The Basel Convention, Partnerships for Sound Management of E-waste, and the Conflict of Mineral Extraction vs. Secondary Extraction from E-Waste

Percy C. Onianwa
Executive Director
Basel Convention Coordinating Centre for the African Region
University of Ibadan, Ibadan

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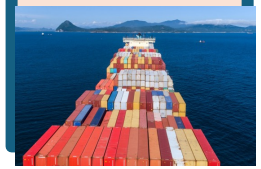
BASEL CONVENTION

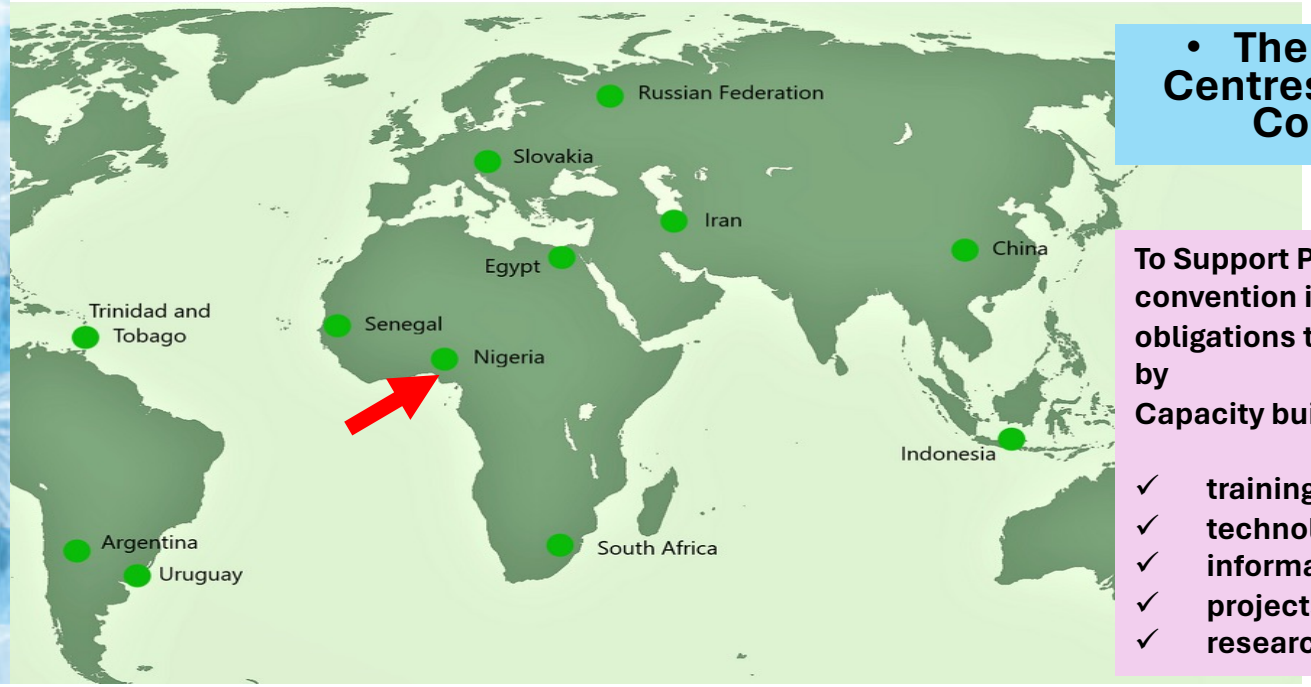
- Objective: to protect human health and the environment from the negative impacts of hazardous wastes and other wastes

Control of Transboundary Movement of Hazardous Wastes



Environmentally Sound Management of Hazardous & Other Wastes

Minimization of Sources of Generation of Hazardous Wastes



- **The 14 Regional Centres of the Basel Convention**

To Support Parties to the convention in meeting their obligations to the convention, by
Capacity building:

- ✓ **training**
- ✓ **technology transfer**
- ✓ **information sharing**
- ✓ **projects**
- ✓ **research**

