Electrical and Electronic wastes

Learning centre on Overcoming new challenges in chemicals and hazardous wastes management

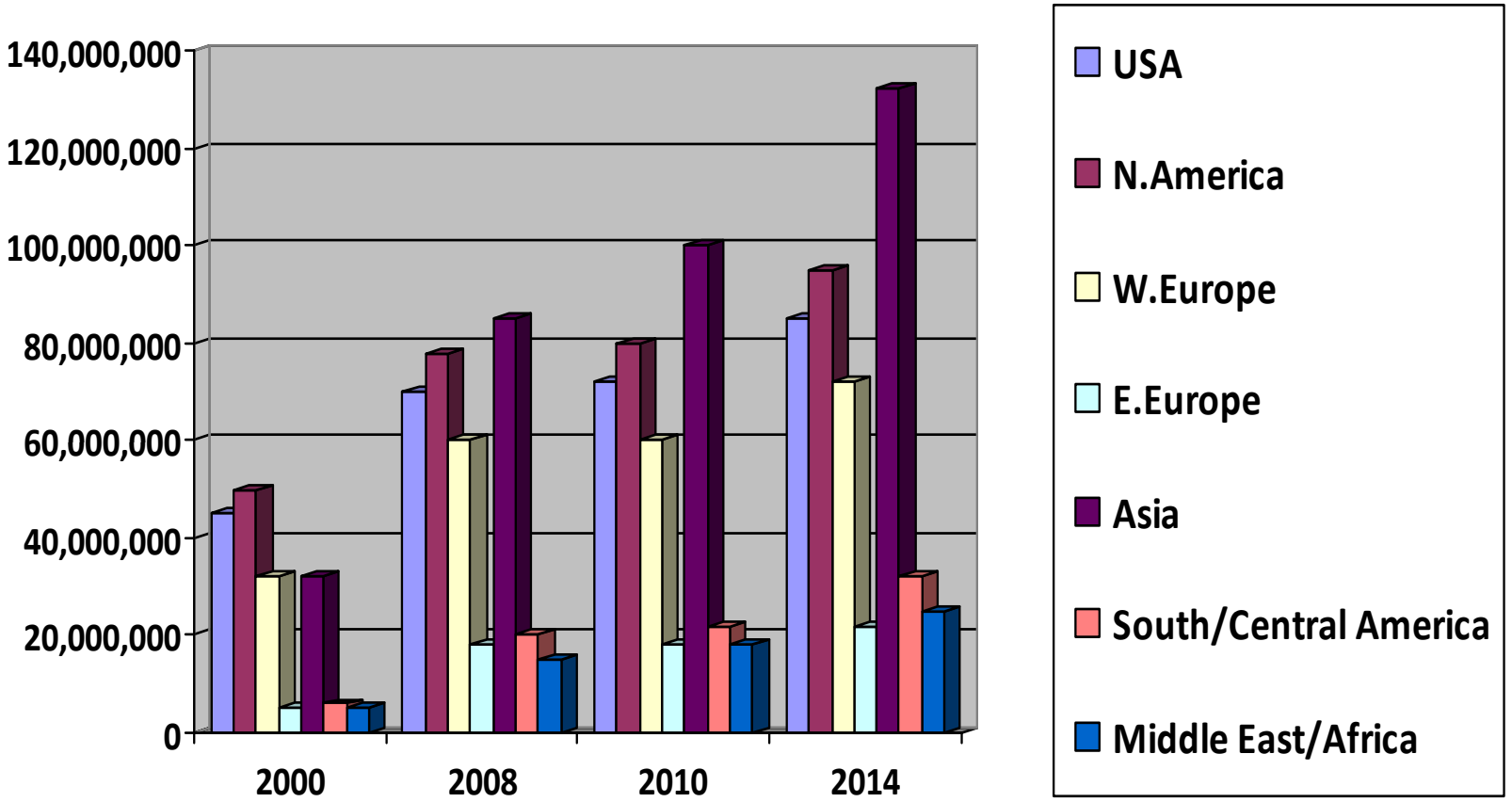
CSD-19
NLB Conference Room B
6 May, 3-6 pm

Contents

- Global e-waste problem
- E-waste programmes in Africa and Asia-Pacific
- PACE

Consumed Electrical and Electronic Products Will Generate

Personal Computer (PC) Sales by Regions



Worldwide WEEE Problem?

