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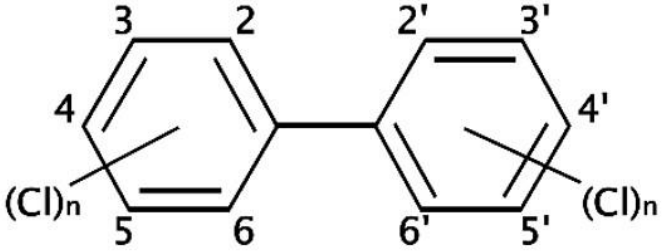
PCB

Polychlorinated Biphenyls



PCB - A FORGOTTEN LEGACY?

CONTENT

1. Brief backgroud
2. Assesment, challenges and limitations
3. Progress according to region
4. Food for thought

BACKGROUND

STOCKHOLM CONVENTION MANDATE

Stockholm Convention Annex A, Part II, paragraph (a):

- Each Party shall make determined efforts to **identify, label and remove from use equipment** containing greater than 10 % PCB and volumes greater than 5 litres; equipment containing greater than 0.05 % PCB and volumes greater than 5 litres; and equipment containing greater than 0.005 % PCB and volumes greater than 0.05 litres

Stockholm Convention Annex A, Part II, paragraph (e):

- Each Party shall make determined efforts designed to lead to environmentally sound waste management of liquids containing polychlorinated biphenyls and equipment contaminated with polychlorinated biphenyls having a polychlorinated biphenyls content above 0.005 per cent, in accordance with paragraph 1 of Article 6, as soon as possible but no later than 2028, subject to review by the Conference of the Parties.

Stockholm Convention Annex A, Part II, paragraph (h):

- The reports described in subparagraph (g) shall, as appropriate, be considered by the Conference of the Parties in its reviews relating to polychlorinated biphenyls. The Conference of the Parties shall **review progress towards elimination of polychlorinated biphenyls** at five year intervals or other period, as appropriate, taking into account such reports.

AVAILABLE GUIDANCE

TECHNICAL GUIDANCE

- ✓ Inventories
- ✓ Environmental Sound Management
- ✓ Disposal
- ✓ Available destruction technologies
- ✓ Technical guidelines - negotiated

http://chm.pops.int/Implementation/PCBs/Guidance/tabid/665/Default.aspx

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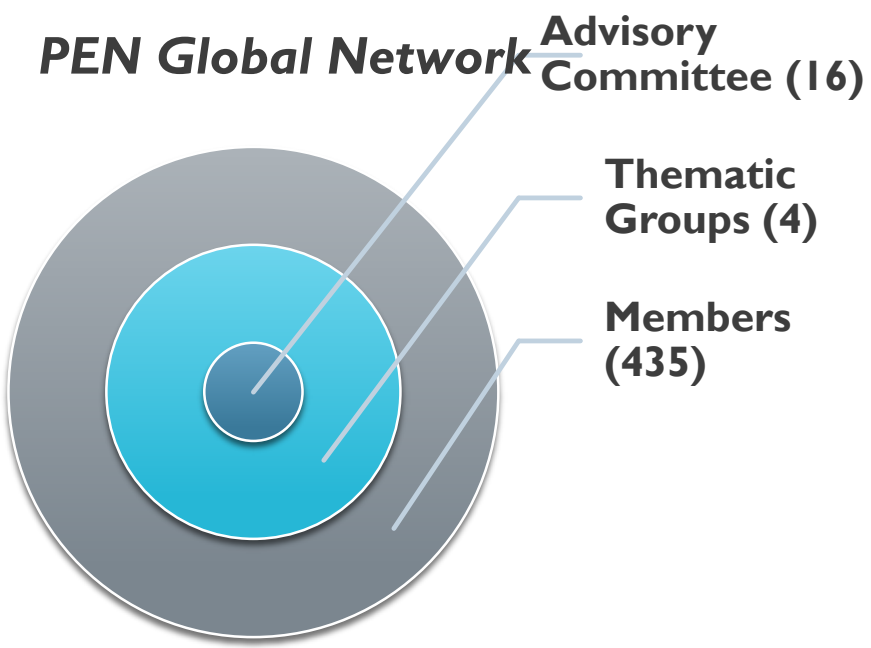
PCB ELIMINATION NETWORK (PEN)

A MULTI-STAKEHOLDER MECHANISM



Thematic Groups:

- **Inventories**
- **Maintenance, handling and interim storage of equipment containing PCB**
- **Disposal of PCB and remediation of contaminated sites**
- **Open Applications of PCB**

