

TACKLING THE GLOBAL E-WASTE PROBLEM: CONTRIBUTIONS OF THE AFRICAN BASEL CONVENTION REGIONAL AND COORDINATING CENTRES

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Faces of Africa's E-waste management



Global transboundary movement of UEEE and WEEE



Global generation trend calls for concern!

Chart 6.4: E-waste growth rates per category

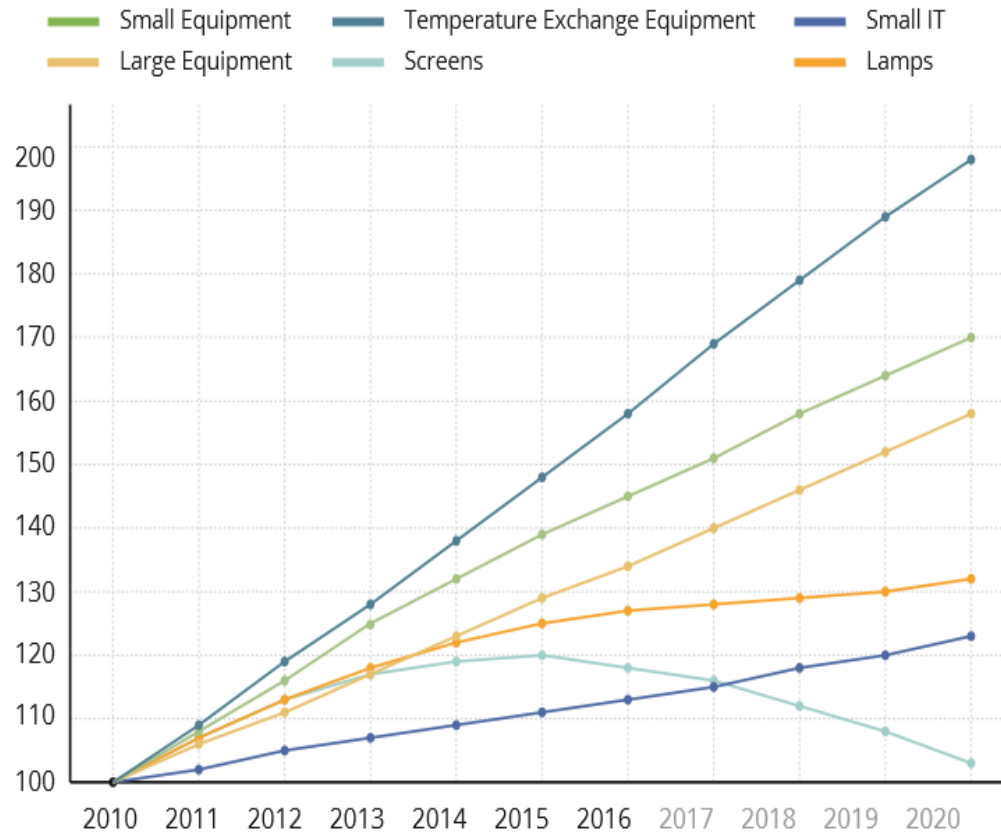
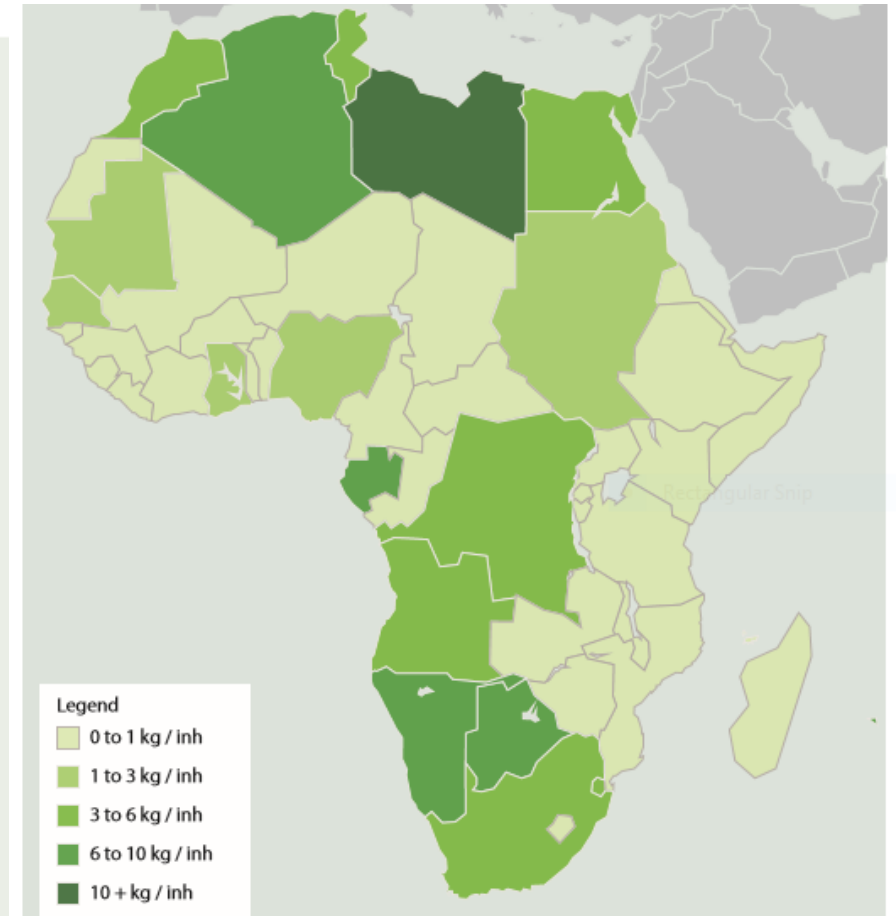
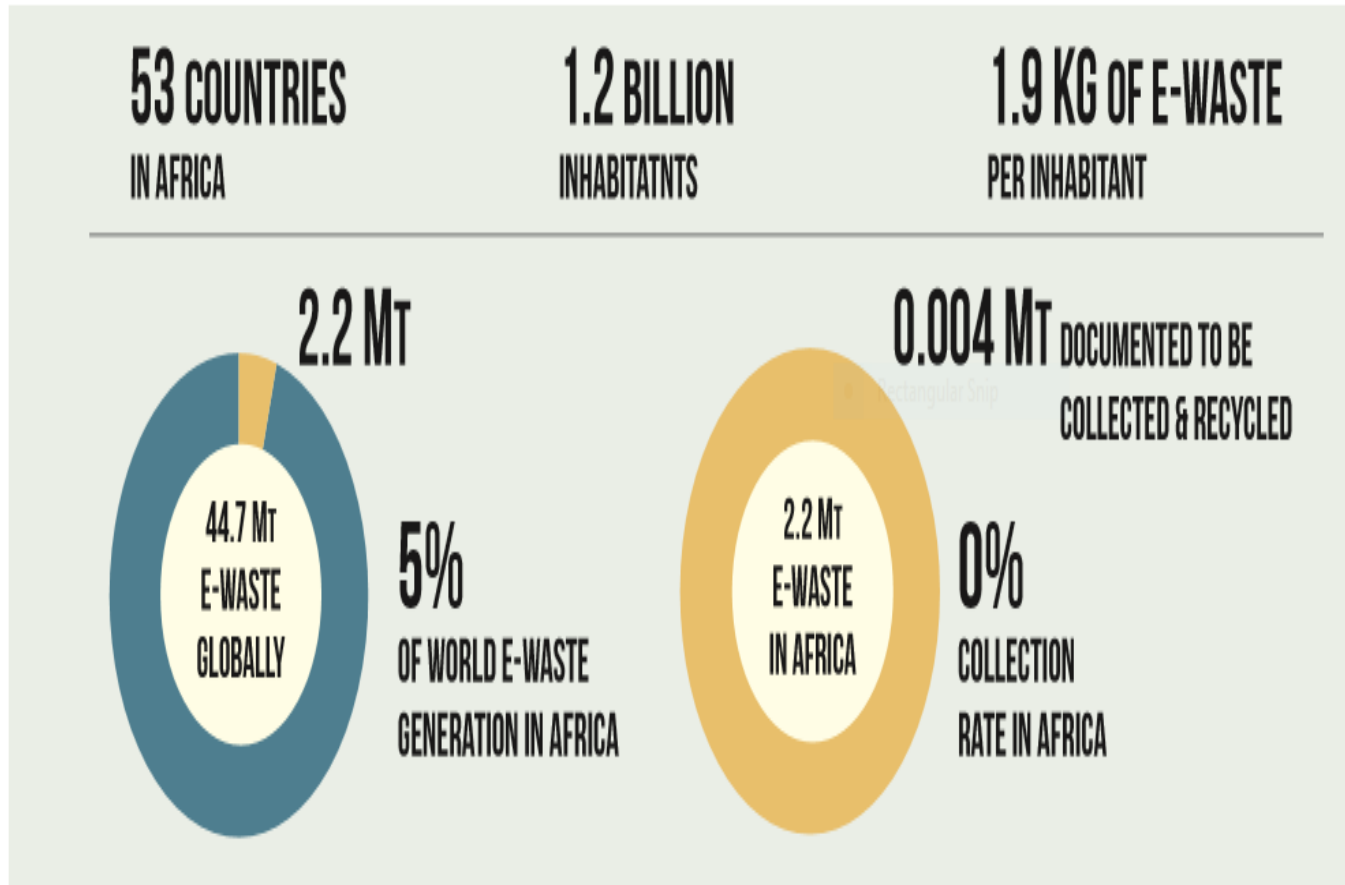


