TOXIC RECYCLING
How to Avoid Poisoning the Recycling Chain?

The BIR World Recycling Convention in Prague, 27–10- 2015

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Executive director of Arnika - Toxics and Waste Programme

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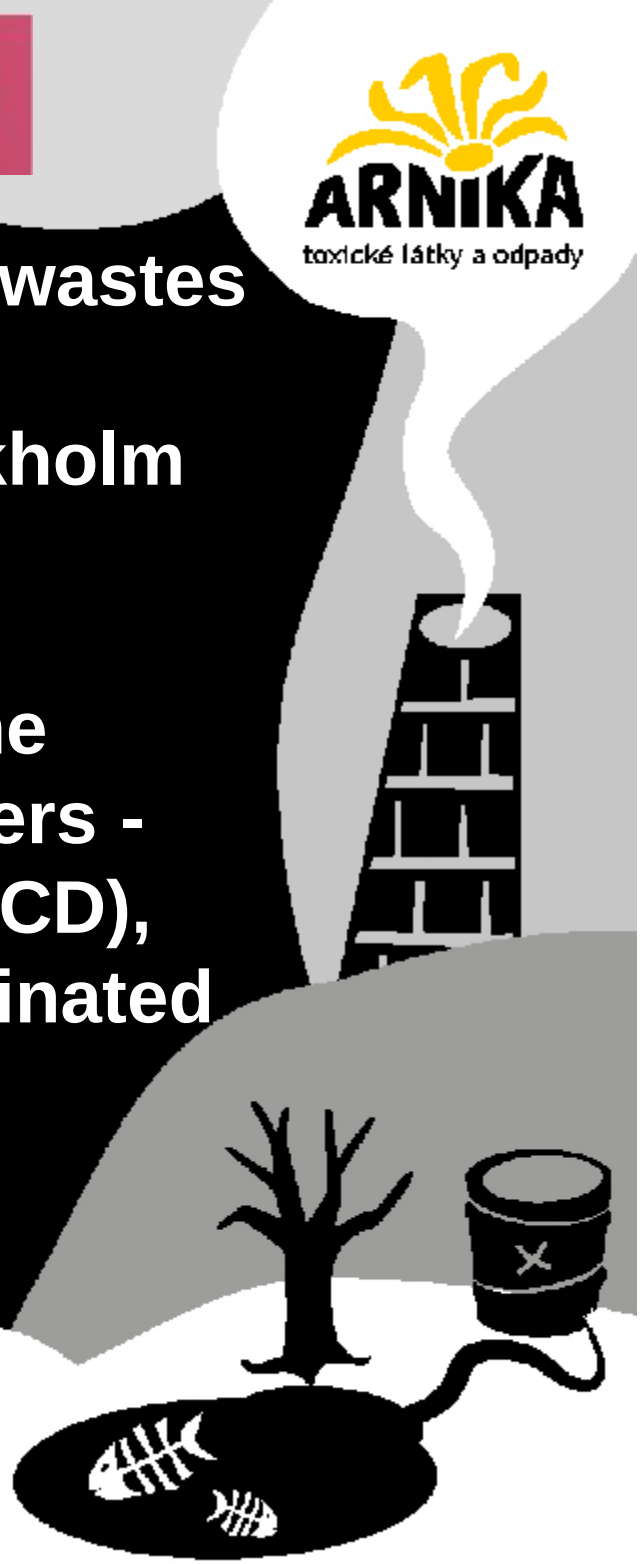
Persistent Organic Pollutants (POPs) in wastes

Chemical substances listed under Stockholm Convention on POPs

E.g. dioxins (PCDD/Fs), brominated flame retardants (polybrominated diphenylethers - PBDEs, hexabromocyclododecane – HBCD), polychlorinated biphenyls (PCBs), chlorinated pesticides (DDT, HCHs, HCB etc.)