…. SECONDHAND – REFURBISHMENT“ – REPAIR - ….

Worldwide WEEE Problem?

…. DONATION - DIGITAL DIVIDE - …

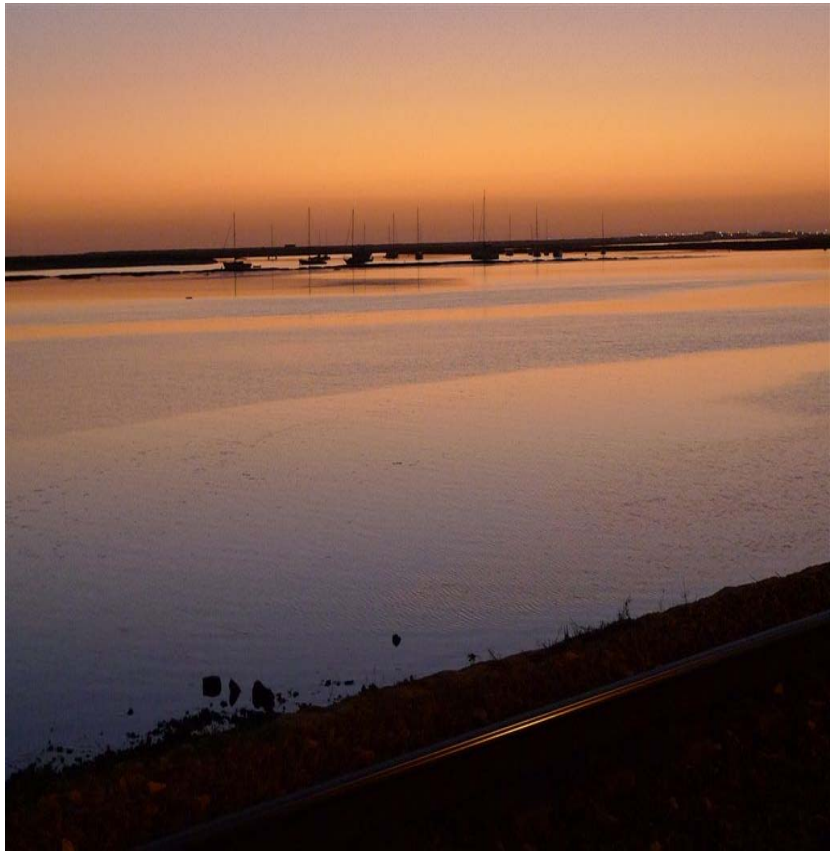
Worldwide WEEE Problem?

…. RECYCLING – DISPOSAL– DUMPING …

E-waste Africa programme

- **Timeframe:** November 2008 to March 2012
- **Countries involved:** Benin, Nigeria, Ghana, Cote d'Ivoire, Liberia, Tunisia and Egypt
- **Partners:** BCRC-Senegal, BCCC-Nigeria and BCRC-Egypt, IMPEL, EMPA and the Oko-Institute

Project objectives



- Enhance environmental governance for e-waste in selected African countries
- Build capacity to monitor and control e-waste imports coming from the developed world, including Europe
- Protect the health of citizens
- Provide economic opportunities

Component 1

Objectives

- Gather information on flows of e-wastes from land and sea into West African countries

- Improve decision making and increase communication between exporting and importing countries

Activities

-Five national studies in Africa: Liberia, Côte d'Ivoire, Benin, Ghana and Nigeria and two in Europe

Preliminary results

✓Nigeria is the most dominant importing country for electric and electronic equipment and vehicles, followed by Ghana and Benin

✓The UK is the dominant exporting country for electric and electronic equipment, followed by France and Germany

Component 2

Objectives

-Improve management of e-wastes and end of life electric and electronic products in four African countries (Benin, Ghana, Côte d'Ivoire and Nigeria)