PEN ADVISORY COMMITTEE MEMBERS

PCBs Elimination Network (PEN) 2028

Party-nominated Members		
Region	**Country**	**Name**
Africa	Nigeria	Stella Uchenna Mojekwu
	Rwanda	Aloys Kamatari
Asia and Pacific	China	Jinhui Li
	Iran	Sanaz Jafarzadeh
Eastern European Group	Moldova	Ion Barbarasa
	Romania	Mihaela Claudia Paun
GRULAC	Costa Rica	Anna Ortiz
	Jamaica	Tara Dasgupta
WEOG	*TBD*	
	TBD	

Other Stakeholders
NGO: Jindrich Petrlik - International POPs Elimination Network (IPEN)
Technical Professional: Urs Wagner - Environmental Technology Limited (ETI)
Industry: Hugues Levasseur - Trédi/Séché Environnement
Holder of PCB: Claudia Cabal - Administración Nacional de Usinas y Transmisiones Eléctricas (UTE)
IGO: *TBD*
MEA: Kei Ohno-Woodall - BRS Secretariat

BECOME A MEMBER OF THE PEN

Membership of the PEN is open to:

- Governments
- Intergovernmental organizations,
- Donors,
- PCB holders,
- Non-governmental organizations,
- Industry, experts/academia
- Business sectors relevant to PCB

Main roles of PEN members:

- Provide support for the implementation of the **PEN's work plan**
- Provide **quality-assured information** through the sharing of experiences and knowledge on the environmentally sound management of PCB and their alternatives
- Provide **financial support** for the network's activities, as appropriate
- Participate in PEN **meetings and discussion forums**

To apply: please send an e-mail to the **Secretariat of the PEN** (UNEP's Chemicals and Waste Branch): **science.chemicals@unep.org**

ASSESSMENT, CHALLENGES AND LIMITATIONS

CONSOLIDATED ASSESSMENT OF EFFORTS MADE TOWARDS THE ELIMINATION OF PCB

Sources of information:

- Stockholm and Basel Convention Reports
- Initial and updates country plans
- GEF projects
- Technical reports, scientific literature

Adjustments, assumptions and/or extrapolations made include:

- **Oil reported in volume:** converted to mass, assuming density of 1.5 kg/L
- **Values with ranges:** the middle point was selected
- **Data reported for a time period:** evenly distributed across years
- **Extreme outliers:** adjusted and/or eliminated after examination
- **'Double counting':** efforts made to minimize such risk

CHALLENGES AND LIMITATIONS

Mostly related to quality of national inventories:

- **Quantitative data:** For 16 countries no quantitative data is available
- **Inventories:** Inventories are preliminary
- **Open applications:** Data on open applications is scarce
- **Changes over time:** Insufficient data to identify changes over time
- **Total mass:** Often no report on the total mass of PCB
- **Units:** Unclear units
- **Reference years:** Unknown reference years
- **Inconsistency:** Inconsistency between and within reports
- **Cross contamination:** No cross contamination counted issues – appears anyway