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POPs travel long distances

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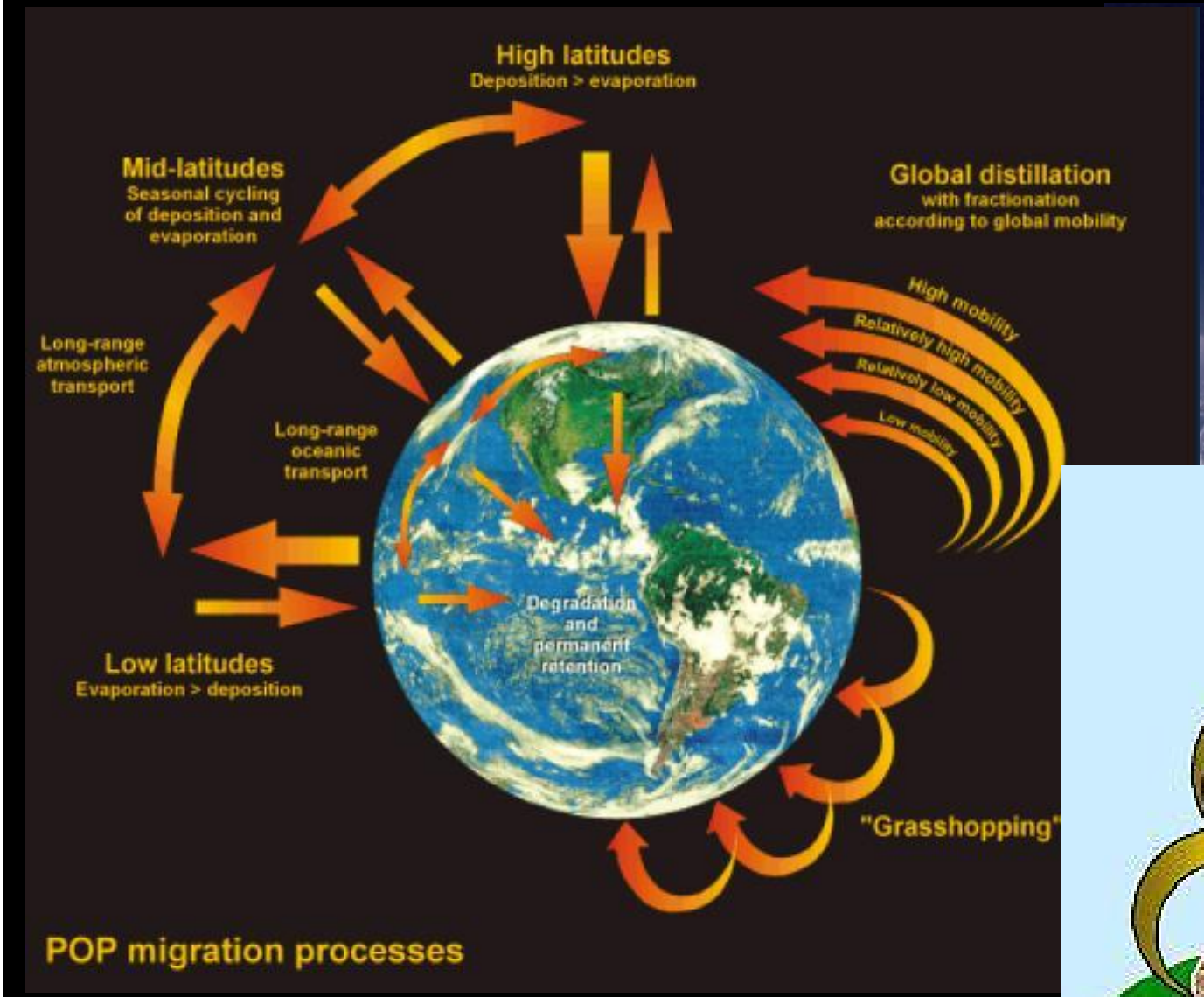