E-Waste: Classification in Basel Convention

Annex VIII (hazardous waste):

- A1180- WEE assemblies
- A1190- Cables
- A1150- Ashes from printed circuit boards incineration
- A 2010-Cathode ray tubes
- A1010, A1020, A1030, A1090 (waste containing heavy metals e.g. lead, mercury, copper, cadmium, etc)

Annex IX (non-hazardous waste):

- B1110 (electrical and electronic assemblies

Some Hazardous Contents of E-Wastes

Toxic Metals

Lead

Mercury

Cadmium

etc

Brominated Flame Retardants (Organics)

How Basel Convention Promotes Sound Management of E-Waste

Publications (technical guidelines, guidance manuals, training manuals, etc)

Partnership programmes on special waste stream and issues

Technical assistance to Parties

Fostering global regulations that advance e-waste management

Collaboration with other international /global actors

Basel Convention E-waste Amendment (effective 01 January 2025)

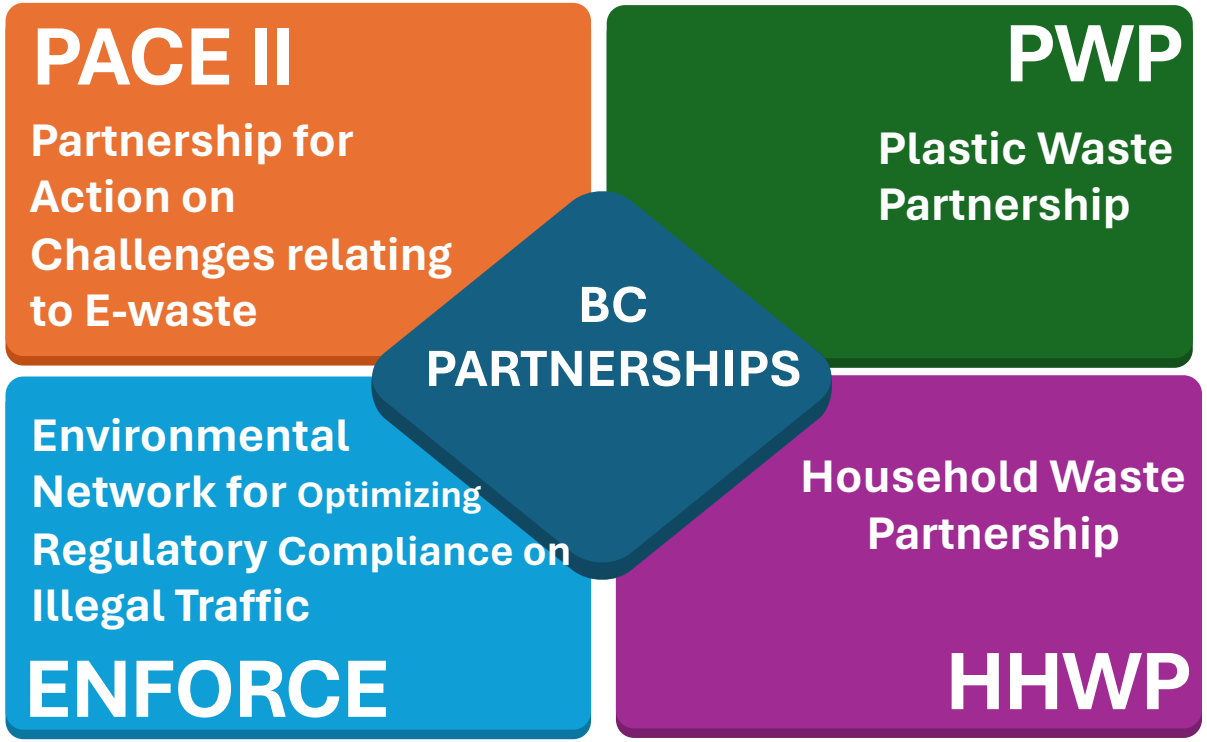
COP-15 , 6-17 June 2022) adopted amendments to Annexes II, VIII and IX to the Convention with the objectives of enlarging the control of transboundary movements of e-waste and **making all electronic and electrical waste subject to the prior informed consent (PIC) procedure.**

