“National Implementation Plans: POPs Research Needs and Opportunities in Africa”

By

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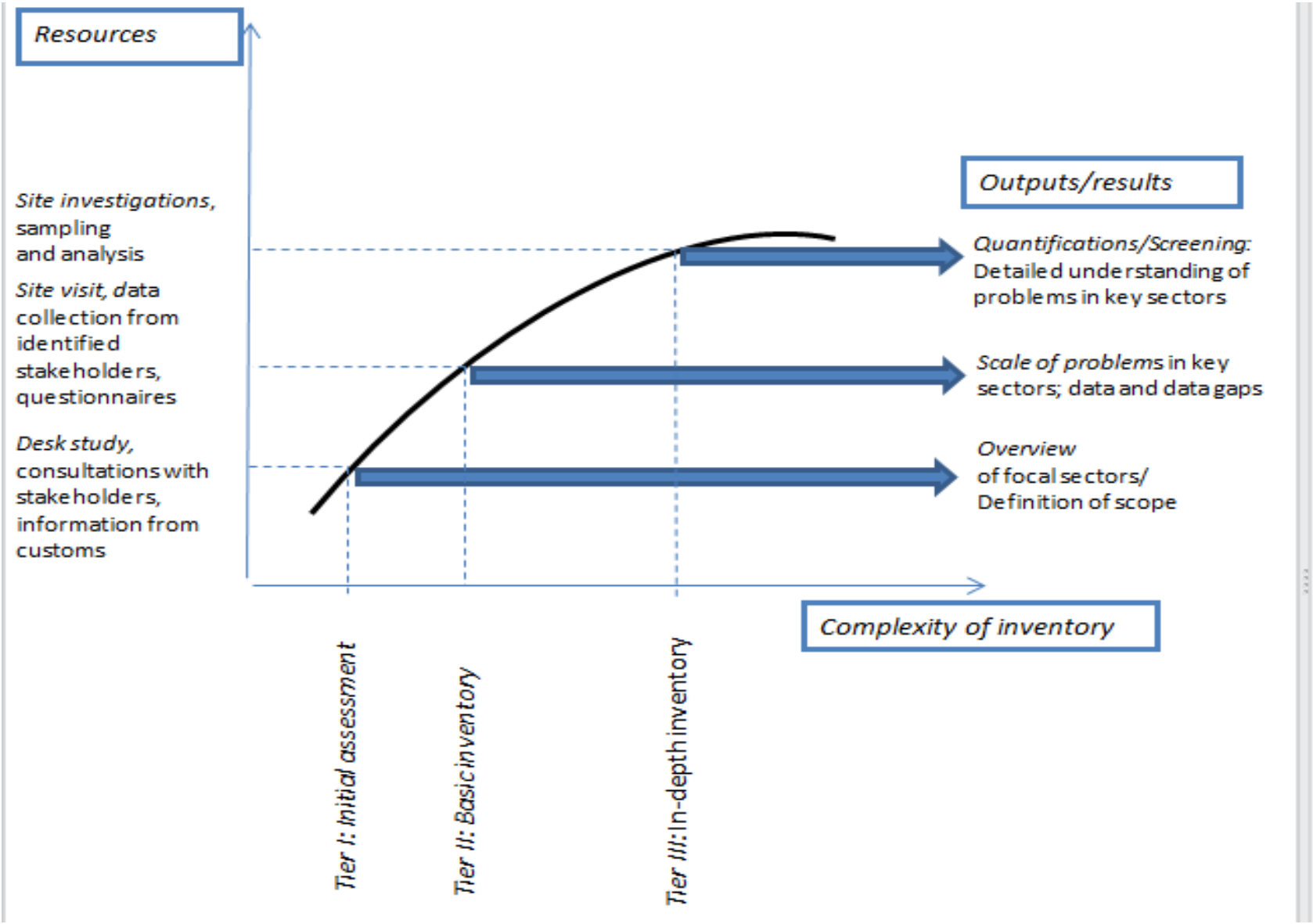
POPs Inventory Challenges in Africa



POPs Inventory Challenges in Africa

In resources, capacity/competence, equipment, and knowledge that prevent the comprehensive assessment of the status of POPs in the country

