

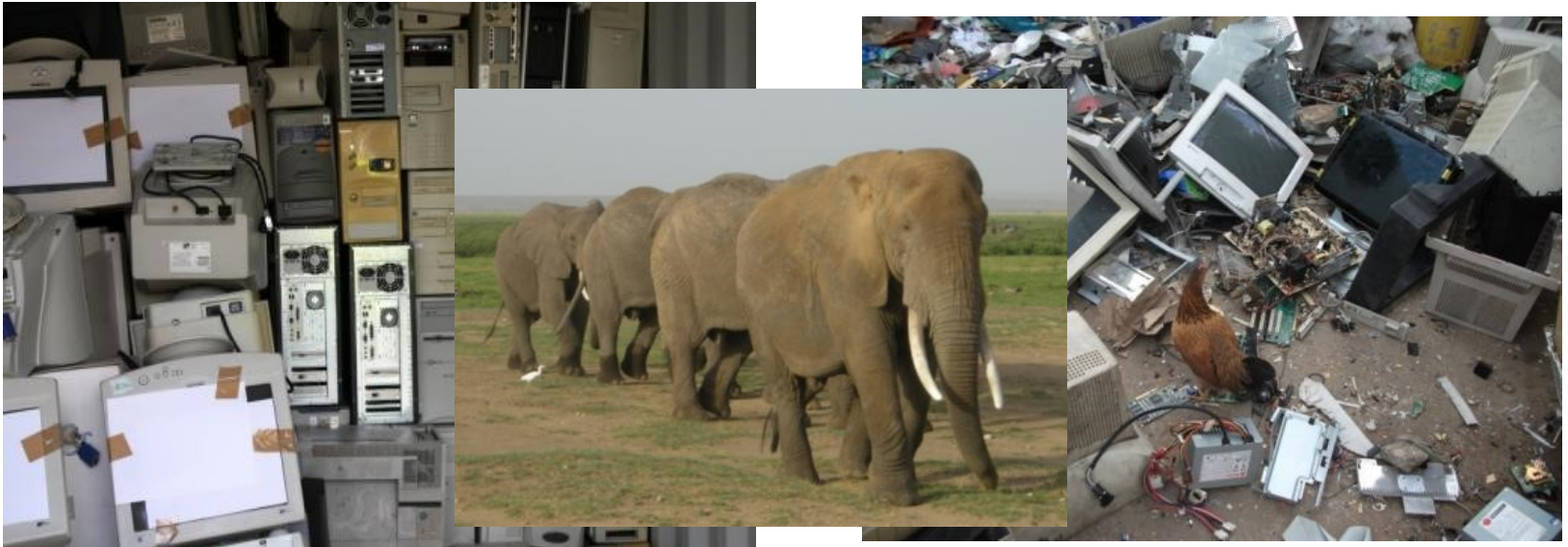
WEEE – The African Dimension



Prof Margaret Bates
The University of Northampton

What is the problem ?

- 41.5 million tonnes in 2011 to 93.5 million tonnes in 2016
- 40-50 million tonnes produced worldwide annually
- UK produces 1m tonnes per annum.
- Increasing 3 x faster than other waste streams



- The import and trade of used EEE is in support of the UN Millennium Development Goals as a means to foster the use of ICT for sustainable development.
- Volume of obsolete PCs generated in developing regions will exceed that of developed regions by 2016 – 2018.
- Estimate that by 2030 developing countries will be discarding 400-700m obsolete PCs per year compared to 200-300m in developed countries.



According to Basel Action Network (BAN 2005) study:

- Nigeria imports about 500,000 used computers annually through Lagos alone.
- 25% of the imports are functional used computers while the remaining 75% was junk or unserviceable.