- **Wastes requiring special consideration**
- **But subject to PIC procedure**
- **New E-waste items now listed as "Y49"**

- **E-waste classified as hazardous;**
- **Subject to PIC**
- **Originally listed as "A1180" (now deleted)**
- **List revised**
- **New listing as "A1181"**

- **Wastes presumed not hazardous**
- **Not subject to PIC procedure**
- **No more E-waste items in this Annex**
- **Entry B1110 now deleted**

Basel Convention Partnership Programmes that have Bearing on E-waste

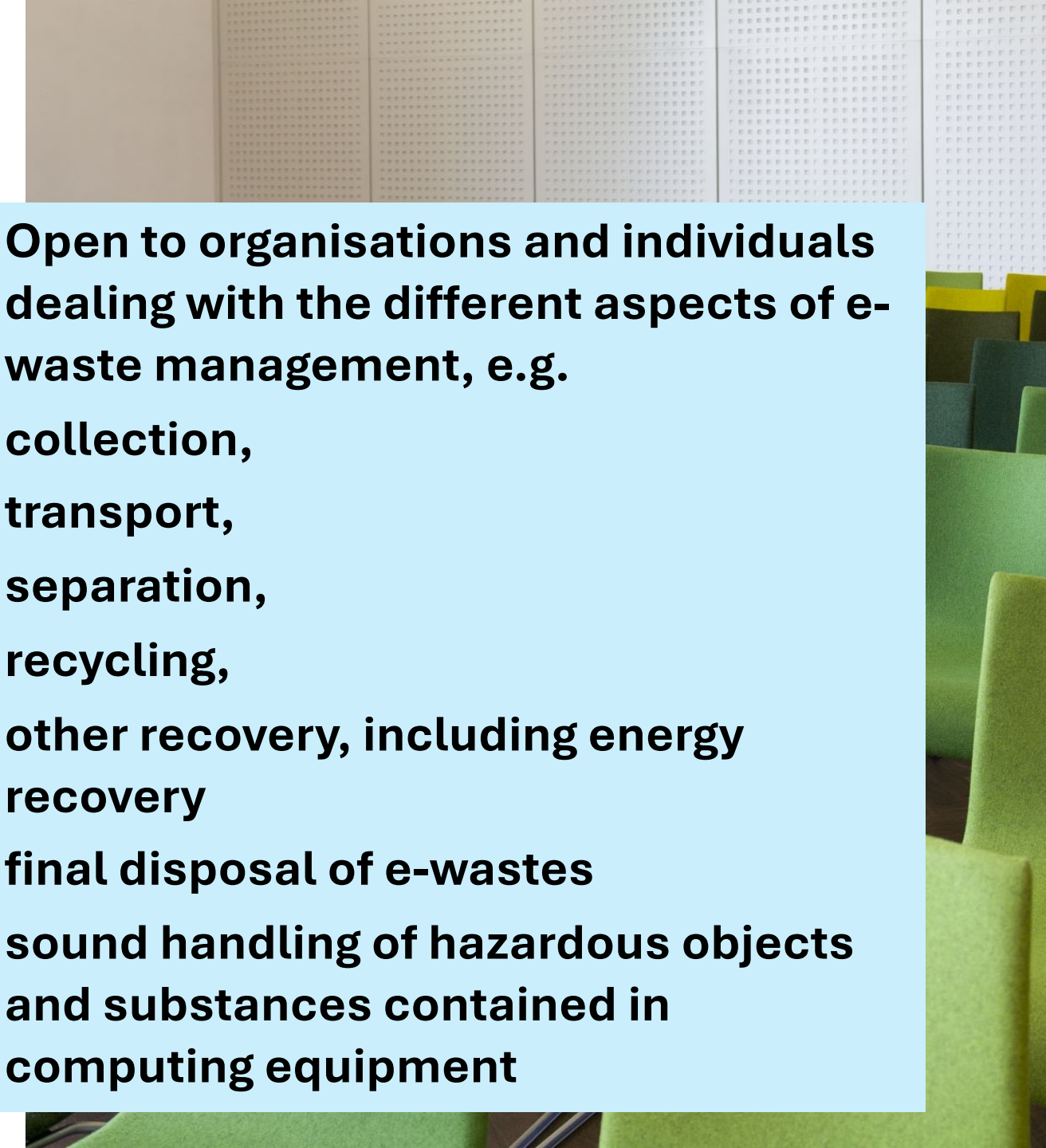


PACE II: Partnership for Action on Challenges relating to E-waste

Membership

- Parties and signatories to the Basel Convention,
- Regional Centres of the Basel Convention
- Municipalities,
- Intergovernmental and non-governmental organizations,
- Private sector, and
- Academia