POPs Inventory Challenges in Africa

- ***Tier II: Basic Inventory***

Collection of information about existing past and present national data on the import and use of POP-PBDEs and articles containing POP-PBDEs from major stakeholders including in depth literature assessment

- ***Tier III: In-depth inventory***

Data collection here relies on the use of **analytical methods** that may include *screening* using X-ray fluorescence (XRF) and *measurements* using gas chromatography and electron capture detector (GC-ECD) or mass spectrometry (GC-MS) (Leslie et al., 2013; Sindiku et al., 2014). It may also involve *detailed inspections of sites* mentioned in tier II or a *compilation of material and substance flow analysis*.

POPs Inventory Challenges in Africa

Tier II: Basic Inventory

- Lack of comprehensive and designed for purpose sectoral inventories (health, transport, energy, manufacturing), customs and national statistical Data
- Registration and recording of countries of origin (manufacture) of imported products and articles inferred to contain industrial POPs in the customs and national statistics database
- Lack of national register of all produced and imported articles and products (susceptible to contain industrial POPs, except for PCBs)
- Lack of GHS implementation in many countries makes very hard the inventory of POPs in articles and products
- READINESS for POPs inventories is not there, and this needs to be fixed

POPs Inventory Opportunities in Africa

Creating enabling context for Tier III: In-depth inventory

Further involve the universities and research institutions in national implementation of the Stockholm convention on POPs and other MEAs

A. Investments in analytical methods that may include

- Portable X-ray fluorescence (XRF) for *screening*;
- Laboratory facilities (Gas chromatography and electron capture detector (GC-ECD) or mass spectrometry (GC-MS) for quantitative measurements
- Training and retention of skilful and competent staffs
- Improve the energy and water supply systems (necessary to maintain and run the equipment)

B. Development of competence in material and substance flow analysis, including through international cooperation (bilateral and multilateral) mechanisms

C. POPs monitoring (environment, food chain contamination)

Small Medical Waste Incinerators in Africa – Demonstrated to be the sources of UPOPs

Kenya

Gabon

Cameroon

POPs analyses in Eggs around Hotspots

Country	Cameroon	Cameroon	Cameroon	Ghana	Ghana	Ghana	Ghana	Gabon	Gabon	Gabon	
Locality	**Yaoundé-TKC Quart.**	**Yaoundé-hospital**	**Yaoundé-Etetak Quart.**	**Accra - Agbogbloshie (e-waste)**	**Accra - hospital MWI**	**Kumasi - hospital MWI**	**Acrra-supermarket**	**Nkoltang (med. waste inc.)**	**Libervill e - Owendo**	**Libervill e - Ozoung e**	**EU standard / limits**
Sample ID (eggs)	**YA-1**	**YA-2**	**YA-3**	**AGB-E**	**KBI-E**	**KU-E**	**ACC-M-E**	**GA-E-NKOL**	**GA-E-OWE**	**GA-E-OZOU**	
Number of eggs in pooled sample	6	5	6	4	5	5	6	5	5	5	-
Fat content (%)	19.60	14.60	14.30	14.69	12.25	14.74	8.75	13.58	13.79	11.20	-
PCDD/Fs (pg TEQ g^{-1} fat)	NA	**4.62**	NA	**661.06**	**49.15**	**1.74**	**0.39**	**11.52**	**9.69**	**12.94**	Feb-50
DL PCBs (pg TEQ g^{-1} fat)	NA	6.76	NA	194.75	14.00	0.86	0.17	3.21	6.75	7.65	-
Total PCDD/F + DL PCBs (pg TEQ g^{-1} fat)	NA	**11.38**	NA	**855.81**	**63.15**	**2.60**	**0.56**	**14.73**	**16.44**	**20.59**	**5.00**