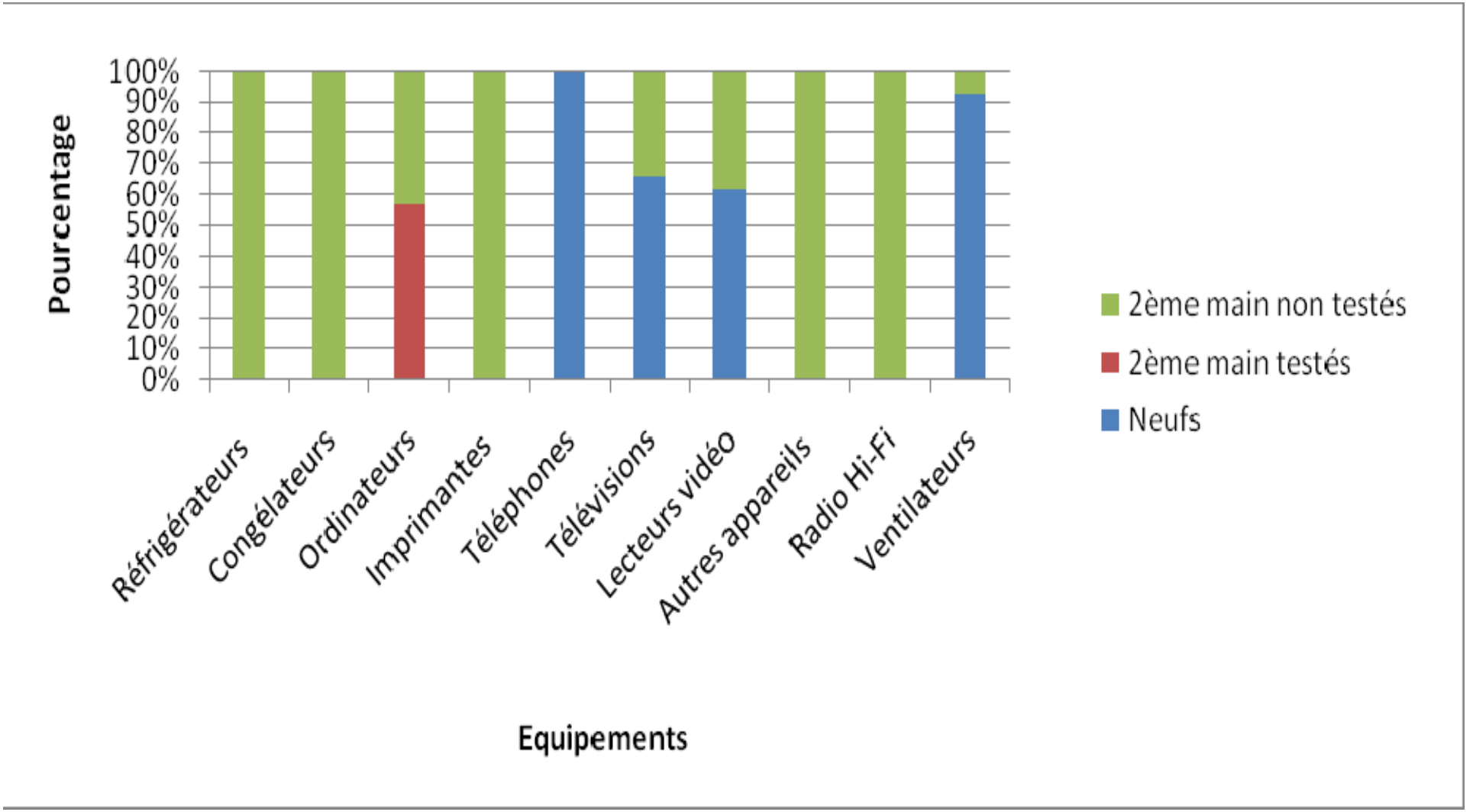
Activities

-Develop country assessments of used and end of life e-equipment
-Develop four management plans and draft strategies and policies for e-wastes management

Preliminary results

- Among the various stages of the mass flow: import, consumption, repair, collection, recycling and disposal, the main challenges lie within *the*
  - *import, recycling and disposal stage*

Categories of imported goods, Adjamé, Côte d'Ivoire



Component 3

Objectives:

- To study the feasibility of establishing environmentally sound materials recovery operations and promoting ESM in the context of the Basel Convention in a major informal e-waste recycling area in Africa (Nigeria)

-Other similar study in Ghana

Component 3

Example results Ghana

Currently Applied Recycling Technologies

Analysing environmental, social and economic strengths & weaknesses

Best Available Recycling Technologies

Analysing environmental, social and economic strengths & weaknesses

Best Applicable Recycling Technologies

Component 4

Enforcement program on the monitoring and control of transboundary movements of used and end-of-life e-equipment and the prevention of illegal traffic in five African countries

Objectives

- Prevent illegal traffic
- Improve monitoring and control of exports from Europe to Africa of used and end-of-life e-products
- Establish a network of enforcement authorities in Europe and Africa

What is Computing Equipment?

POPs ?

Brominated diphenyl ethers (BDEs)

Use: flame retardant

C-pentaBDE: most commonly used in flexible polyurethane foam (PUF)

C-octaBDE: most commonly used in acrylonitrilebutadiene styrene (ABS) plastic. Other use: high impact polystyrene (HIPS), polybutylene terephthalate (PBT) and polyamide polymers.

In electronic and electrical appliances:
computers, home electronics, office equipment (plastic outer casings, printed circuit boards, internal plastic parts, components with rigid PUR)

POPs ?

Brominated diphenyl ethers (BDEs)

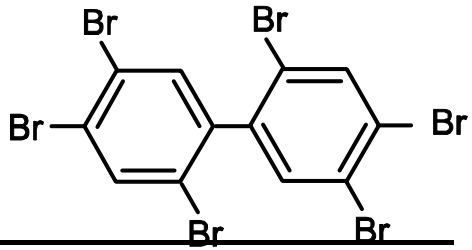
Specific exemption for recycling of listed BDEs: Implications?

→ Listed in **Annex A (Elimination)**

→ Exemption for production: **none**

→ Exemption for use: **may allow recycling of articles that may contain the chemicals, and the use and final disposal of articles manufactured from recycled materials that may contain the chemicals**

POPs ?



Hexabromobiphenyl

Past use: Flame retardants. Added to plastics used in products such as home electrical appliances, textiles, plastic foams, laptop cabinets, etc. to make them difficult to burn.

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Currently: No production and use reported. Other polybrominated biphenyls are also controlled by RoHS Directive by EU.

Alternatives: Available

→Listed in: **Annex A (Elimination)**

→Production: **No exemption**

→Use: **No exemption**

Partnership for Action on Computing Equipment (PACE) under the Basel Convention

"PACE and its Activities"

Basel Convention has adopted Partnership with industry, NGOs and other stakeholders as an effective strategy towards providing solutions to the global e-waste problem.

PACE

Mission Statement

To *increase environmentally sound management of used and end-of-life computing equipment, , taking into account social responsibility, the concept of sustainable development and promoting information sharing on life cycle thinking.*

Scope

*The scope of the partnership will cover: Personal Computers (PCs) and associated displays, printers and peripherals**

* Computer monitor, including the following types of computer monitor:(a) cathode ray tube;(b) liquid crystal display;(c) plasma. Computer keyboard, mouse, and cables. Computer printer:(a) including the following types of computer printer:(i) dot matrix;(ii) ink jet; (iii) laser;(iv) thermal; and (b) including any computer printer with scanning or facsimile capabilities, or both.

PACE Membership

- 28 Parties and Signatories to the Basel Convention.
- 10 Basel Convention Regional Centres for Training and Technology Transfer (BCRCs).
- 9 Research and Academic Institutions, and other UN Bodies.
- 15 NGOs, Industry, and Industry Associations.

Current Status

PACE products that have been finalized and adopted:

- Report on ESM criteria recommendations.
- Two Guidelines (repair and refurbishment; and material recovery and recycling).
- Procedures on Transboundary Movement of Computing Equipment.
- Glossary of Terms for PACE.

Future Plans

Guidelines

- Guideline will be evaluated in the facility type environment and revised.
- Overall Guidance Document to be adopted by COP 10.