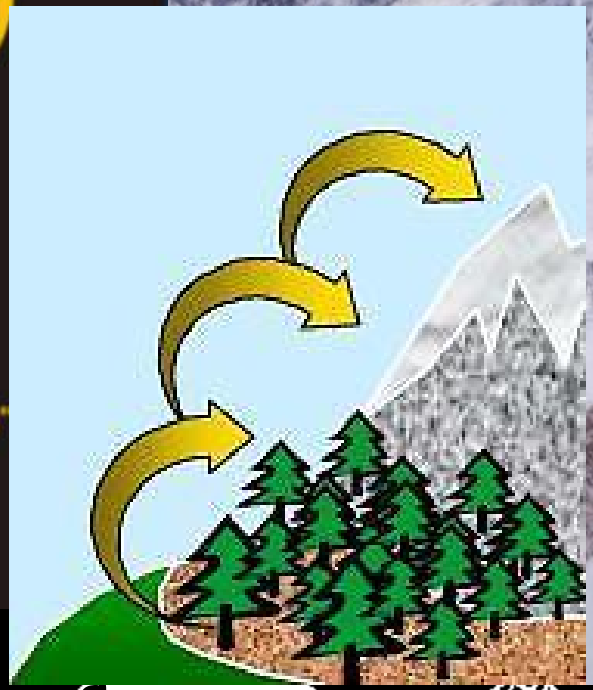

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