- Open to organisations and individuals dealing with the different aspects of e-waste management, e.g.
- collection,
- transport,
- separation,
- recycling,
- other recovery, including energy recovery
- final disposal of e-wastes
- sound handling of hazardous objects and substances contained in computing equipment



PACE II: Terms of Reference

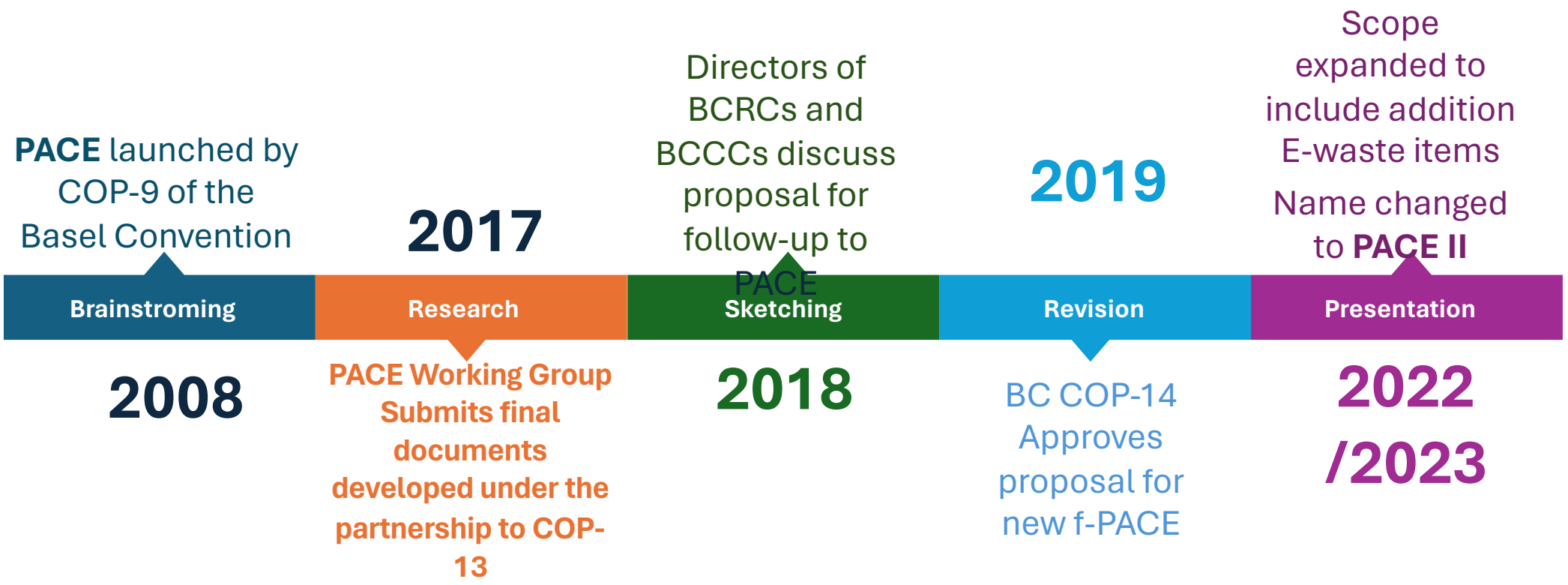
GOAL	SCOPE
To strengthen at the regional, national and local levels, • the environmentally sound management (ESM) of E-waste (WEEE) • the environmentally sound refurbishment and repair of used electrical electronic equipment (UEEE)	▪ computing equipment (personal computers (PCs), laptops, notebooks and tablets, and associated displays, printers and peripherals)1 , ▪ mobile phones, ▪ television screens, including CRT, LCD and LED screens, ▪ video and audio equipment, refrigerators, ▪ cooling and heating equipment

