E-waste in emerging markets, challenges and opportunities

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Take Back Regulations Manager
To this...

E-waste is a resource

Create Employment Opportunities

Managed in a safe and environmentally sound manner!
From this...

Outdoor dumping and landfilling
To this...

All e-waste collected and treated responsibly
Extended Producer Responsibility Principle (EPR)

It aims to ensure that businesses who place products on the market take responsibility for those products once they have reached the end of their life.

Solutions should be based on EPR...
Producers alone cannot prevent this
Collaboration is essential!

- The solution will revolve around changing mindsets
- Stimulating drivers for sustainable business models to recover value from all e-waste
- Creating markets for fractions of e-waste which currently have no market

EPR is also about enabling these developments
E-waste as a resource!

E-waste becomes a resource

Material Prices

Considered by many as valuable
Urban mining

Gold in 1ton PC’s Is equivalent to Gold in 17 tons of ore

Bleiwas, 2001
Urban mining

Gold in 1 ton of PCs is equivalent to Gold in 17 tons of ore

Bleiwas, 2001
WEEE collections in some African countries

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>E-waste Generated (t/yr)</th>
<th>Thereof Collected (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nigeria</td>
<td>2010</td>
<td>1,100,000</td>
<td>50%</td>
</tr>
<tr>
<td>Ghana</td>
<td>2009</td>
<td>179,000</td>
<td>96%</td>
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</tbody>
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Collection appears to be high in Africa due to the involvement of the informal sector

**BUT**

High collection rate **does not mean** high material recovery

Source: UNEP/SBC/EMPA/Oko-Institute
So what is going wrong?

How can we prevent this?
Three issues about e-waste management today...

- Un-safe Techniques ➔ Hazardous
- Limited infrastructure ➔ material loss
- Non valued fractions dumped

Solutions need to tackle all three issues

End User ➔ Informal Collectors ➔ Recycling to High Standards ➔ Local & Global Market

All e-waste treated properly
Solutions

E-waste policy in Africa needs to be approached from a different angle

• Stimulate development of markets
• Involves all stakeholders
• Collection program with informal sector
• Incentives to encourage collection of whole e-waste
• Maximize collection of all materials
• Applying proper standards
HP’s Africa E-waste Program since 2007

- Research
- Education
- Establish recycling facilities
African Informal E-waste Alliance

OEMs

- Blue print for Africa revolved around key principles
- Engaging with authorities

Objectives: Develop and scale up practical solutions for e-waste management on the ground!
Key Principles to proper regulation

• E-waste = resource → Involvement of the informal sector creates jobs

• Improper treatment is the issue → Need recycling standards

• Enforcement is essential!
Some fractions or products may be ‘problematic’. Producers may need to finance an incentive mechanism to ensure they are collected.

Problematic Products may need incentive mechanism:
- CRT from TV/Monitors
- CFC from fridges
- Fluorescent Tubes
Producers do not have full control → collaboration is key to enable EPR
Producer Responsibility when WEEE has a Value?

- Producers have an important role in creating incentives for the collection of problematic fractions.
- EPR is about creating and stimulating viable competitive markets for e-waste material, recovery and recycling.
- Working with stakeholders creating markets at the source of the problem.
Looking ahead...

Through proper standards, mechanisms and enforcement...

...all e-waste will be collected and treated by 3rd parties as a profitable business...

...but we are not there yet...and there is much work to do to reach this vision...
Thank you

For more information: Visit hp.com/recycle

Or contact daniel.seager@hp.com