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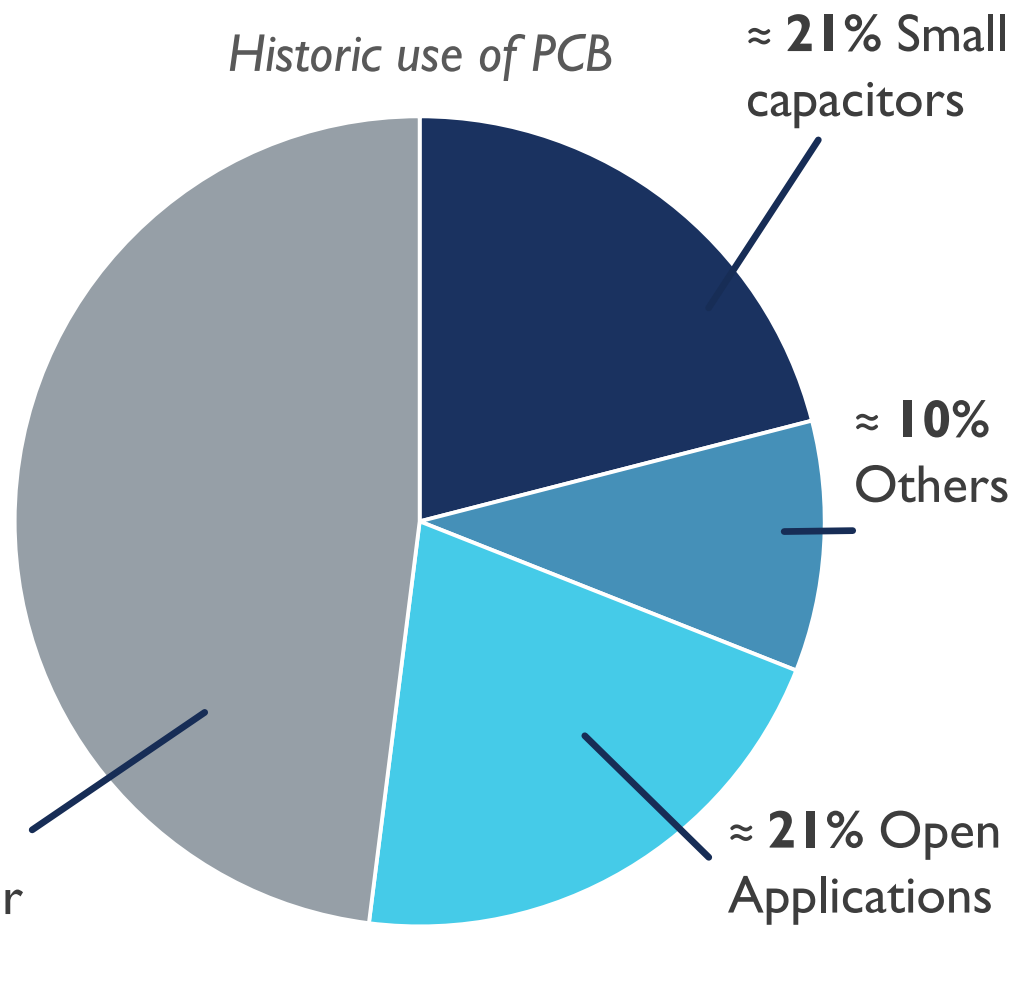
HOW MUCH PCB WAS PRODUCED?

- **Estimate:** 1 – 1.5 million tonnes
- **By whom?** 12 countries and17 companies
- **When?** Between 1929 - 1993
- **Ongoing?** Only in the Democratic People's Republic of Korea



HOW MUCH PCB WAS PRODUCED?

Country	Start of production	End of production	Amount (1,000 t)	
	Earliest estimate	Latest estimate	Lowest estimate	Highest estimate
Korea (DPR)	1960s	>2006	25	30
Soviet Union/Russia	1938	1993	180	180
Spain	1930	1986	25	29
Czechoslovakia	1959	1984	21	21
West Germany	1930	1983	59	300
Italy	1958	1983	24	31
France	1930	1984	102	135
Poland	1966	1977	2	2
USA	1929	1977	476	648
China	1960	1983	7	10
Japan	1952	1972	59	59
UK	1951	1977	66	67
Total			**1,046**	**1,512**

Source: "Consolidated Assessment of Efforts Made Toward the Elimination of Polychlorinated Biphenyls", UNEP, 2016