The Tasks include:

- Undertake and/or contribute to outreach, dissemination, education and awareness raising activities on the ESM of used and waste equipment in its scope,
- Pilot projects involving partners;
- Capacity building and technology transfer;
- Encourage innovation and
- Encourage exchanges and cooperation among public and private partners as well the youth and NGOs.

Evolution of: PACE II – Partnership for Action on Challenges relating to E-waste

From: PACE - Partnership for Action on Computing Equipment



New phase.
Partnership for Action on Challenges relating to E-waste.

PACE II: Some Recent Activities

- Several Dissemination Activities: E.g.
  - Translated PACE and MPPI guidance document into the six UN languages
  - Developed model workshop toolkits for Customs, Regulatory/Enforcement agencies, Recyclers
  - Celebration of International E-waste Day, and Internation Zero-Waste Day
  - Regional Centre participated in ITU activities – Green Standards Week, Digital Transformation Dialogues
- Currently developing guidance documents for ESM, repair and refurbishing of TVs, cooling equipment and temperature exchange equipment
- Carried out several pilot projects on e-waste

Recent Pilot Projects of PACE II

Some Other Partnerships, Organisations, Activities Promoting Sound Management of WEEE and UEEE

- UN E-waste Coalition
- SteP – Solving the E-was
- Prevent Waste Alliance
- SAICM
- WEEE FORUM
- International E-Waste M
- UNITAR/UNU Scycle
- ITU
- ISWA
- The Global E-waste Stat

- ✓ The Global E-waste Statistics Partnership (GESP)
- ✓ **Electronic Recycling Association (ERA)**
- ✓ International Associations for Electronics Recycling
- ✓ Electronics Goes green Conferences
- ✓ Association of Original Equipment Manufacturers (OEMs)
- ✓ + several more

Electronics Goes Green 2024+

General Info

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Fraunhofer IZM

Fraunhofer IZM
Organizing Team Electronics Goes Green
Gustav-Meyer-Allee 25 | D -13355 Berlin, Germany
Internet:
www.izm.fraunhofer.de

