Informal e-waste recycling sector in Ghana: An in-depth socio-economic study

Going Green - CARE INNOVATIONS 2010

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About Öko-Institut

- also named “Institute for Applied Ecology” -

The Öko-Institut is a leading European research and consultancy institution working for a sustainable future. It is a value driven non-profit-organisation and employs more than 120 staff at three locations: Freiburg, Darmstadt and Berlin.

The Öko-Institut has five research Divisions:

- Energy & Climate Protection
- Infrastructure & Enterprises
- Nuclear Engineering & Facility Safety
- Sustainable Products & Material Flows
- Environmental Law & Governance
Activities in Ghana and West-Africa:

- UNEP E-waste Africa Project
  (UNEP-SBC, BCCC, EMPA, Öko-Institut)

- Socio-economic assessment and feasibility study on sustainable e-waste management in Ghana
  (VROM-Inspectorate, NVMP, EPA-Ghana, GreenAd, Öko-Institut)

In-depth socio-economic study on the sustainability impacts of the informal e-waste recycling sector in Ghana

Feasibility study for developing local niche markets for environmentally sound management
Background

The Digital Dump
Exporting Re-use and Abuse to Africa

Poisoning the poor
Electronic waste in Ghana

media release version
24 October 2005
The Greenpeace Network
A Project of Greenpeace
Socioeconomic indicators

A: Impacts on employees
A 1 Health & safety
A 2 Freedom of association, right to collective bargaining / workers' participation
A 3 Equality of opportunity and treatment / fair interaction
A 4 Forced labour
A 5 Child labour
A 6 Remuneration
A 7 Working hours
A 8 Employment security
A 9 Social security
A10 Professional development
A11 Job satisfaction

B: Impacts on the local community
B 1 Health & safety
B 2 Human rights
B 3 Indigenous rights
B 4 Community engagement
B 5 Social & economic opportunities

C: Impacts on society
C 1 Unjustifiable risks
C 2 Employment creation
C 3 Contribution to national economy
C 4 Contribution to national budget
C 5 Corruption
C 6 Impact on conflicts, including interference with sensitive political issues
Mass Flow Chart
Results of the socio-economic study
Health & safety
Freedom of association & right to collective bargaining
Largely informal sector, however presence of scrap dealers association, refurbishers association, repairers association etc.

Employment & social security
Absent, no written agreements → high employment turnover; however, some family-based arrangements do exist

Equality of opportunity & treatment
Almost exclusively men’s business; young males preferred, av. age early 20s

Child labour & forced labour
Child labour mostly in incineration activities, but also in dismantling
Young boys of about 5 yrs. involved; mostly between 11 to 14 years
**Impact on workers**

### Remuneration

<table>
<thead>
<tr>
<th></th>
<th>Refurbishers</th>
<th>Collectors</th>
<th>Recyclers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remuneration per day (in US$)</td>
<td>(3.3) 6.3–8.3</td>
<td>(2.0) 2.3–4.6</td>
<td>(2.0) 5.8–9.5</td>
</tr>
<tr>
<td>Remuneration per month (in US$)</td>
<td>(100) 190–250</td>
<td>(60) 70–140</td>
<td>(60) 175–285</td>
</tr>
</tbody>
</table>

*Figures in brackets indicate the information from Anane 2010*

**Economic indicators - Ghana**
- GDP US$ 713 in 2008
- 30% of total population in Ghana lived with less than US$ 1.25/ day
- 54% with less than US$ 2/ day
- 29% below national poverty line

**Remuneration – WEEE China**
- Average daily salary → US$ 3.63
  (Öko-Institut 2007)

→ Income has to be shared with family members
→ Income data related directly to productive economic activity
→ It is difficult to sustain a family solely with informal WEEE business
→ However, WEEE-workers have access to rapid cash flow, an aspect which is absent in agricultural-led households in North Ghana
Impact on workers

**Working hours**

<table>
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<th>Collectors</th>
<th>Recyclers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working hours per day</td>
<td>8–10</td>
<td>10–12</td>
<td>10–12</td>
</tr>
<tr>
<td>Working hours per month</td>
<td>210–260</td>
<td>300–360</td>
<td>300–360</td>
</tr>
</tbody>
</table>

**International conventions**
- Not in excess of 48 hours per week
- At least 1 day off per week
- Voluntary overtime: Max. 12 hours per week

**Job satisfaction**
- Very subjective, but…
- Apart from meeting basic needs, regular remittances to families & relatives
- Set up own business only after few years of work
- Cash flow, as opposed to traditional modes of livelihoods, such as agriculture
Impacts on society

Employment creation

<table>
<thead>
<tr>
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<th>Refurbishers</th>
<th>Collectors</th>
<th>Recyclers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed in Accra</td>
<td>10,000–15,000</td>
<td>4,500–6,000</td>
<td></td>
<td>14,500–21,000</td>
</tr>
<tr>
<td>Employed in Ghana</td>
<td>14,000–24,000</td>
<td>6,300–9,600</td>
<td></td>
<td>20,300–33,600</td>
</tr>
</tbody>
</table>

- 0.2% to 0.3% of the total labour force in Ghana
- 0.5% to 0.8% of the total population in Ghana
## Contribution to national economy

<table>
<thead>
<tr>
<th>Remuneration per month (in US$)</th>
<th>Refurbishers</th>
<th>Collectors</th>
<th>Recyclers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>190–250</td>
<td>70–140</td>
<td>175–285</td>
<td>435–675</td>
<td></td>
</tr>
<tr>
<td>Remuneration per year (in US$)</td>
<td>2,280–3,000</td>
<td>840–1,680</td>
<td>2,100–3,420</td>
<td></td>
</tr>
<tr>
<td>Number of people employed in refurbishing and e-waste recycling sector in Ghana</td>
<td>14,000–24,000</td>
<td>6,300–9,600</td>
<td>20,300–33,600</td>
<td></td>
</tr>
<tr>
<td>Contribution to national economy per year (in US$)</td>
<td>Remuneration per year (in US$) multiplied by the number of people employed in refurbishing and e-waste recycling sector in Ghana</td>
<td>105,966,000–268,128,000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- 0.6% to 1.6% of the GDP in 2007
Impacts on neighbouring communities
Impacts on neighbouring communities
Future e-waste management systems in Ghana need to comply with the following principles:

- Significantly reduce environmental impacts
- Significantly reduce health risks for workers and neighbouring communities
- Preserve the jobs of collectors and recyclers already engaged in this sector
- Enable the implementation of social and environmental standards
Thank you for your attention!

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