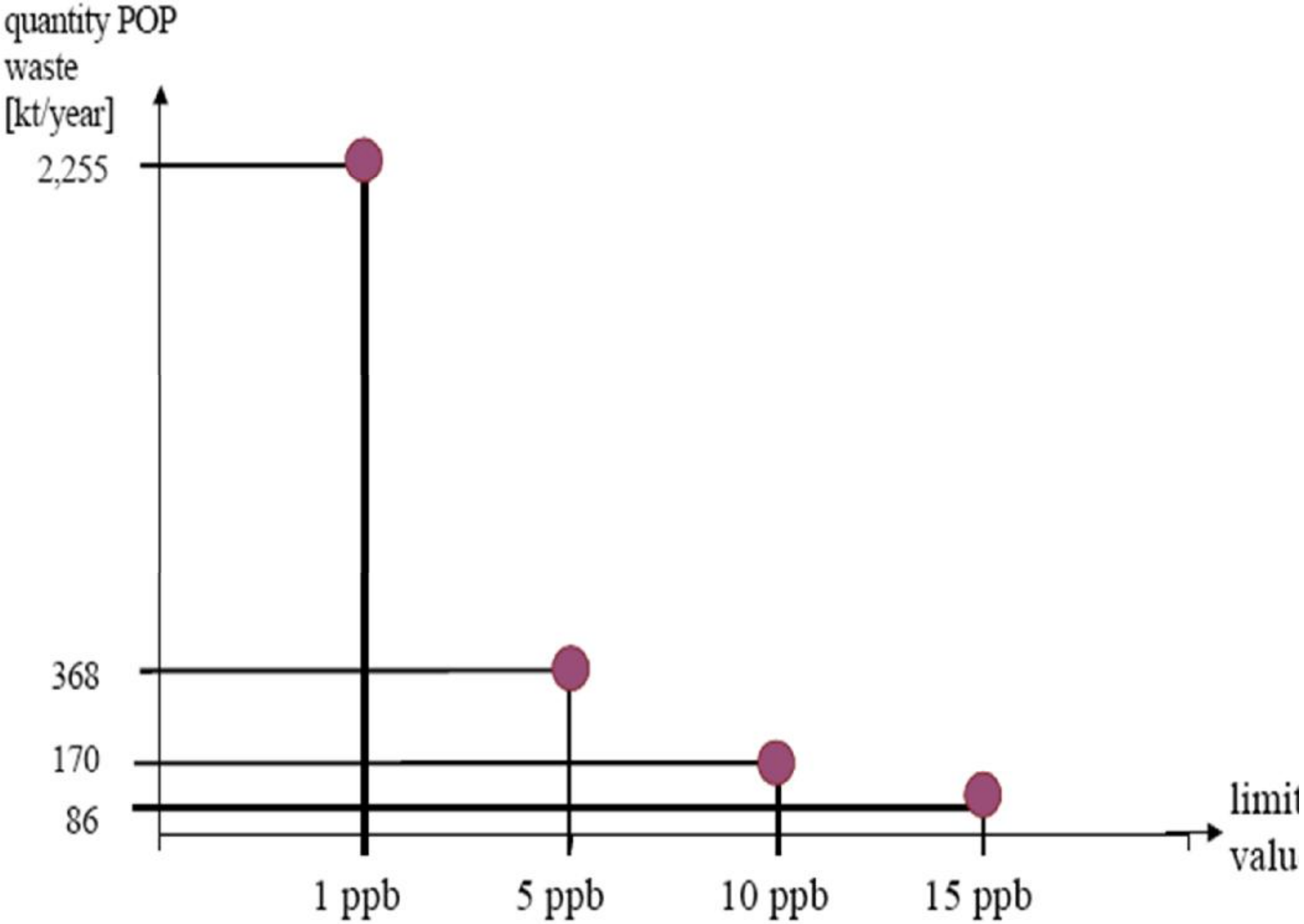
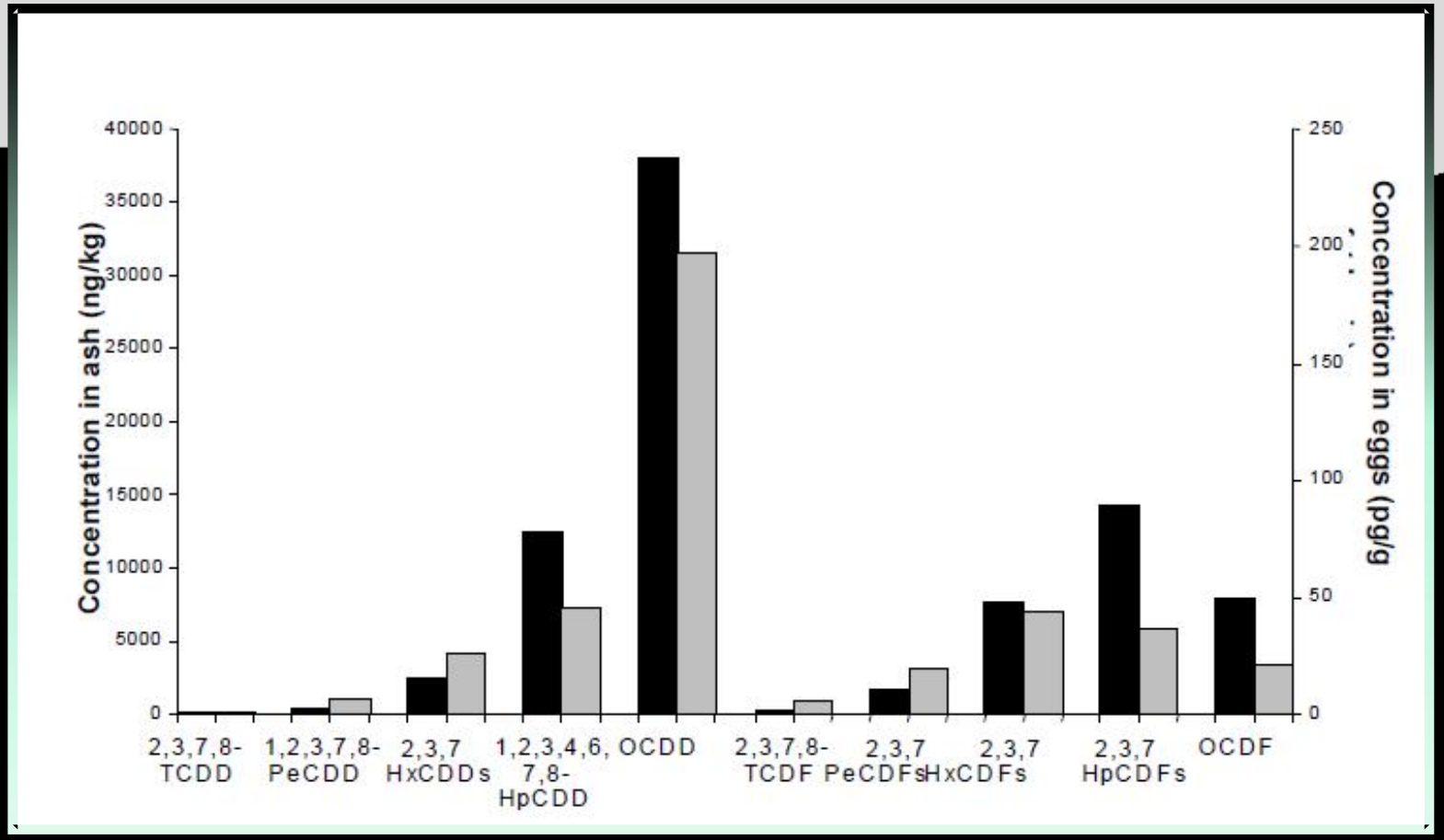
Risks of POPs