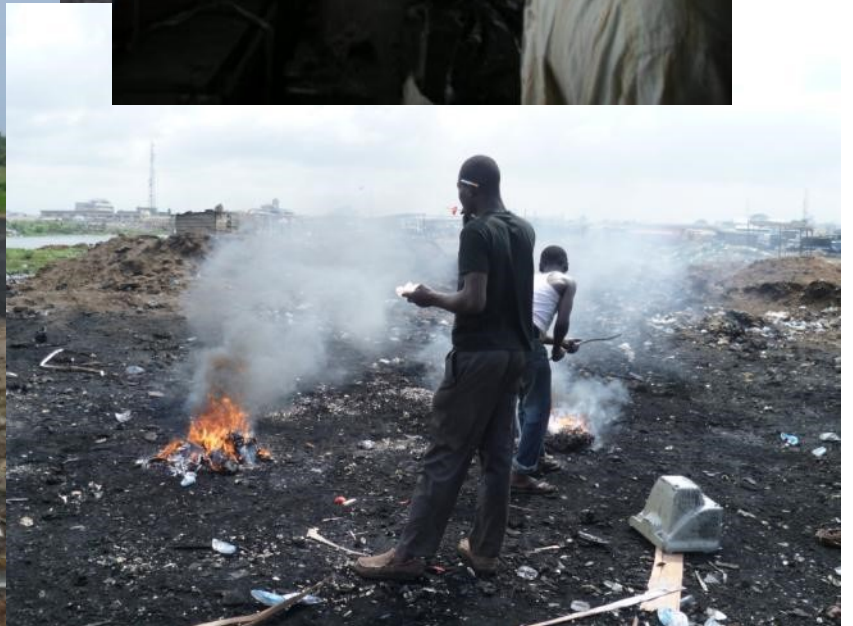
Environment Agency UK

- Over 11,000 shipping containers packed with electrical items were exported from the UK to Africa in 2009
- An estimated figure of 74,900 tonnes of electrical items to Africa in 2009
- Of the 11,000 containers it is not known if the cargo was electrical items or waste electrical items
- Information from container inspections in 2009 suggests that 1 in 8 of these shipments was waste

Basel Convention 2011

- Studies in Ghana revealed that in 2009 around 70% of all imports were used EEE.
- 30% of the used EEE imported was determined to be non-functioning (e-waste): half of this amount was repaired locally and sold to consumers and the other half was unrepairable.
- Nigeria dominates the region in the total amount of used and new EEE imports, total number of EEE in use and the subsequent total amount of e-waste generated.
- Collection rates vary among the countries and reach up to 95% in the case of Ghana.
- Almost all of the collected material reaches the informal recycling sector.





E- Waste Problem

- Historically meant illegal export of ewaste from developed to developing countries.
- There has been a lot of focus on this illegal traffic and as a result of the activities of regulators and others this trade is now reducing.