Table 6.1: E-waste generation and collection per continent

Indicator	Africa	Americas	Asia	Europe	Oceania
Countries in region	53	35	49	40	13
Population in region (millions)	1,174	977	4,364	738	39
WG (kg/inh)	1.9	11.6	4.2	16.6	17.3
Indication WG (Mt)	2.2	11.3	18.2	12.3	0.7
Documented to be collected and recycled (Mt)	0.004	1.9	2.7	4.3	0.04
Collection Rate (in region)	0%	17%	15%	35%	6%

Source: 2017 Global E-waste Monitor (UNU)

Africa's e-waste statistics



Source: 2017 Global E-waste Monitor (UNU)

Global actions on the e-waste problem

- Defining, quantifying, and tracking e-waste
- Multilateral and bilateral initiatives
- Awareness raising
- International and national policy formulation
- Legislation against transboundary movement
- Legislation against local incineration
- Formulating technical guidelines and manuals
- Networking on e-waste solutions
- Promoting sound recycling
- Promoting refurbishment
- Redesigning to replace hazardous contents
- Development of tools to promote ESM
- Training of key stakeholders
- Local Inventory research
- Contaminated land research
- Health impact research
- Incorporation of ESM of e-waste into formal education
- Engaging the informal sector,
- Technology transfer
- Technology financing
- Interception of illegal shipments
- Prosecution of illegal shippers

Basel Convention actions on e-waste management

- Promotion of environmentally sound management (ESM)
- Technical assistance to parties (training workshops, technology transfer, information dissemination, etc)
- Promoting the BAN Amendment
- Technical guidelines, manuals
- Fundraising / Trust fund
- Liaison with a wide range of stakeholders
- Promoting action networks
- Initiatives and Partnerships (Mobile Phone Partnership Initiative [MPPI], and Partnership for Action on Computing Equipment [PACE])
- Establishing and coordinating the **Regional Centres**

