

PCBs - an unresolved problem for both humans and wildlife.

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Of all the banned Persistent Organic Pollutants (POPs) listed under the Stockholm Convention, the polychlorinated biphenyls (PCBs) pose the greatest difficulty in remediation because of their relative abundance, toxicity and environmental persistence, even relative to other organochlorines (1). Currently, the bans on PCB manufacture/use are *insufficient* – on their own - to fully protect human health or to conserve wildlife. As an initial step, more effort is needed by countries to comply with the terms of the *Stockholm Convention*, particularly in Europe. Europe produced about 299-585,000 tonnes of PCBs but many EU member states are not assessing or decontaminating PCB-contaminated materials, sites or waste stockpiles sufficiently (2). Only Norway, Sweden and Switzerland in Europe have established procedures for secure disposal or destruction of highly contaminated PCB in joint sealants (2).

The US produced the most PCBs globally (about 476-648,000 tonnes in total) and has signed but not ratified the *Stockholm Convention* (2). Nonetheless, the US is relatively proactive in terms of PCB mitigation nationally and at State level - including numerous US Environmental Protection Agency "Superfund sites" actively decontaminating sites contaminated with PCBs and other hazardous substances (1). Perhaps as a direct result, PCB levels in the US have slowly declined in humans and other biota like fish for many years now and overall PCB mitigation is generally considered to be successful (3). If the more aggressive PCB risk assessment and decontamination adopted in the US – including the "Superfund sites" - is producing sustained and ongoing declines in PCBs in humans/wildlife over several decades (3) – should we not advocate a similar approach as a matter of urgency – particularly in Europe?

References

- 1. US EPA (2016) <u>https://www.epa.gov/superfund</u>.
- 2. United Nations Environment Programme (UNEP) Chemicals Branch. Preliminary Assessment of Efforts Made Toward the Elimination of PCB. January 2015. (2015). http://www.unep.org/chemicalsandwaste/Portals/9/POPs/PCB/Preliminary%20Assessment%20of%20E fforts%20Made%20Toward%20the%20Elimination%20of%20PCB_UNEP%20Chemicals%20Branch. pdf.
- 3. J. Xue et al., J. Expo. Sci. Environ. Epidemiol. 24, 615–621 (2014).

https://wedocs.unep.org/bitstream/handle/20.500.11822/13664/Consolidated%20PCB%20Assessment _2016.pdf