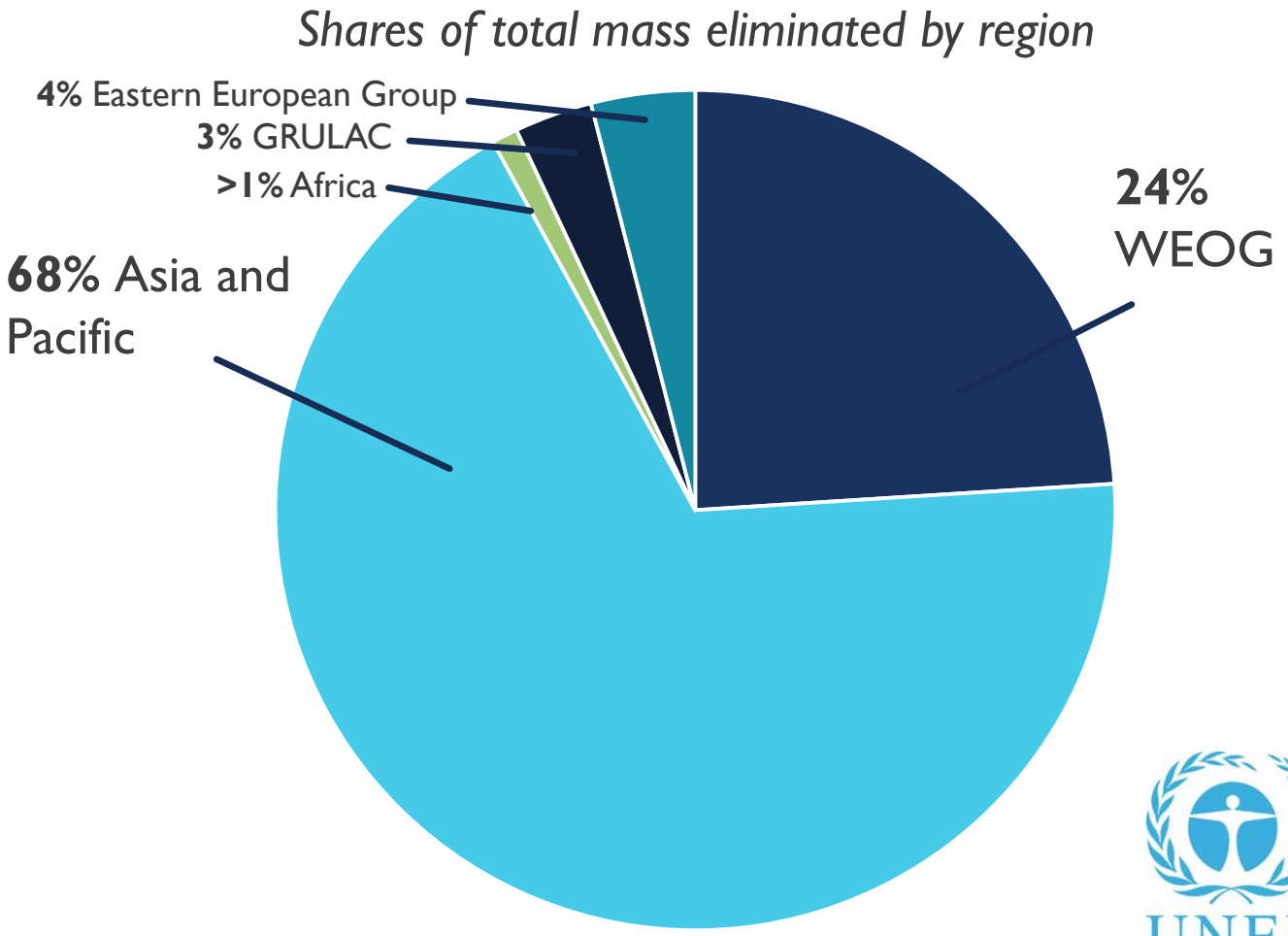
MASS ELIMINATED

PROGRESS ACCORDING TO REGION

Asia and Pacific and