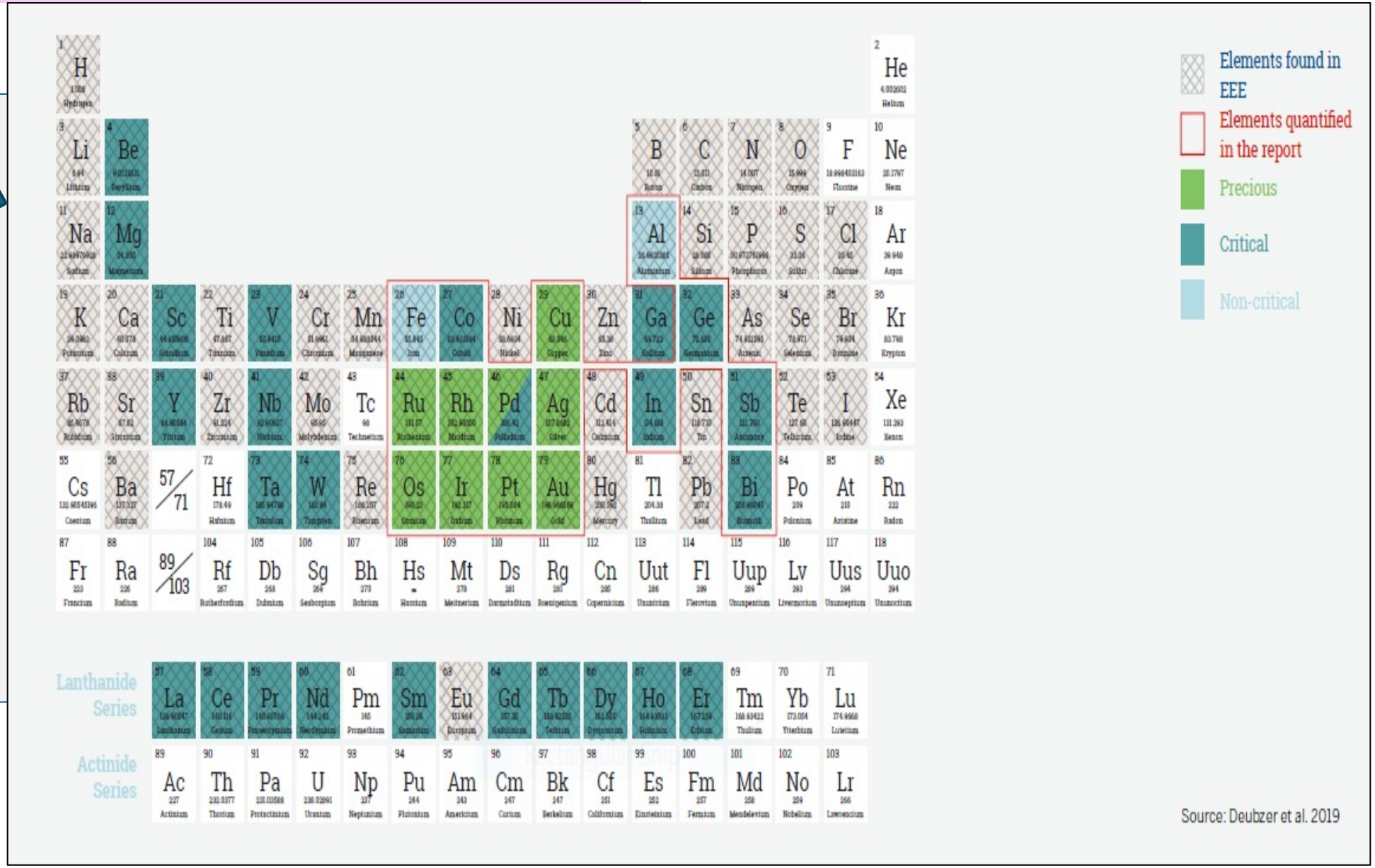
Phone: +49 30 46403-137
Fax: +49 30 46403-211
Email: conference@electronicsgoesgreen.org