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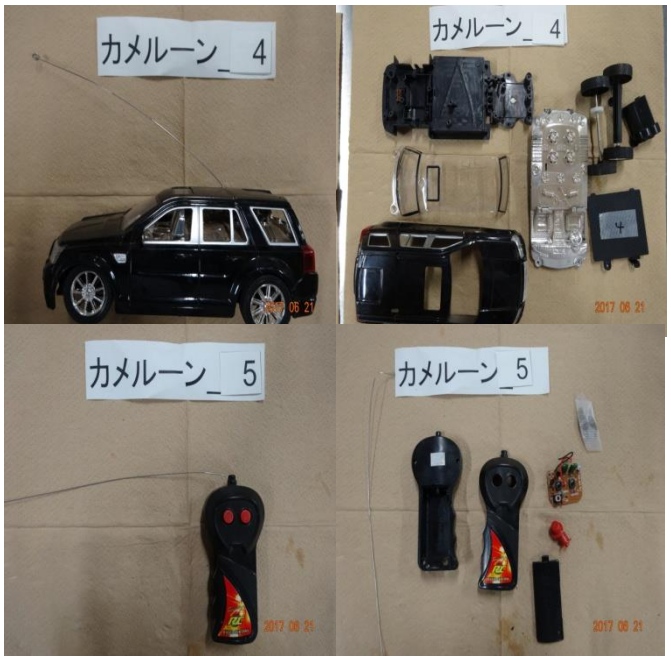
POPs in new plastic products

- ✓ Children's toys
- ✓ Hair accessories
- ✓ Office supplies
- ✓ Kitchen utensils



Practical/technical measure:

Annalytical monitoring campaigns

Arnika,/IPEN, Czech Republic
National Institute for Environmental Studies (NIES), Japan

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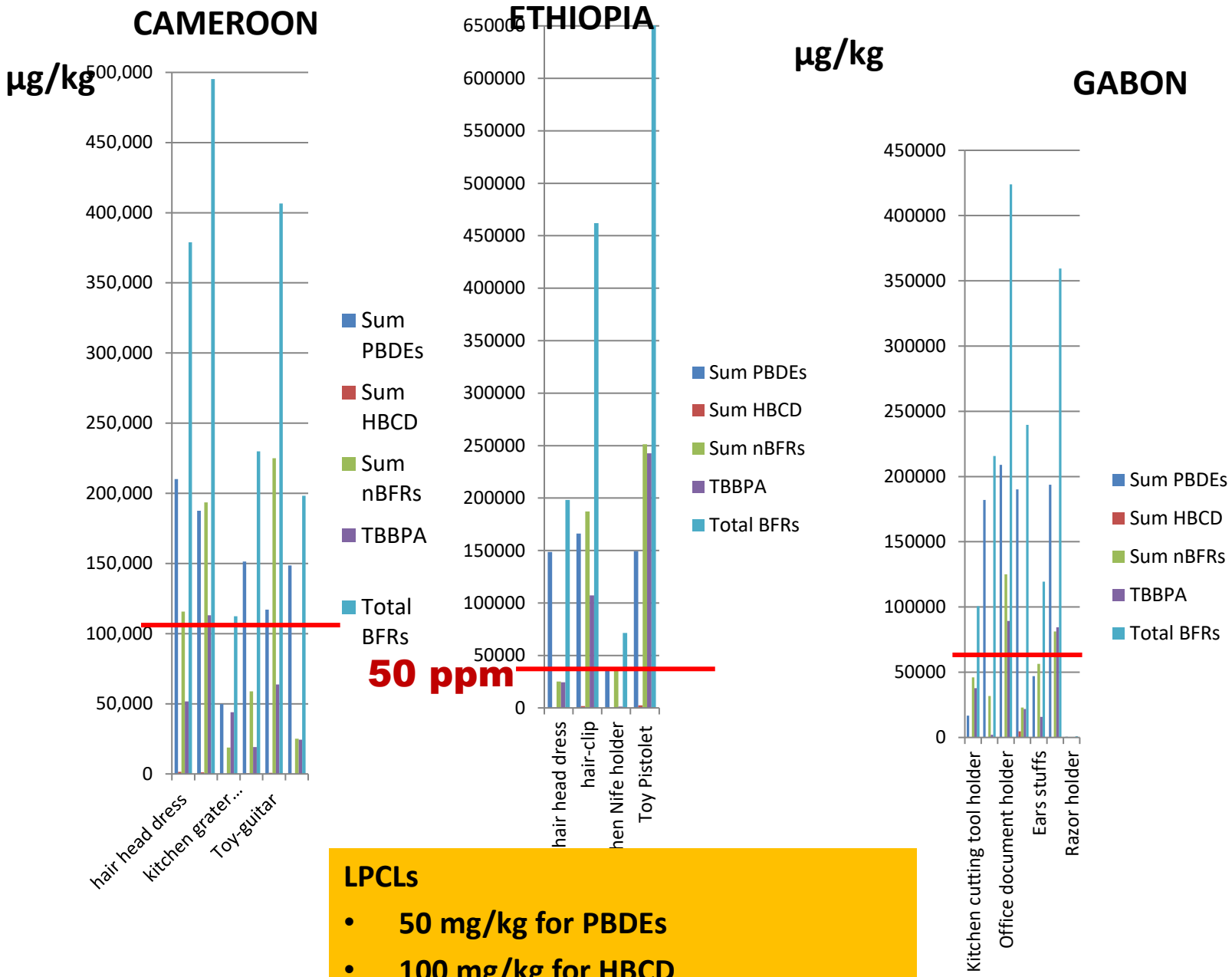
POPs in new plastic products in Africa