Export of e-waste

Export of e-waste



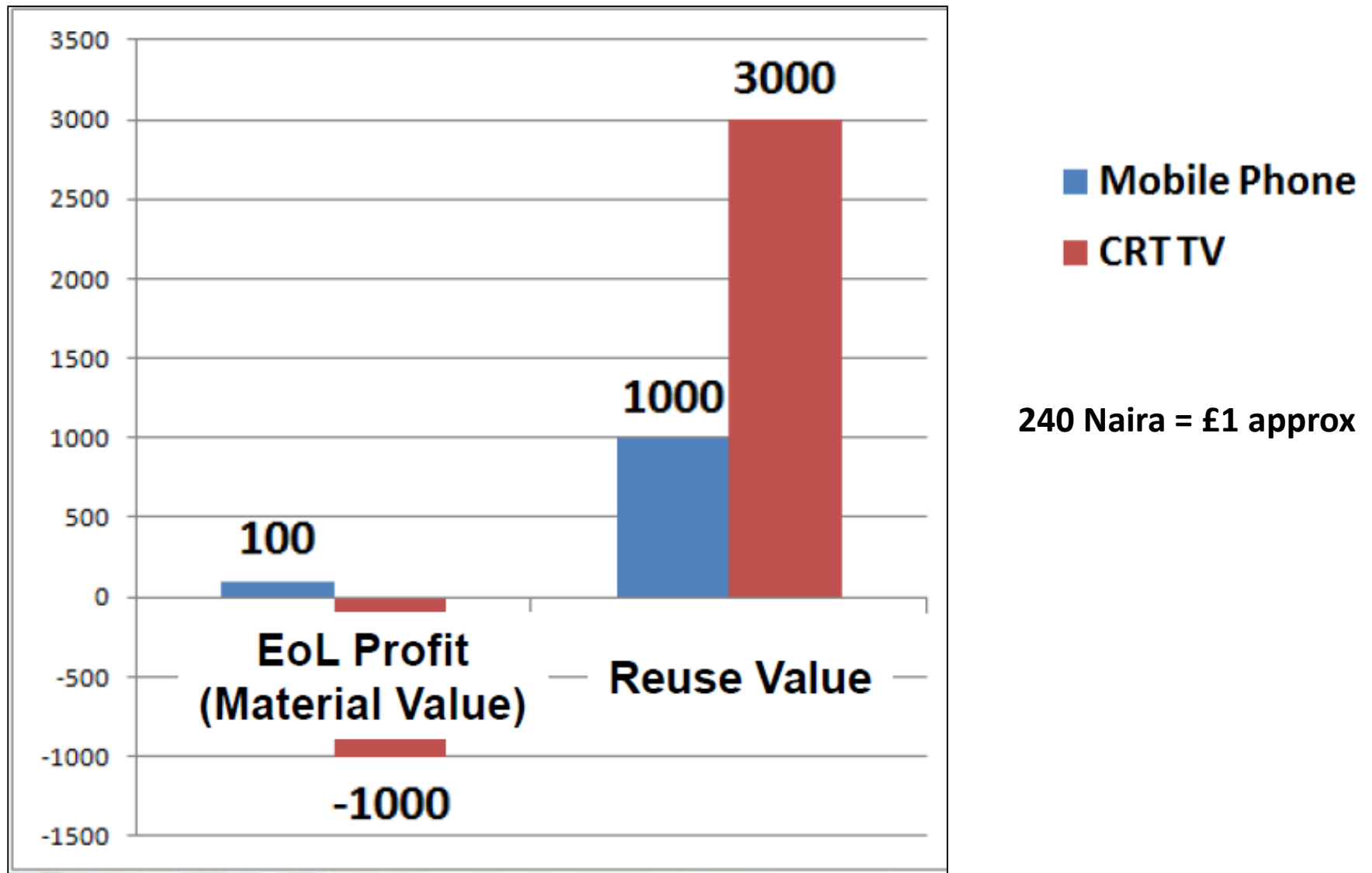


The use of EEE is still low in Africa compared to other places but in the last decade:

- the penetration rate of personal computers has increased by a factor of 10,
- the number of mobile phone subscribers has increased by a factor of 100.

The penetration rate signifies that due to the intense trade of used EEE, people have better access to lower priced EEE.

Prices of Untested Equipment (Naira)



Source: UNU comparing Germany and Nigeria

- In some African countries 80 – 90% of the population cannot afford to buy new equipment
- It doesn't matter whether equipment has been made locally in country, imported new or imported second hand there will still be an ewaste problem unless you have a recycling solution



What's Being Done?

Export

- Basel Convention
- PAS141 (UK)
- Intelligence led investigations
- Scanning of suspected containers

Import

- Registration of importers
- Guidelines for importing used EEE
- Bamako Convention
- Legislation
- Intelligence led investigations



Basel Convention

To ensure that hazardous and other wastes are managed and disposed of in an environmentally sound manner (ESM).



To this end, Parties are expected:

- to minimize the quantities that are moved across borders,
- to treat and dispose of wastes as close as possible to their place of generation and
- to prevent or minimize the generation of wastes at source.

Strong controls have to be applied from the moment of generation of a hazardous waste to its storage, transport, treatment, reuse, recycling, recovery and final disposal.

Bamako Convention on the Ban on the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa

- The *Bamako Convention* is a treaty of African nations prohibiting the import of any hazardous (including radioactive) waste, and has been ratified by 24 nations.
- The objectives of the Convention are designed to protect both the environment and human health from dangers posed by hazardous wastes by reducing their generation to a minimum.
- All participating nations are required to prohibit the import of all hazardous wastes, for any reason, into Africa from other continents.
- The impetus arose from the failure of the Basel Convention to prohibit trade of hazardous waste to less developed countries, and from the discovery that developed nations were exporting toxic wastes to Africa

PAS 141 Reuse of used and waste electrical and electronic equipment (UEEE and WEEE)

The main aims of this are to:

- a) encourage the reuse of WEEE as promoted by the WEEE Directive
- b) reduce the amount of WEEE sent to landfill and incineration by diverting WEEE to be prepared for reuse;
- c) provide a framework for assuring consumers of the quality and safety of REEE as differentiated from WEEE and UEEE that has not been prepared for reuse;
- d) provide a framework for assuring manufacturers that the placing of products on the market for reuse will not adversely affect their brands or reputations for safety and quality;
- e) deter the illegal export of WEEE under the guise of sham reuse;
- f) provide a tool for identifying REEE that has been subject to the preparing for reuse process set out in this PAS;
- g) encourage job creation in organizations involved in preparing WEEE and UEEE for reuse.

Nigerian National Environmental (Electrical/Electronic, Sector) Regulations

- Import of UEEE –
 - Of comparative model of equipment
 - Fit for purpose
 - Functional and not scrap
 - Does not show waste characteristics
 - Properly packaged
- Ban on import of:
 - EoL, unusable, unserviceable EEE
 - CRTs
- Registration of importers



Nigerian National Environmental (Electrical/Electronic, Sector) Regulations

- Collection centres must ensure that ewaste:
 - Not stored longer than one year on site
 - Not disposed in trash receptacles or at a dumpsite and or landfill
 - Collected for recycling
 - Is not subject to open burning
- Must not
 - Burn ewaste
 - Dispose of with municipal waste
 - Dispose at dump sites, landfill, water body etc
 - Break CRT tubes in an unsound environmental manner
 - release CFCs
 - Leach precious metals with acids and other hazardous wastes



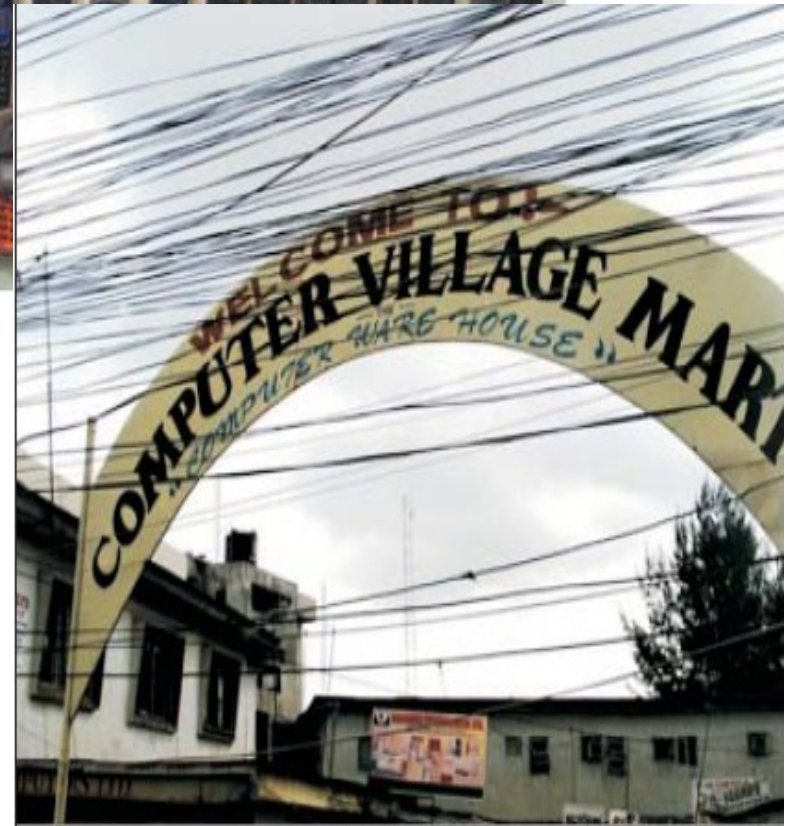
For Goods to be legally shipped from Europe they must:

- Be in functional order
- Not contain a substance that is prohibited by law
- The age of the item is reasonable (relatively new technology)
- The outward /external appearance of the item does not show any waste characteristics
- The packaging/packing is sufficient for protection during transport, loading and unloading