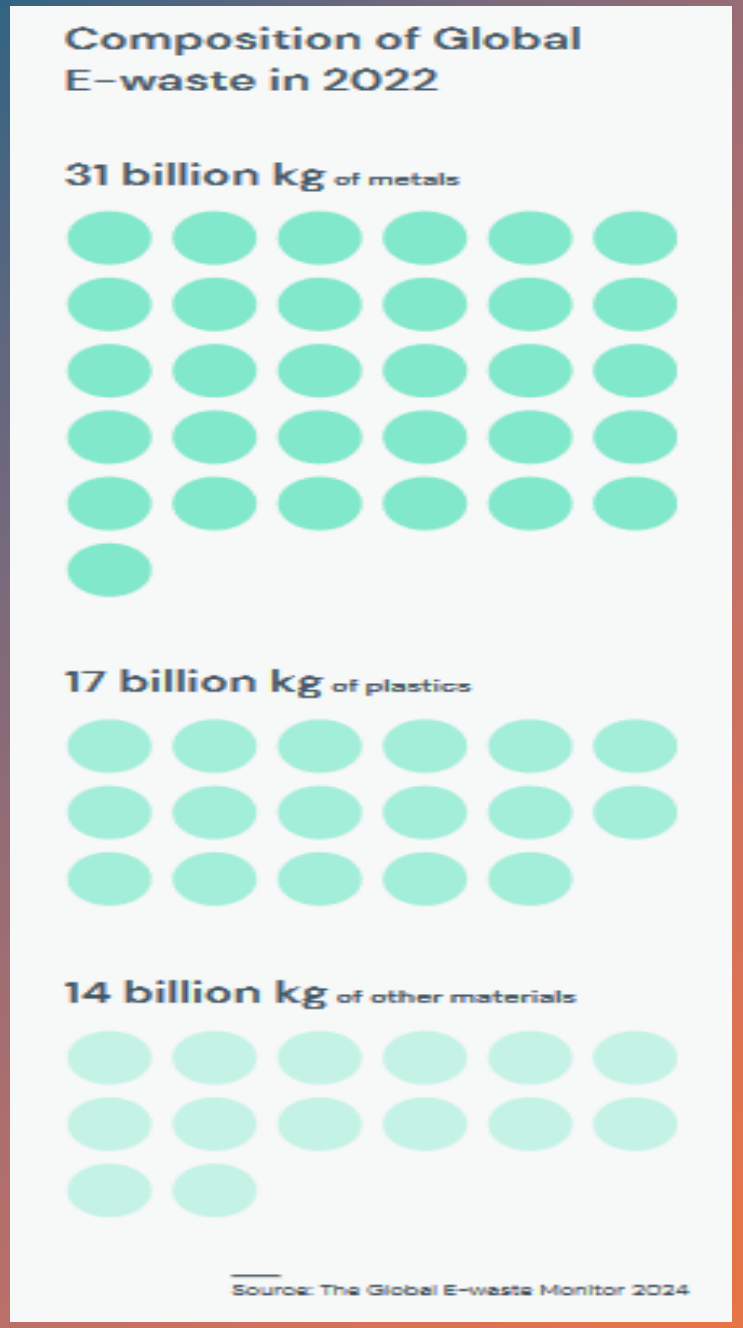
The Electronics Goes Green conference is a significant event for scientists, product developers, and business managers working to improve the environmental properties of electronics and ICT products. The seventh edition of the conference (June 2024), will focus on circularity, digitalization, and carbon neutrality.