MPPI and PACE documents

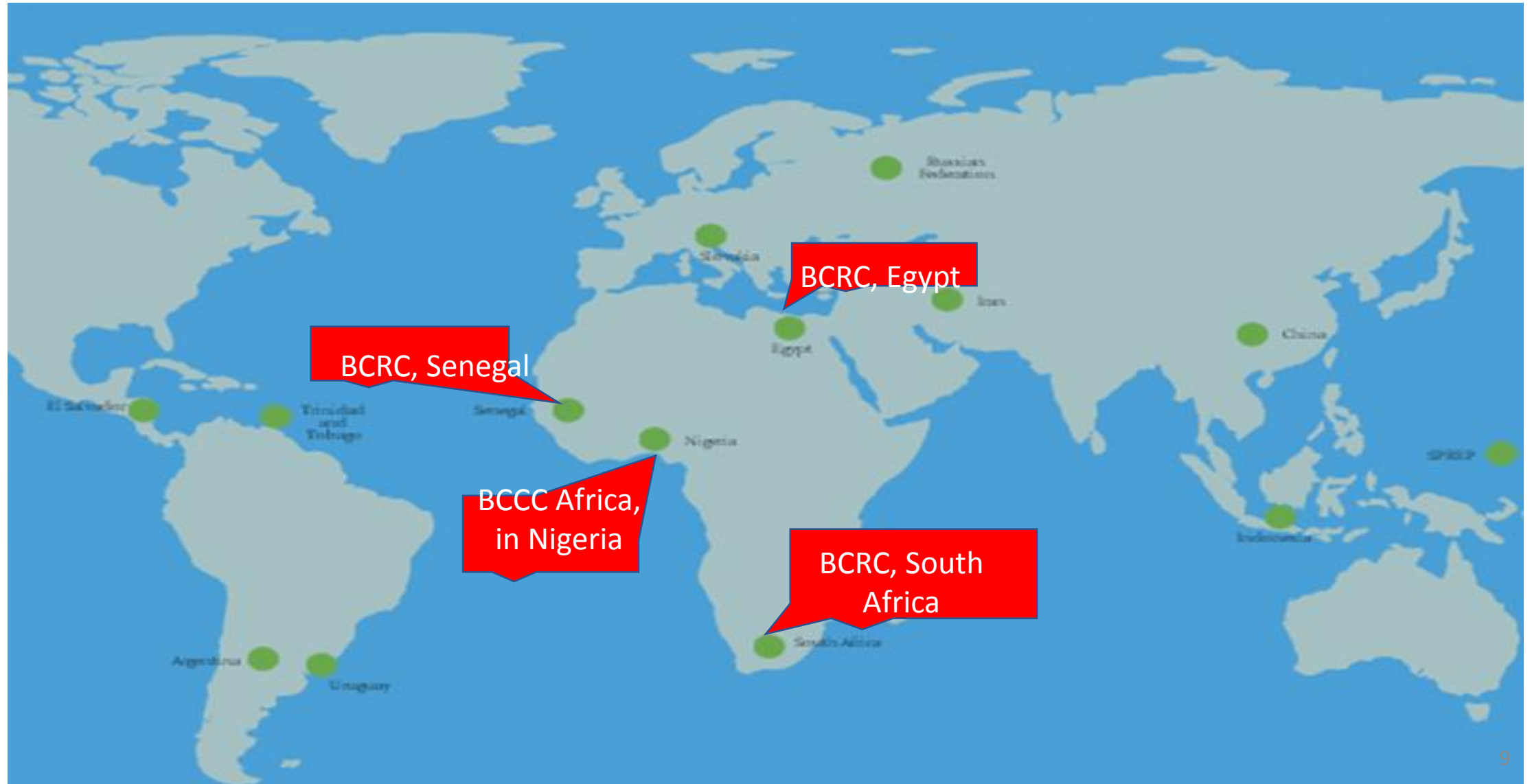
- **MPPI DOCUMENTS**

- Developed five technical guidelines
 - awareness raising - design considerations,
 - collection of used and end-of-life mobile phones,
 - transboundary movement of collected mobile phones,
 - refurbishment of used mobile phones, and
 - material recovery/recycling of end-of-life mobile phones

- **PACE DOCUMENTS**

- [Guideline on environmentally sound testing, refurbishment and repair of used computing equipment;](#)
- [Guideline on environmentally sound material recovery and recycling of end-of-life computing equipment;](#)
- [Glossary of terms;](#)
- [Report with ESM criteria recommendations;](#)
- [Report on strategies, actions and incentives to promote environmentally sound management of end-of-life-computing equipment](#)
- [Manual on Steps to Establish and Implement Environmentally Sound Management for Used and Waste Computing Equipment](#)
- [Report on project experiences and lessons learned](#)
- [Follow-up Partnership to PACE](#)

Basel Convention Regional Centres



Core mandates/functions of the Basel Convention centres

- Support Parties to the Basel Convention in their implementation of the Convention, through:

Training

Technology
transfer

Information

Consulting
/ Research

Awareness
raising

Projects

Training Workshops

- Very many training workshops have been conducted on ESM of e-waste by all 4 centres
- Participants/Target groups have included:
 - Government regulatory agencies
 - Customs officials
 - Ports Management officials
 - Police
 - Academia
 - NGOs
 - Equipment importers
 - Informal sector practitioners
 - International experts
 - Police
 - Legislators
 - Others

Some Africa Basel Centres Workshops on E-waste

**PACE Draft Guideline Workshop, 2015,
Lagos, Nigeria**



**Regional E-waste Management Wkshp,
Alexandria, Egypt 2014**



Information, Research Publications

- All 4 regional centres actively involved in information dissemination
- Research and publications on e-waste more prominent at the BCCC-Africa (Nigeria)
- E.g.
 - Nnorom, I.C; Osibanjo O; Ogwuegbu, M.O.C. (2011) Global disposal strategies for waste cathode ray tubes. *Resources Conservation and Recycling* 55 (3):275-290,
 - Nnorom, I.C; Osibanjo O. (2011) Determination of metals in printed wiring boards of waste mobile phone. *Toxicological & Environmental Chemistry* 93 (8): 1557-1571, September 2011.
 - Olubanjo, K; Osibanjo, O; Nnorom I.C. (2015) Evaluation of Pb and Cu contents of selected component parts of waste personal computers. *Journal of Applied Science and Environmental Management* 19 (3) 470-477.