Export of Used EEE





Second hand markets in Lagos

Used EEE On Sale: Lagos



Used EEE For Sale





Disposal at Open Dumps



Open Burning



2009 / 10

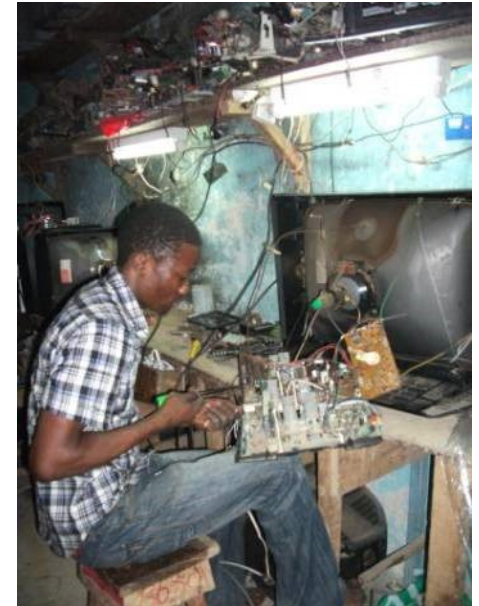
Addressing the Education and Training Needs of An Increasingly Environmentally Regulated Africa

- June 2010 Workshop 1 - Lagos Airport Hotel. Basel Centre and University of Northampton
- July 2010 Workshop 2 – Lagos Airport Hotel. Basel Centre, University of Northampton, Reclaimed Appliances, Hewlett Packard



Presentations

- Electronic waste - Nigerian perspective
- Ewaste problem
- Legal import of used goods (UK position)
- Health effects



Workshop 2- ESM

- Same delegates (limited numbers)
 - Hewlett Packard
 - Reclaimed Appliances
 - Learning Light
- Presentations
 - Safe Disassembly
 - Videos
 - Testing
 - Interactive guides
 - Collection
 - Entrepreneurship
- Donations of PPE and testing equipment



2010

- Meeting with NESREA in Abuja
***Nigerian National Environmental
(Electrical/Electronic, Sector) Regulations***



2011

- February – Eko International Ewaste Summit – Lagos, Nigeria
- OEM Alliance!
- Panorama



2012

- March 2012 Pan African Ewaste Forum – UNEP, Nairobi

- June 2012 UNU Ewaste Academy – Accra, Ghana

- Kenya
- Nigeria
- Benin
- Ethiopia
-

- September 2012 AMCEN – Arusha, Tanzania



2013

- Capacity Building - Kenya





east african compliant recycling (EACR)

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LEAPFROG EAST AFRICA IN WASTE MANAGEMENT

By turning Africa's e-waste into opportunities instead of hazards, we are creating jobs, cleaning the environment and protecting human health.

Units 8, 9, 14, 15 Mombasa Road (Next to Mombasa Cement), Athi River, Kenya

v2.0

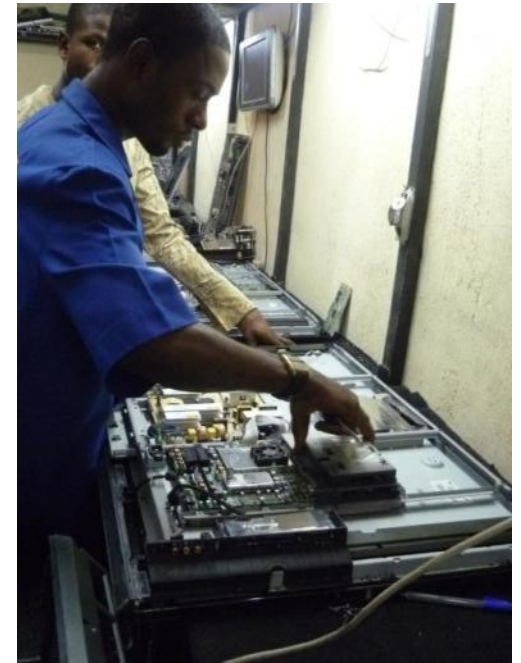
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Solution - Regional

- access to local and global market is key, i.e. waste fraction can be exported
- treatment facility permitting
- enforcement: level playing field for ALL producers & recyclers
- producer funding mechanism for problematic fractions
- treatment facility & collection network set up costs funding



From this



To this



Or this





Thank You

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