Risks of POPs – low POPs content


quantity POP
waste
[kt/year]
2,255
368
170
86
1 ppb
5 ppb
10 ppb
15 ppb
limit
valu

Waste incineration residues



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Fingerprints of dioxins (PCDD/Fs) in fly ash from Byker waste incinerator and chicken eggs from alotments in Newcastle , where free range chicken were raised near the paths paved with fly ash.

PCDD/Fs in ASH = 4.2 ppb; chicken eggs = up to 56 ppt TEQ (3 ppt TEQ EU limit at that time)

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POPs in Recycled & New Products

Under the guise of "recycling," the POPs Treaty is allowing the continued use and global distribution of POPs.

OLD PRODUCTS

The Brominated Flame Retardants, PentaBDE and OctaBDE have been used in a wide variety of consumer products for many years. In 2009, these chemicals were recognized as POPs of global concern that need to be eliminated like PCBs and the other POPs listed in the Stockholm Convention.

POPS EXPOSURE: FAMILIES

NEW PRODUCTS

Brominated Flame Retardants are then distributed to consumers in new products, continuing the exposure of babies, children and families.

POPS EXPOSURE: CHILDREN

RECYCLED

Recycled materials & products contaminated with Brominated Flame Retardants (e.g., ABS plastics and foam) are collected, shredded and mixed with other substances to form "recycled" foam

POPS EXPOSURE: WORKERS

DILUTION OF POPS INTO NEW PRODUCTS IS NOT THE SOLUTION TO PROTECT CHILDREN FROM THE POLLUTION OF BROMINATED FLAME RETARDANTS. IT ENSURES BROADER EXPOSURE AND MORE HARM.

"Failure to [stop recycling] will inevitably result in wider human and environmental contamination and the dispersal of brominated diphenyl ethers into matrices from which recovery is not technically or economically feasible and in the loss of the long-term credibility of recycling."

— Stockholm Convention Expert Committee (see Annex to UNEP/POPS/COP.5/15)

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Basel Convention
Control of transboundary movement of e-waste and POPs waste
Stockholm Convention (SC)
Treatment of POPs waste – definition of low POPs content is crucial (article 6 of the SC)