OEM Alliance for E-waste Solutions in Africa

- Director of HP for Europe & Africa visited during a workshop organized by BCCC-Africa for informal sector pickers during June/July 2010. A few OEMs were in attendance
- He was impressed and subsequently determined to mobilise OEMs into forming an OEM Alliance
- Alliance comprises HP, Philips, Nokia and Dell.
- Progressive partnership with the BCCC, BCRs and govt regulators
- Supported writing of e-waste regulations, e.g. in Ghana and Nigeria
- Now currently involved in establishing an EPR scheme for Nigeria.

E-waste Africa project

Partners:

- BCCC – Africa (*Coordinated*)
- BCRC – Senegal
- BCRC – Egypt
- Secretariat of Basel Convention
- IMPEL
- EMPA
- Oeko-Institut

Period:

- **November 2008 – March 2012**

Main Publication:



E-waste Africa project

- A large number of critical stakeholders trained on ESM of e-waste
- E-waste inventory data obtained for several African countries
- 19 selected staff (customs, ports officials, govt regulators from Ghana, Egypt, Benin and Nigeria), led by Directors of BCCCAfrica, BCRC Senegal & Egypt, trained on port inspection for two weeks in Amsterdam and Antwerp ports.
- Several country e-waste management reports (technical and socio-economic) submitted.
- Publication – “Where are WEEE in Africa?” produced
- Pan-Africa Forum on E-waste held in Nairobi - March 2012
- Training curriculum aimed at port and customs authorities, governmental officials and accreditation authorities was developed
- Establishment of the EU-Africa network

- Nigeria
- Ghana
- Liberia
- Benin
- Ivory Coast
- Egypt
- Tunisia

DOTCOM Waste Project

(Development of Tools to Counter Illegal Management and Trade of Wastes)

- Funded by: European Commission (DG, Home)

Target Routes:

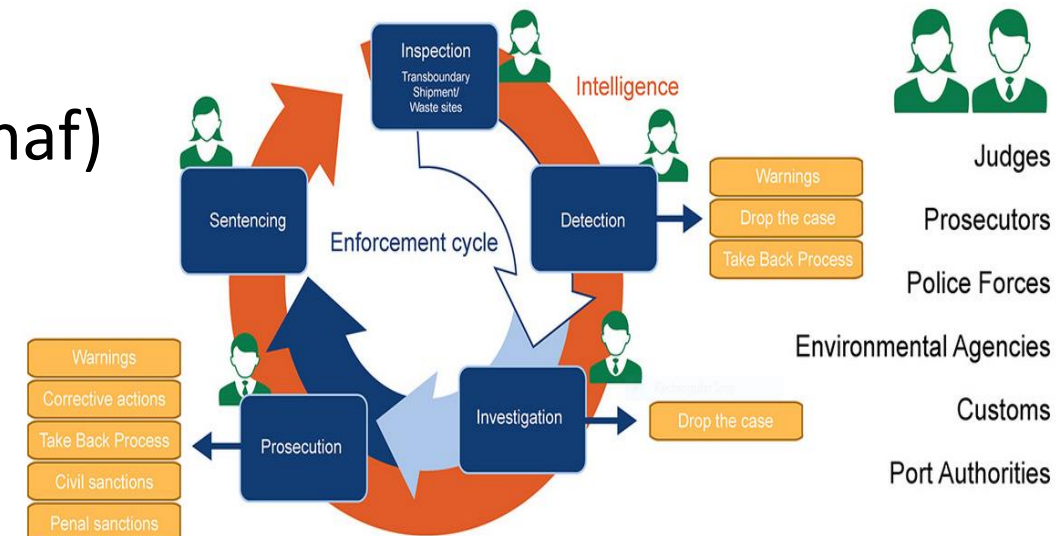
- EU – West Africa route
- EU – China route

Consortium:

1. United Nations University (UNU)
2. BCCC-Africa, in Nigeria
3. BCRC China
4. Ports Environmental Network Africa (Penaf)
5. Cross Border Research Association
6. Compliance & Risks
7. Tecoms
8. Public Prosecutor Office of Bari

Project Period:

January 2016 - December 2017



DOTCOM Waste Project

(Development of Tools to Counter Illegal Management and Trade of Wastes)



- Training Needs assessment for West African, Chinese and European officials
- Comprehensive library (catalogue) on waste crimes and related matters developed online
- Officials from Nigerian, Ghana and Europe trained in Rome and some Italian ports and customs facilities on identifying waste, intelligence, inspection, prosecution, sentencing, tracking, etc
- Toolkit for ports inspection by customs, etc, developed
- Several webinars conducted and still available online,

Demonstration of ESM in three southern African countries

- Coordination: BCRC South Africa
- Participating countries: Namibia, Lesotho, South Africa - 2016
- Nature of Project:
 - ✓ Pilot / Community participation
 - ✓ Collection, dismantling and sorting facilities placed at some locations, and public awareness campaign carried out to get people to drop off their e-waste.
 - ✓ Assess e-waste processes in pilot areas against PACE guidelines

Key Observations:

- People reluctant to voluntarily drop-off their e-waste
- Buy-back system only will induce surrender of the e-waste

Person in the Port Project

Objectives:

- Assess: volumes, origins, types, functionality of used electrical and electronic equipment (UEEE) imported into Nigeria

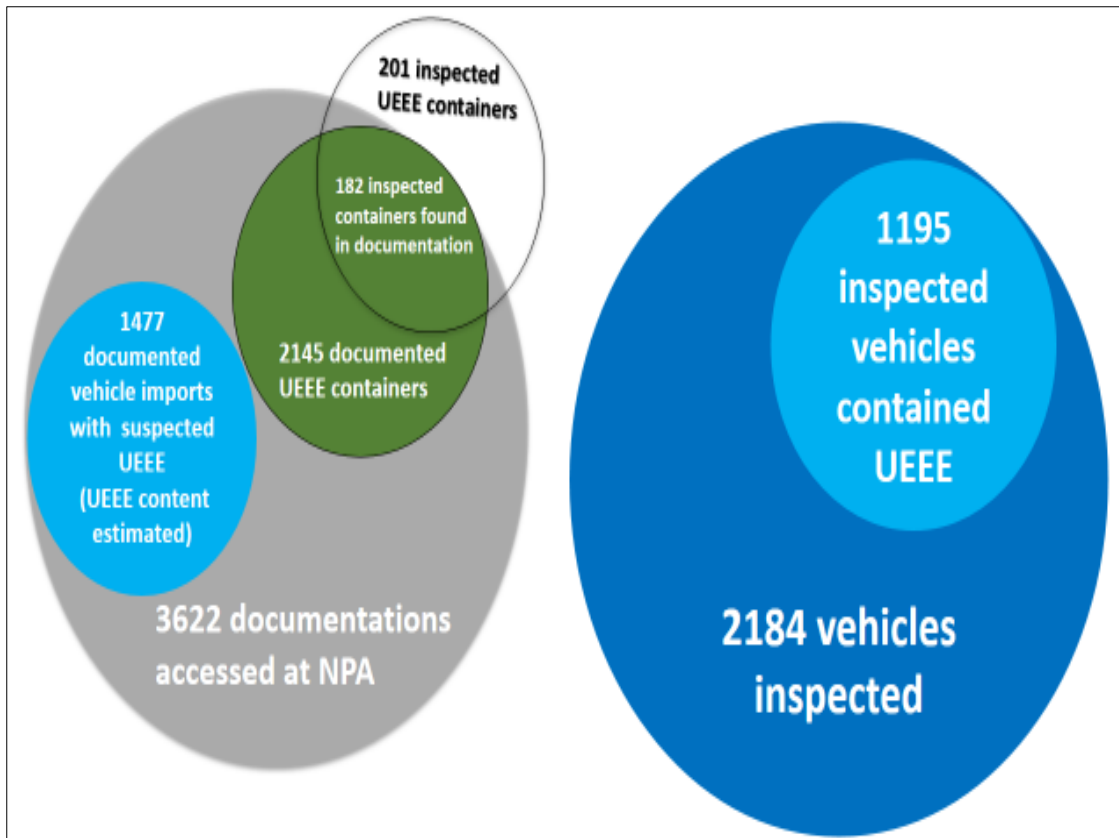
Approach:

- Place person (the PiP) in
 - ✓ Tincan Island Port Complex, and
 - ✓ Apapa Ports in Lagos, Nigeria

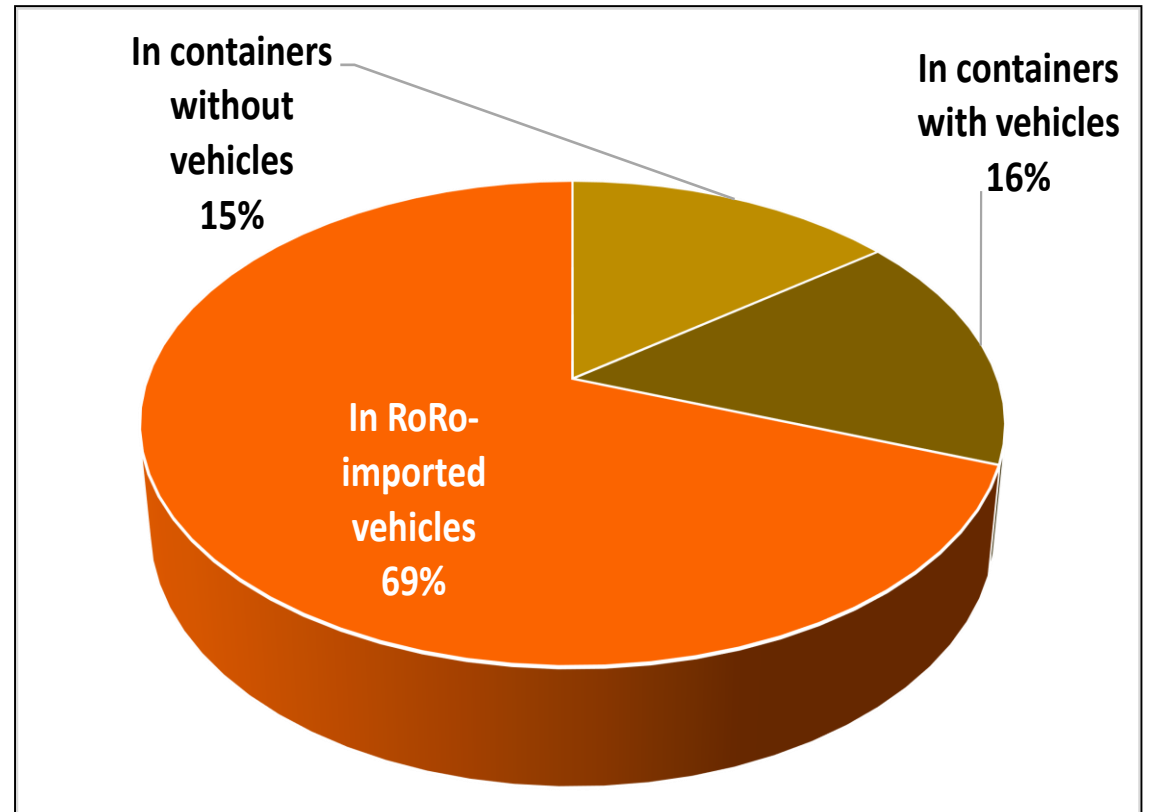
to participate in container and vehicle inspections /bAssess import documentation for UEEE imports (2015 and 2016)

Person in the Port Project

What was inspected?