WEOG account for more than 90%

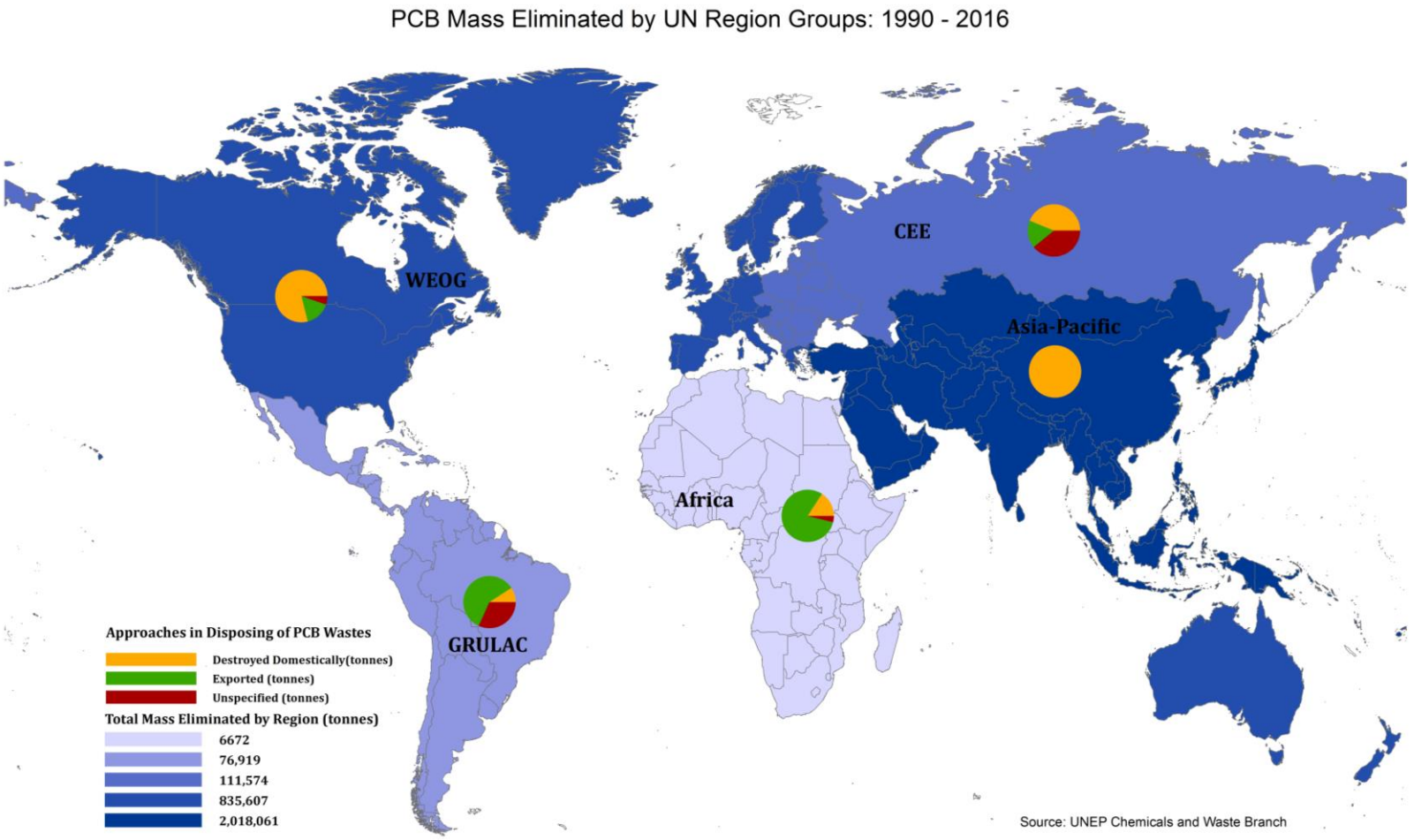
Predominantly used disposal strategies:

- **Domestic destruction:** WEOG and Asia and Pacific
- **Export:** GRULAC, Eastern European Group and Africa



MASS ELIMINATED

PROGRESS ACCORDING TO REGION



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MASS TO BE ELIMINATED
PROGRESS ACCORDING TO REGION

Predominantly used disposal strategies:

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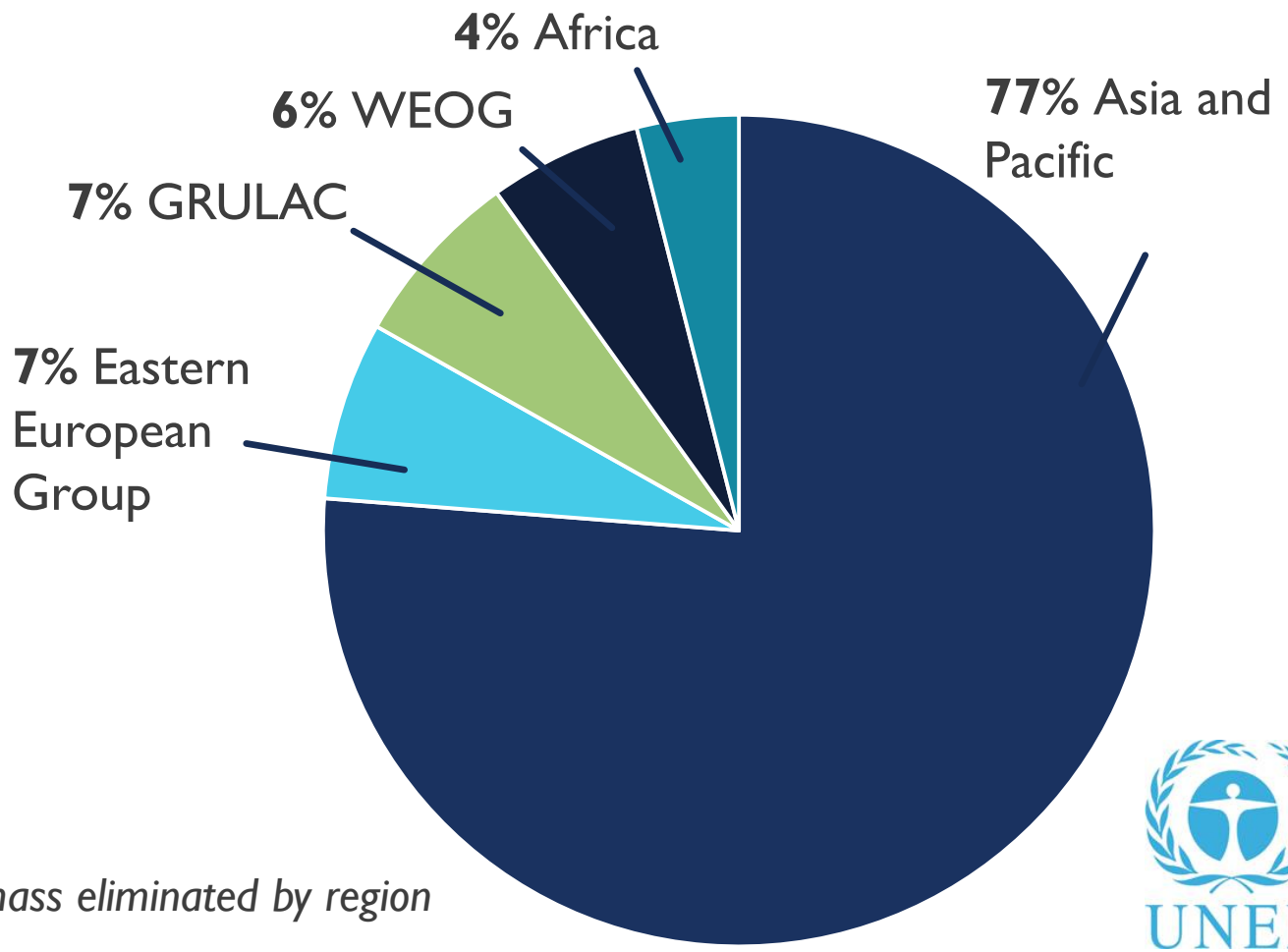
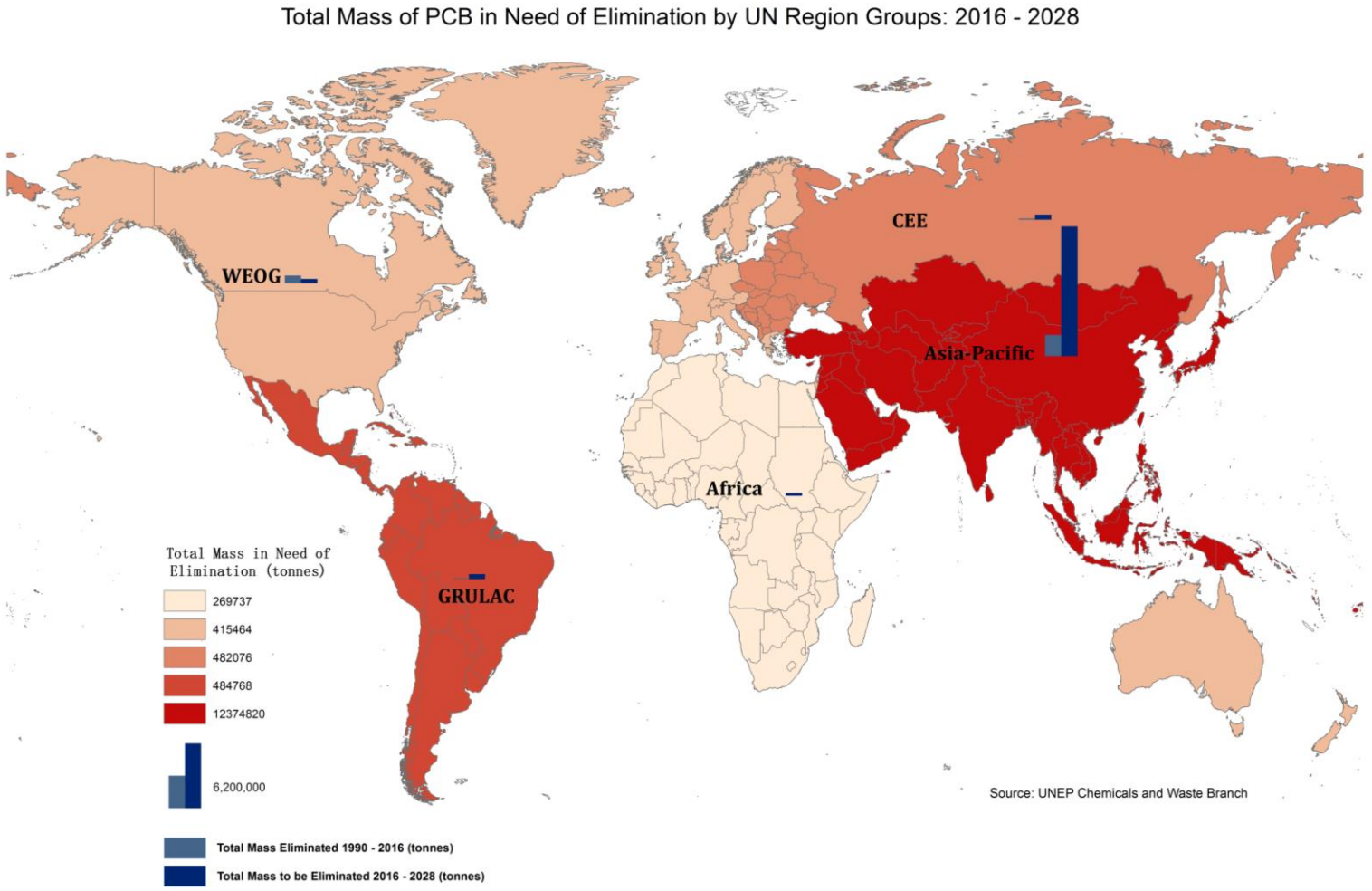
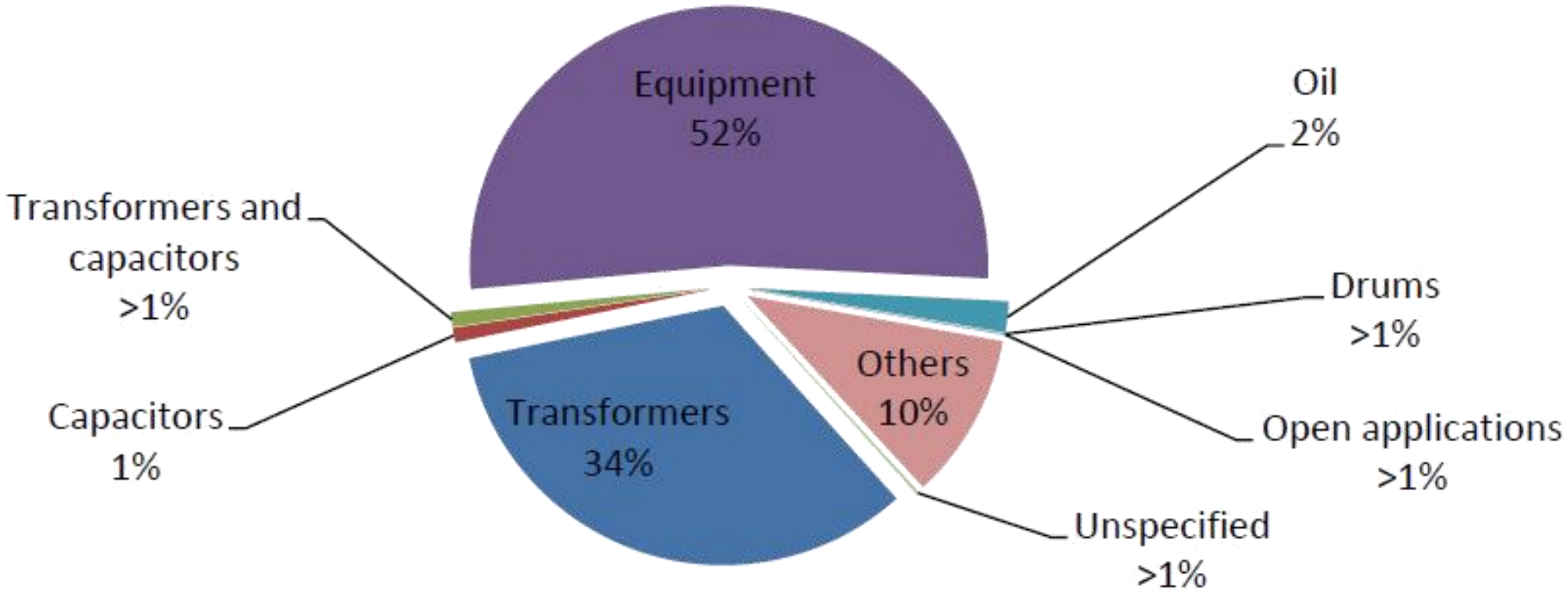