On the Conflict of Mineral Extraction and Secondary Extraction from E-Waste

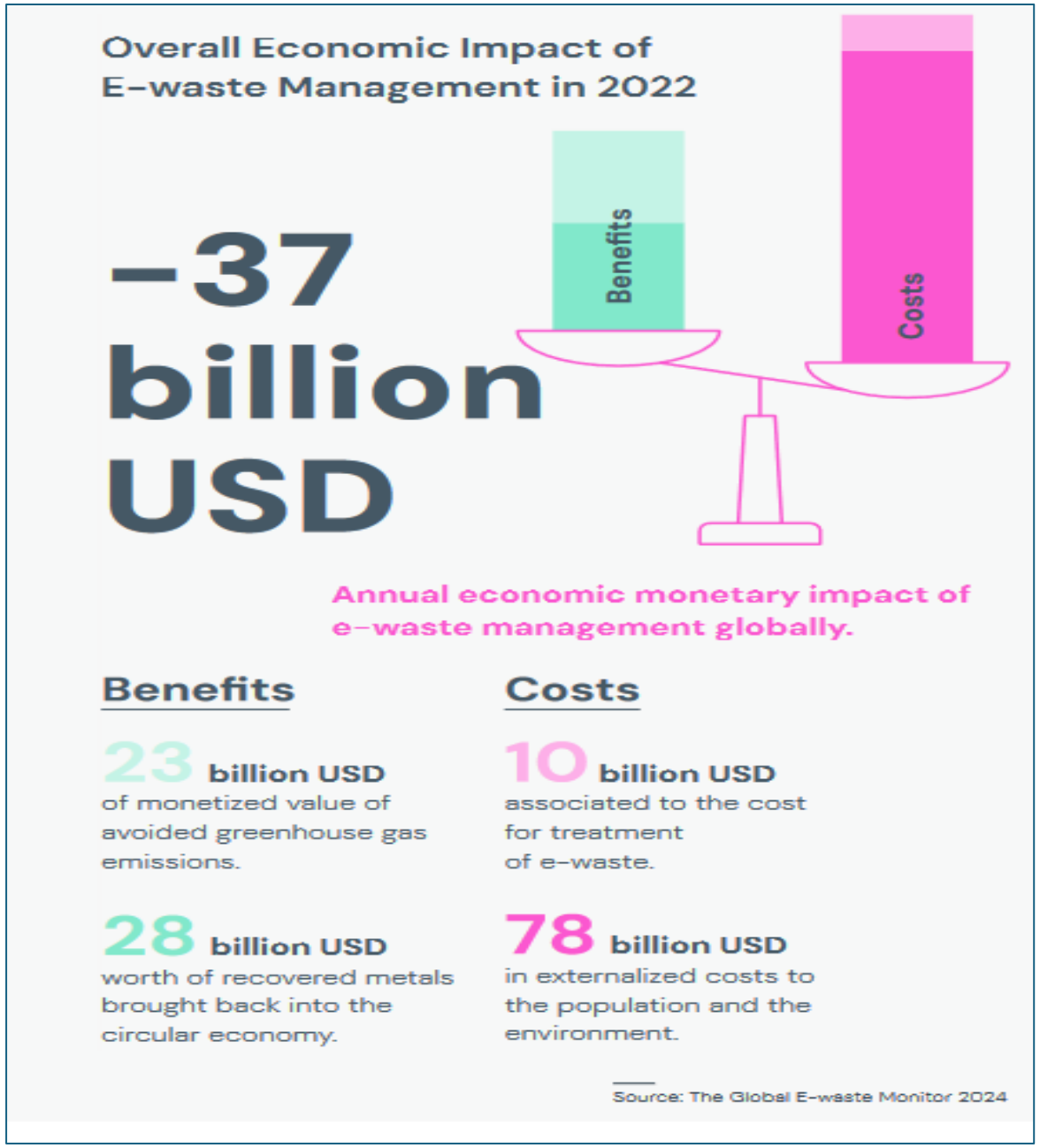
Main Components of E-waste Equipment

- ✓ many non-ferrous and precious metals/element,
- ✓ ferrous metals
- ✓ alloys,
- ✓ glass,
- ✓ ceramics,
- ✓ organic polymers with toxic content,
- ✓ other substances like stabilizers, fillers and pigments.





- - Very large quantities of of metals in waste currently obtained through primary mining operations that
  - damage human health and
  - Damage the environment.
- Natural mineral resource are finite, therefore primary mining is not sustainable
- Continuous mining of mineral resources does not promote circularity



Examine the 2024 Global E-waste Monitor (GEM) data on E-waste management on the left:

- From a purely economic perspective, **CURRENT OVERALL ECONOMIC IMPACT OF E-WASTE MGT IS NEGATIVE (-$37 bn in 2022)**

- Poor outcome mostly derived from informal disposal methods (e.g. burning, burial etc) that damage human health and the environment. ($78 bn).

- Secondary extraction (urban mining) of minerals only contributes $28 bn benefit.

- If we do more urban mining, we can
- (i) increase this $28 bn benefit
- (ii) increase value of GHG avoided from $23bn
- (iii)reduce externalized cost down from $78 bn
- (iv) direct cost of treatment may go up slightly higher from $10bn

WE CAN SWITCH THE BALANCE TO AN OVERALL POSITIVE ECONOMIC BENEFIT

Merits of Urban Mining	Challenges for African Countries
✓ Can provide overall economic benefit ✓ Preserves finite natural resources ✓ Lower pollution effects. Greener environment ✓ Promotes sustainability and Circularity ✓ Creates new, safer and greener jobs ✓ Promotes innovation in design and manufacturing	✓ Very low collection and recycling rates ✓ Low collection volume offers poor business model ✓ Poor access to finance and technology for secondary extraction of rare and critical minerals. ✓ African countries need to establish sub-regional, hubs by cooperation, for large scale mineral extraction processing plants.

THANK YOU FOR YOUR ATTENTION