

US EPA E-waste Efforts in Ethiopia

BCRC-CAM and ITU E-waste Workshop
El Salvador
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Vendor at the Merkato in Addis Ababa



Circuit boards removed from old computers

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Background

- Ethiopia World Bank Project (2004-2010) focused on increased access to communication technology
- Computer and refurbishment training (CRTC) established to increase computer literacy
- Demanufacturing facility (DMF) in Akaki established next to CRTC to address waste issue

E-waste in Ethiopia

- Overall lack of data on generation, collection, import and export of e-waste
- Oko-Institute and PAN-Ethiopia study
 - Use of electronics low compared to other countries but growing quickly – 4,300 tons in 2011
 - Manufacturing includes mostly mobile phones though most imported illegally due to high tax
- E-waste regulation and national e-waste strategy under development
- Downstream markets include – steel plants, plastics recycling; no copper, aluminum, CRTs or printed circuit boards
- Formal Collection: service centers for manufacturers of cell phones; computer refurbishment and training center; demanufacturing facility
- Informal collection: not significant right now

US EPA and StEP Engagement

- EPA and StEP formed an official partnership in 2011 to work jointly on e-waste issues
- StEP provides a global platform for engagement with key partners & serves as central repository of information
- StEP provides scientific and academic perspectives, not political

E-waste Recycling and Computer Refurbishment and Training Facility in Akaki

- Located 20km from Addis Ababa
- Computer training and refurbishment facility receives donations from the UK
- DMF does pre-processing of obsolete ICT equipment through dismantling and sorting
- No output to downstream markets yet, mostly stored (18 t of steel scrap and 6.8 t of mixed plastic at facility)
- New facility under construction nearby to increase capacity
- No hazardous waste disposal site or waste incinerator in Ethiopia

Establishment of Ethiopia E-waste Management Working Group



Key Players

- Ethiopian organizations:
 - Government – Environmental Protection Authority, Ministry of Communication and Information Technology, Standards Authority
 - Civil Society – PAN Ethiopia, Forum for the Environment, Institute for Sustainable Development, ENDA Ethiopia
 - Academia – Addis Ababa University
 - Industry - Ethiopia Plastic, Ethiopia Iron and Steel
- International organizations: StEP, UNIDO, UNU, Cascade Asset Management LLC, University of Limerick, Oeko Institute, IBLF, USEPA

GEF Project

- GEF awarded US\$1 million to Ethiopian government in late 2012 for e-waste management project
- Project falls under sound management of chemicals beyond POPs and SAICM objectives
- UNIDO is executing agency with StEP playing major technical role
- Builds off of StEP-EPA work
- Utilizes EEWoG as key steering and advisory structure
- Focus on scaling up DMF capacity, establishing e-waste management system (collection, preprocessing, dismantling, end-processing)
- Regional approach targeting cooperation with similar e-waste related activities in other East-African countries

Photos



Entrance to compound with Computer Refurbishment and Training Center and Demanufacturing Facility



Computer Refurbishment and Training Facility - CRTC



Demanufacturing Facility (DMF) located next to CRTC

Computer Refurbishment and Training Center



Chris Frasier of IBLF , which imports donated equipment, speaks with Ethiopian and international visitors.

CRTC



Donated equipment from the US or UK ready for sorting and refurbishment or dismantling.



Donations include old 5 ¼" and 3 ½" disk drives.



Worker at a “cleaning” station.



Front view of CRTC.

Demanufacturing Facility



CRTs lined up for dismantling while worker explains process.



Neil Peters-Michaud of Cascade Asset Management in Wisconsin standing next to dismantled steel from computer hardware.

Stored components



Circuit boards awaiting a destination.



Plastics awaiting a destination.

Dismantled CRTs



Cathode ray tubes separated from the plastic and awaiting a destination.



Copper wiring from CRTs piling up.

THANK YOU

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