LPCLs

- **50 mg/kg for PBDEs**
- **100 mg/kg for HBCD**

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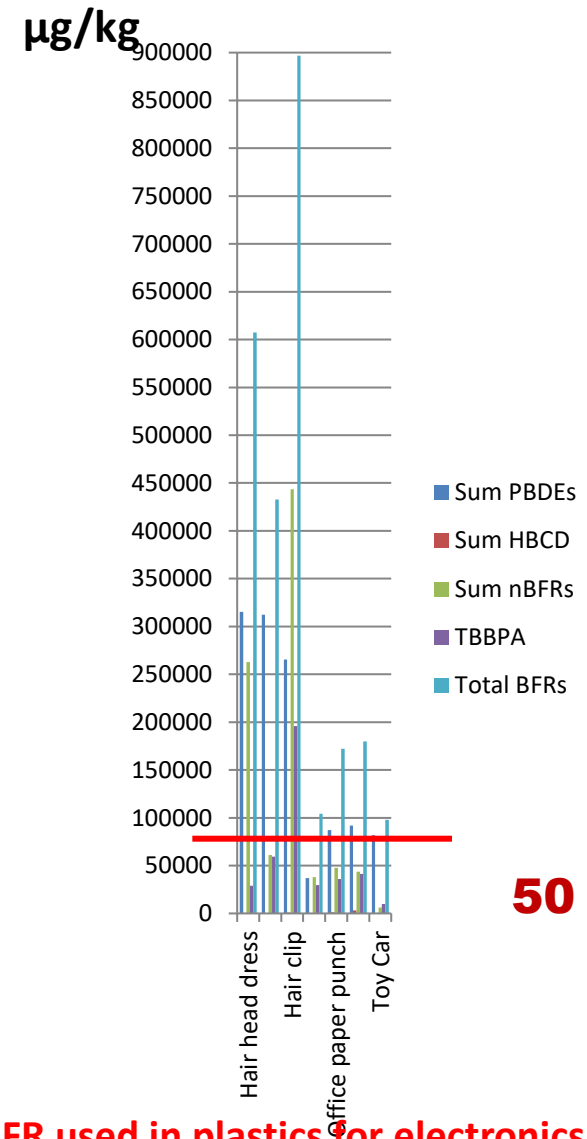
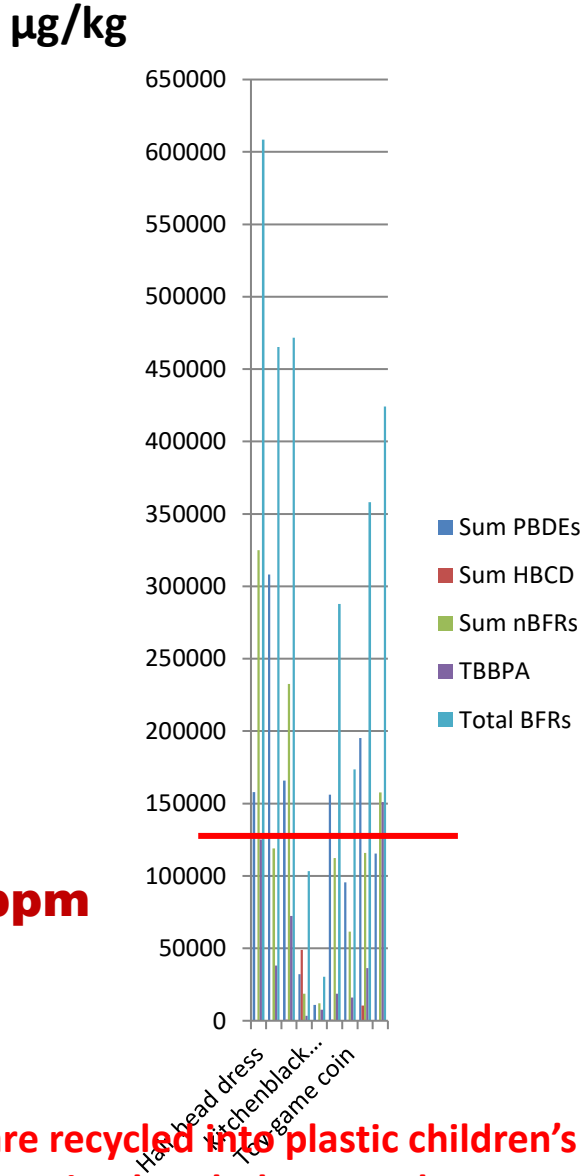
POPs in new plastic products in Africa