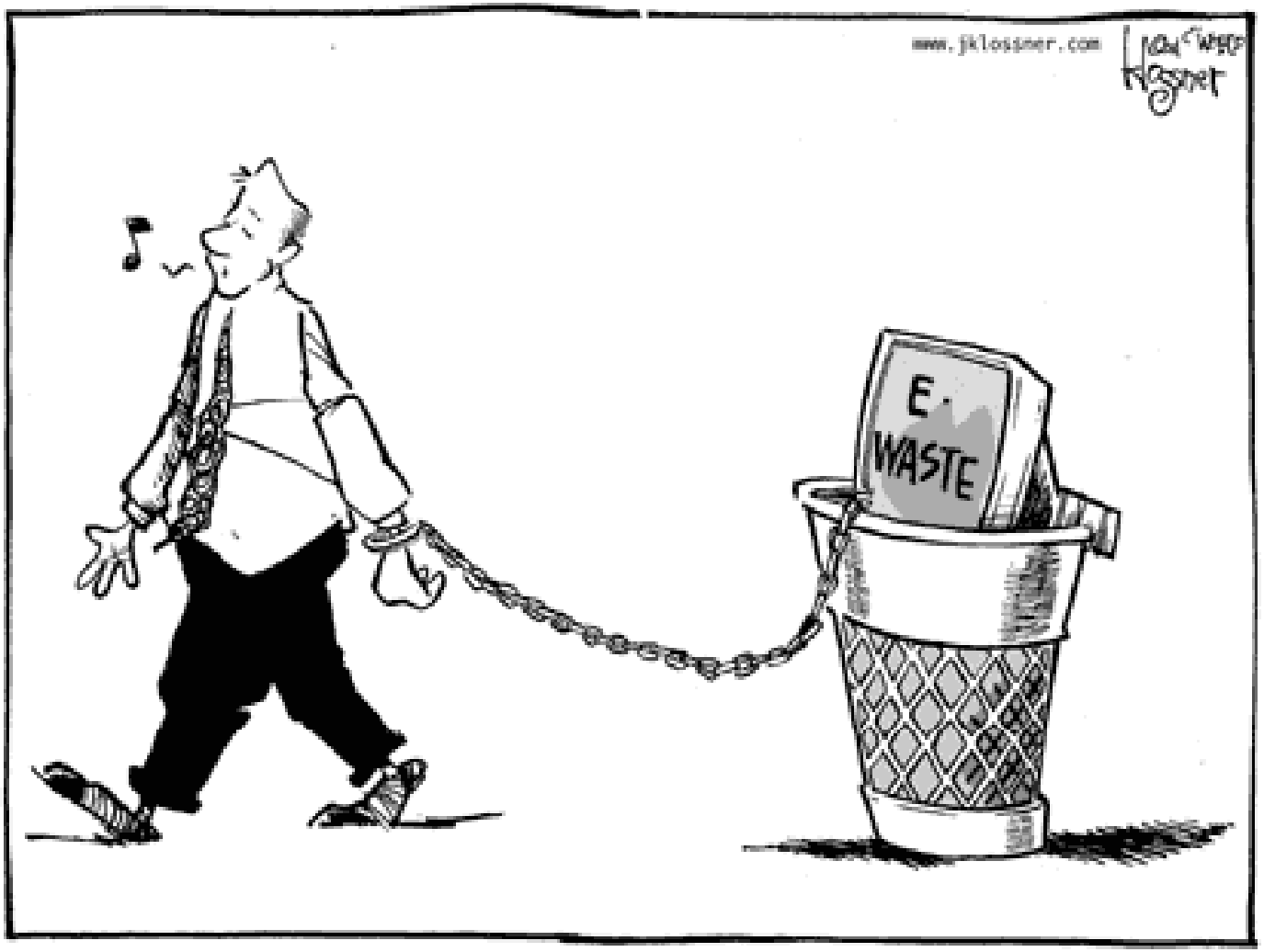
Pilot Projects

- Continue with pilot projects on collection and management of used and end-of-life computing equipment from informal sectors.
- Recommendations and strategy on resource mobilization to ensure sustainability of pilot projects

Awareness Raising

Resource Mobilization and Financial Sustainability


Help keep electronic waste from growing.



THANK YOU!