US EPA E-waste Efforts in Ethiopia

BCRC-CAM and ITU E-waste Workshop El Salvador March 21, 2013



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

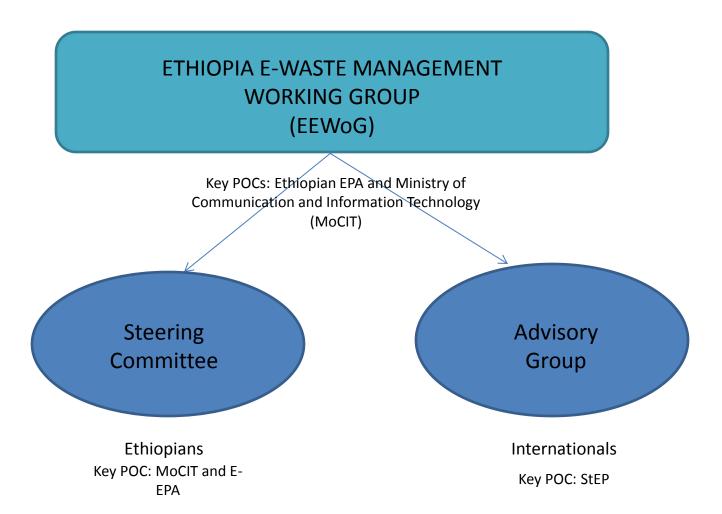
US EPA and StEP Engagement

- 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 respository 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 ewaste 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.

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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