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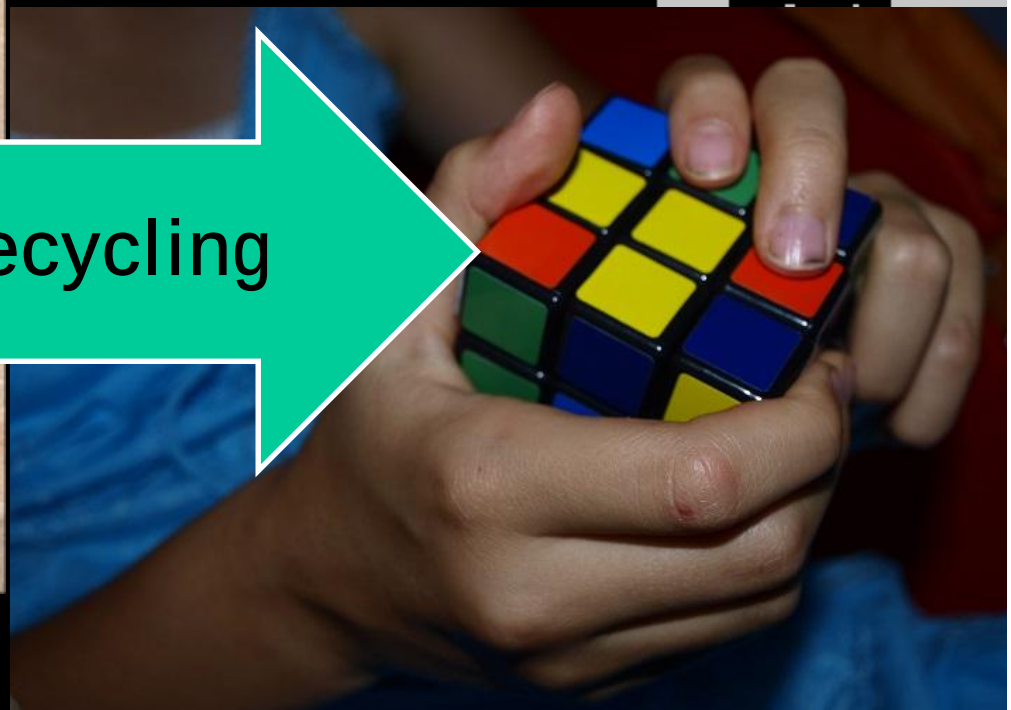
Recycling



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Provisional low POPs content levels

POP	LPL
PBDEs (hexa-, hepta-, penta-, tetra-)	50 or 1000 ppm
HBCD	100 or 1000 ppm
PCDD/Fs	15 ppb
All other POPs under SC	50 ppm

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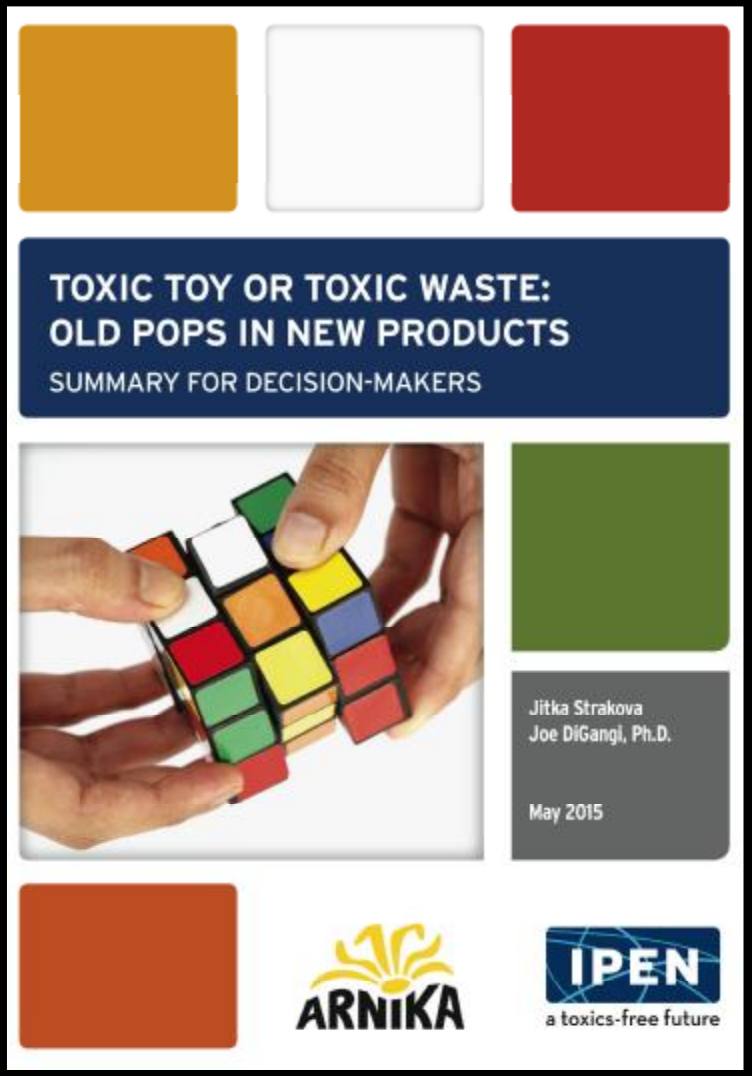