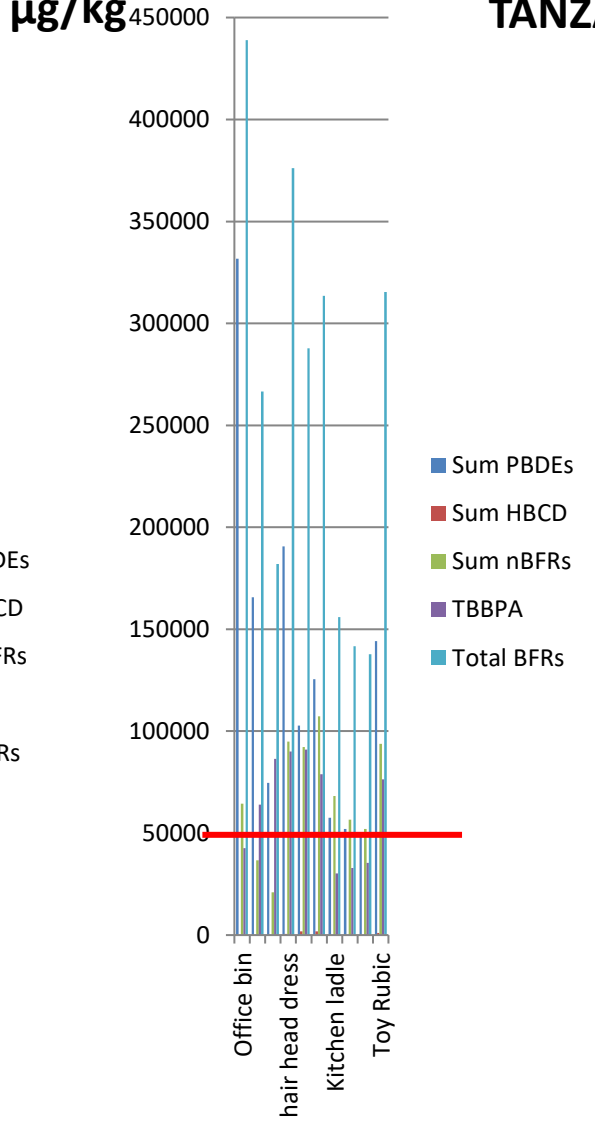
MOROCCO



TUNISIA



TANZANIA



50 ppm

BFR used in plastics for electronics are recycled into plastic children's toys: Need of effective international measures (Closing exemption loopholes, mandate transparency and traceability)

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THANK YOU

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