Shares of total mass eliminated by region

MASS TO BE ELIMINATED
PROGRESS ACCORDING TO REGION



MASS TO BE ELIMINATED
BY CATEGORY



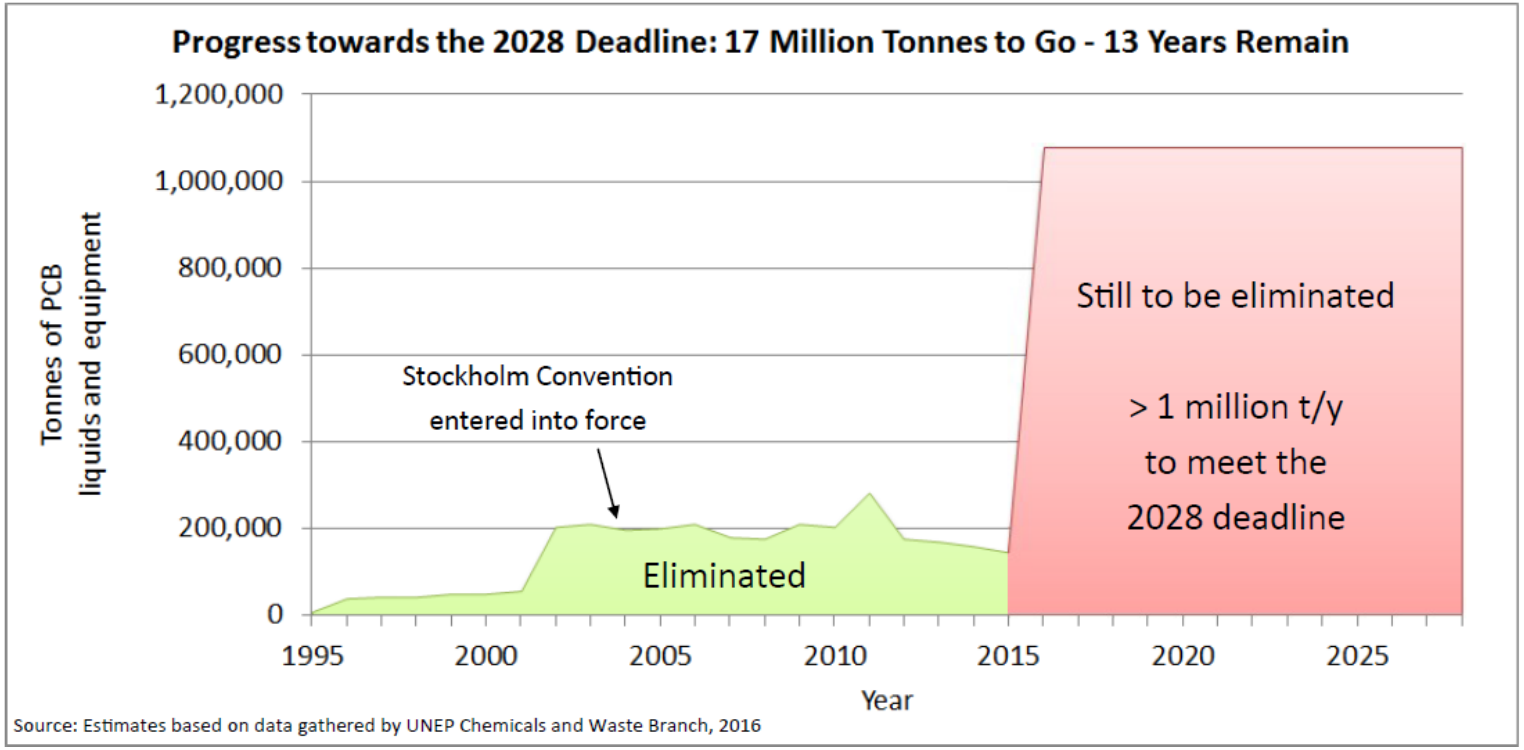
ELIMINATED – TO BE ELIMINATED

Amount eliminated:

- Estimated ca. 3 million tonnes
- **17%** of total

Amount to be eliminated:

- Estimated ca. 14 million tonnes
- **83%** of total

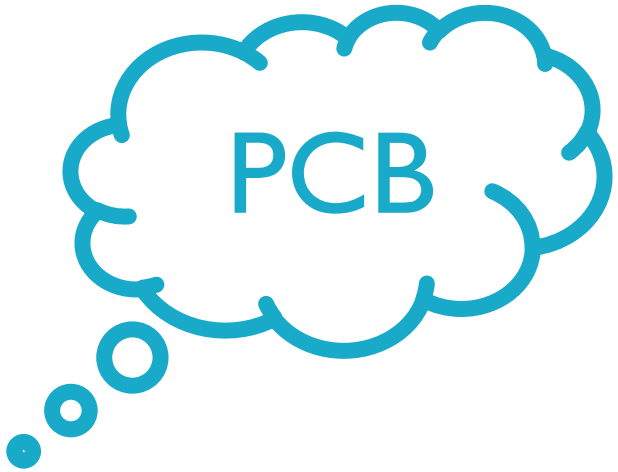


IS PCB A FORGOTTEN LEGACY?

Joint UNEP/OCHA Environment Unit, field visit of the interagency team

FOOD FOR THOUGHT

- Are we in the **right track?**
- **How do we change the trend?**



- Can PCB be seen as an **opportunity to change?**
- **Strategies: joining efforts** with other initiatives and programmes

➔ Urgent need to **step-up efforts** to meet the **2025 and 2028 goals** of the Stockholm Convention

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THANK YOU FOR YOUR ATTENTION!

Web references

UNEP Chemicals and Waste Branch:
www.unep.org/chemicalsandwaste/

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