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http://www.ipen.org/news/toxic-toy-or-toxic-waste-recycling-pops-new-products

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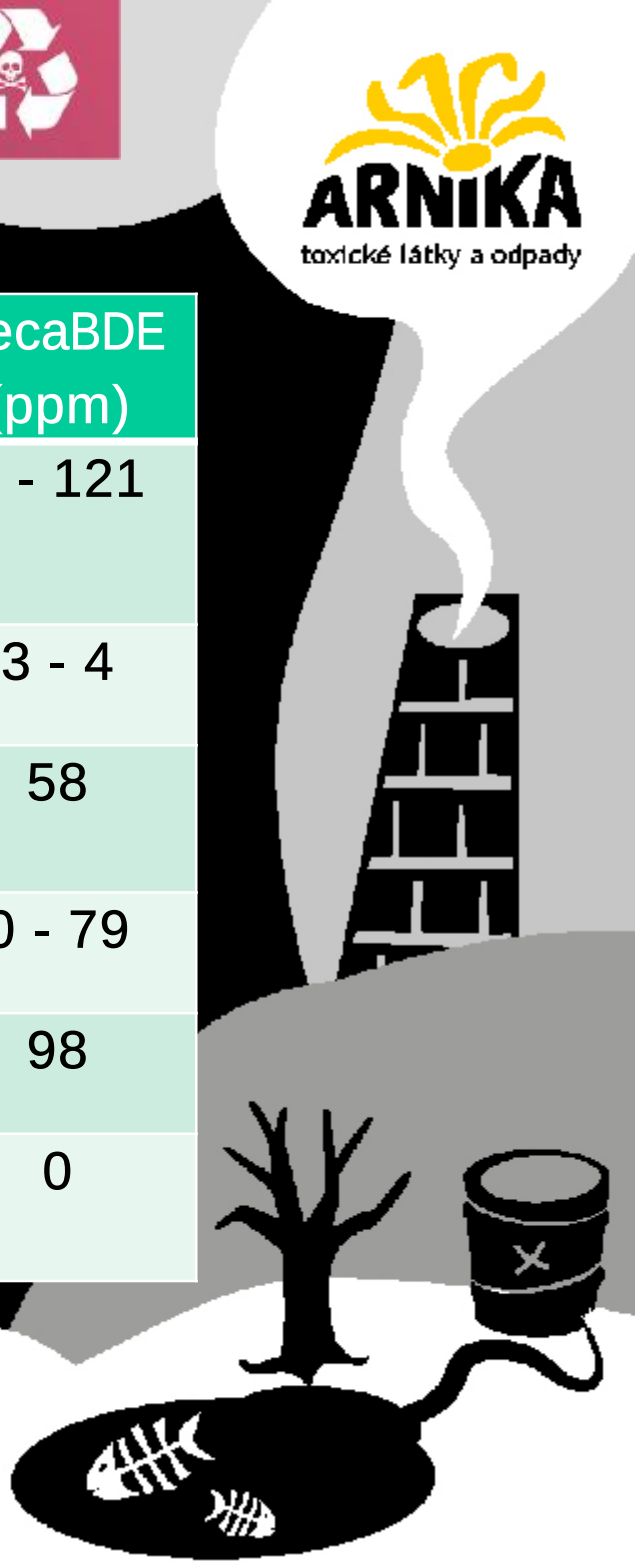
Type	made in	Country of purchase	OctaBDE (ppm)	DecaBDE (ppm)
Rubik´s cube & other toys	Mostly China	Czech Republic	0 - 95	2 - 121
Rubik´s cube	China	Germany	1	3 - 4
Rubik´s cube	Not labeled	Hungary	6	58
Rubik´s cube	China	Poland	0 - 51	0 - 79
Rubik´s cube	China	Slovakia	26	98
Rubik´s cube	Not labeled	Sweden	0	0



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STOP Toxic Recycling

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& Reuse

PUSH for stricter low POPs content level

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http://english.arnika.org/
http://www.ipen.org

Thank you for your attention