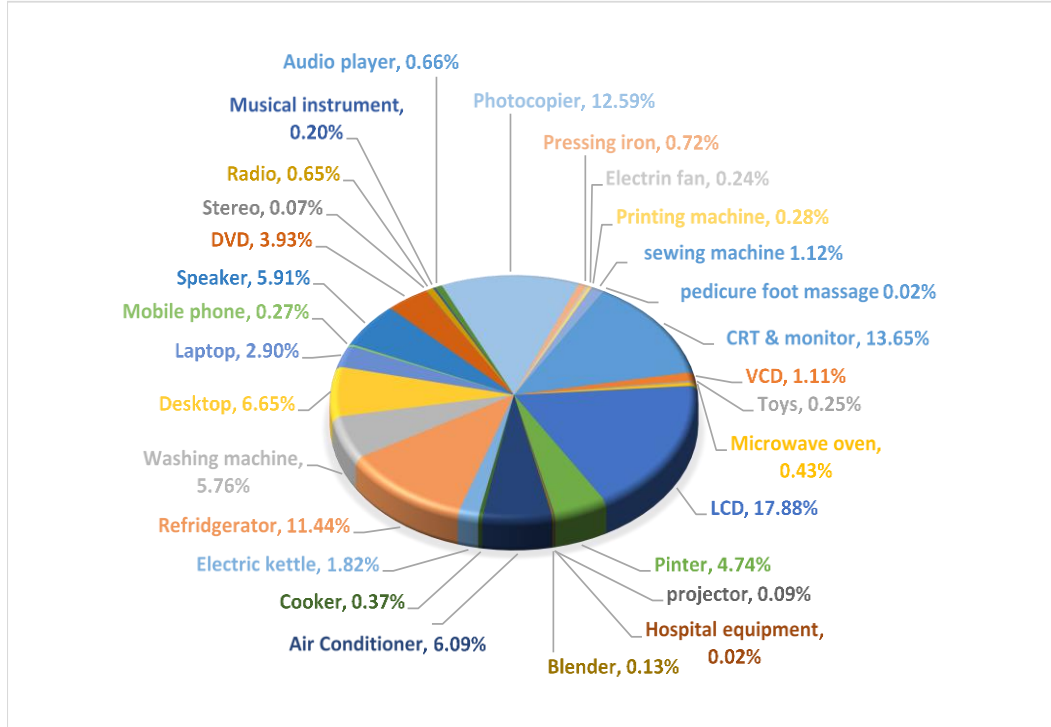


60,000 tonnes per year

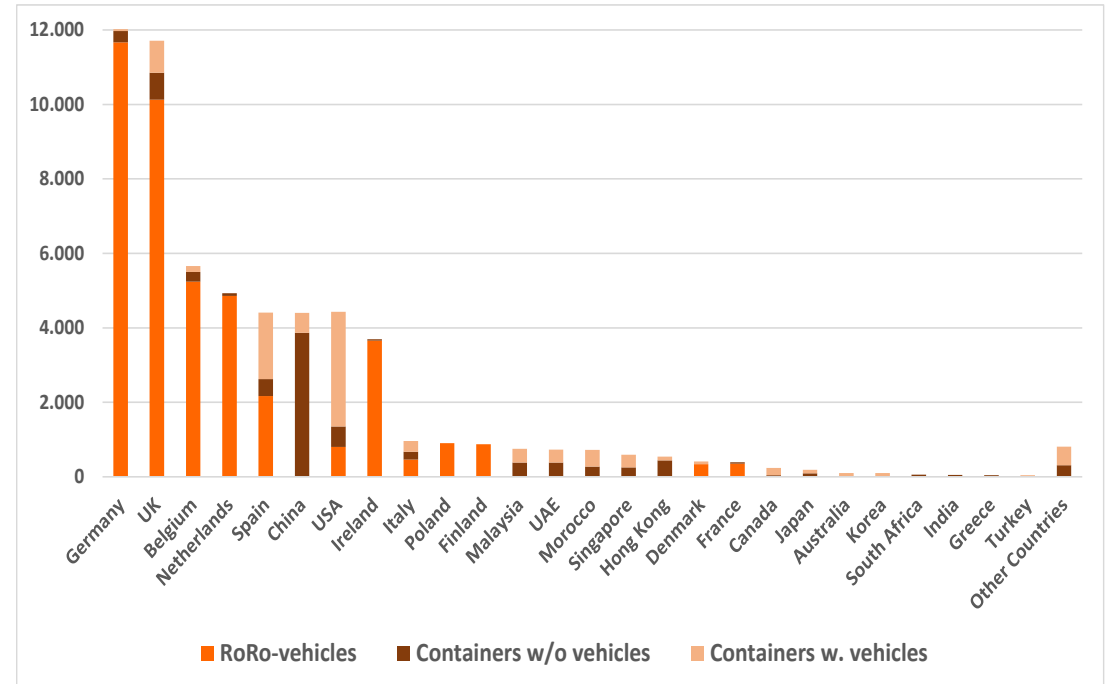


Person in the Port Project

What was imported



Where from?



Full PiP project report is now available online

<http://www.basel.org.ng/index.php/40-latest/123-download-projects-report-2>

http://collections.unu.edu/eserv/UNU:6349/PiP_Report.pdf

