from the generation and management of hazardous wastes and other wastes,

…

Stockholm Convention Preamble:

STOCKHOM CONVENTION

The Parties to this Convention,

…

Aware of the *health concerns*, especially in developing countries, resulting from local exposure to persistent organic pollutants, in particular *impacts upon women and, through them, upon future generations*,

…

E-waste recycling:

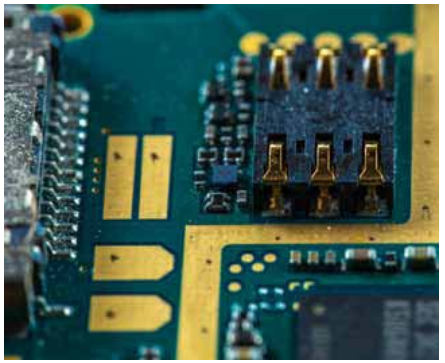
- Millions of poor people in developing countries living from valuable materials in end-of-life e-products or e-waste
- Introduction of proper recycling system has to find a way to

  involve the informal sector

  without harming health and environment

E-waste as source of various chemicals:

- Over **1,000 different chemicals,** among others:
  - **Iron, copper, gold, silver, rare metals**
  - **Heavy metals** (lithium, lead, cadmium, mercury, etc)
  - **Polychlorinated biphenyls** (PCBs)
  - **Brominated flame retardants**
  - **Plastics** components



- Open and uncontrolled burning releases large amounts of **dioxins and furans** to the environment

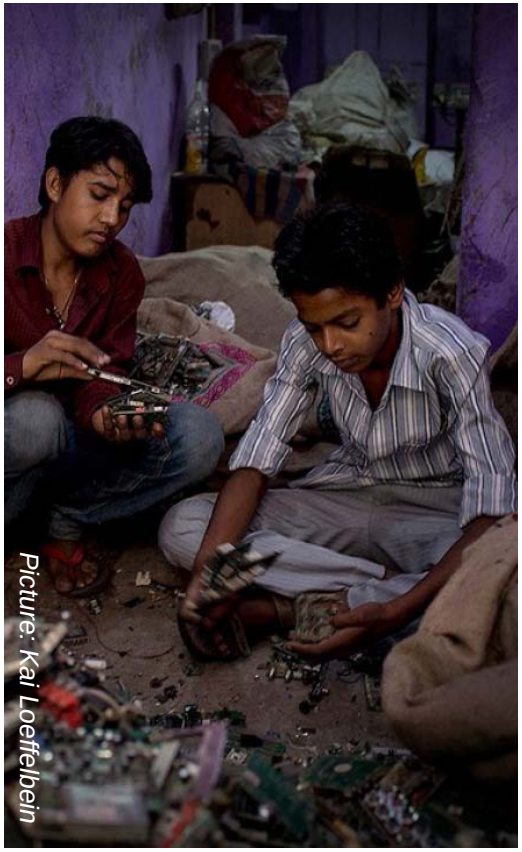
Challenges:

- Backyard recycling with high environmental and health impacts and low yields /efficiency
- Soil and water contamination from chemical disposal
- Toxic emissions from burning of materials,
  e.g. the body burdens of dioxins in people from an e-waste processing sites were ranked among the highest when compared to an international basis


Picture: Kai Loeffelbein

Challenges:

- Children involved in burning activities and manual dismantling
- Children living in or close to houses with recycling activity
- Children manually sorting and picking of recyclable, reusable materials from mixed wastes
- Mother's intake and body burden is transferred across the placenta and through breast milk


Picture: Kai Loeffelbein

Gender issues in e-waste management in Africa (I)

- Crude e-waste management in Africa
- The most vulnerable groups are women and children –

  30% of workforce in crude e-waste processing business
- Issue of child labour

Gender issues in e-waste management in Africa (II)

- Women, men and children are involved in e-waste scavenging and collection from refuse dumps without any personal protection equipment
- Girls also serve as providers of water to boys who burn cables to recover copper wire
- Health challenges for girls and women directly and as mothers of tomorrow
- Inter–generational long-term effects

Opportunities:

- E-waste has high recycling value
  - Plastics
  - Ferrous metal
  - Non-ferrous metals
  - Precious metals
  - Special metals

- E-waste recycling is economically viable and attractive

Socio-economic impacts:

Daily income of:	*(US$)*
Collectors on dump sites	0.2 – 0.5
Door-to-door collectors	1.7 – 3.3
Refurbishing workshop employee	2.2 – 3.4
Refurbishing workshop owner	67.2 – 222

SBC: Where are WEEE in Africa

Conclusions:

- The collection, segregation and primary dismantling of non-hazardous fractions of e-waste can be organized with relatively cheap, simple but safe processing methods.
- Collection, dismantling, refurbishment and recycling of used and end-of-life e-products provides jobs to thousands of people, women and men.
- The more complex material recovery and recycling processes have to be concentrated in plants that provide for a high level of worker protection and emission control.

"Let us remember that the environment is not a gift from our parents but a loan from our children.

Inter-generational equity requires that we must all cooperate and work together to ensure a clean, healthy and safe environment for children unborn."

Professor Oladele Osibanjo
Director, Basel Convention Coordinating Centre
Ibadan, Nigeria
World Environment Day 2013

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Thank you!