Wildlife and Countryside LINK

GLOBAL ACTION NEEDED TO ADDRESS A PERSISTENT THREAT TO CETACEANS

PCBs remain a contemporary issue for cetaceans

Persistent Organic Pollutants (POPs) are chemical substances that persist in the environment, bioaccumulate through the food web, and pose a risk of adverse effects in humans and wildlife. A recent study[1] showed that, although banned organochlorine pesticides like DDT and dieldrin have declined significantly in marine top predators in Europe, polychlorinated biphenyls (or PCBs) – a POP - have stopped declining and still persist at excessively high concentrations in killer whales (*O. orca*), bottlenose dolphins (*T. truncatus*), and striped dolphins (*S. coeruleoalba*) in the Northeast Atlantic and the Mediterranean Sea. High PCB concentrations in European cetaceans are still widely associated with long-term population declines and low or zero rates of reproduction – consistent with severe PCB-induced population level effects.

High PCBs are not just a "European" problem. The very high trophic level and longevity of most marine apex predators mean that bioaccumulation and biomagnification of PCBs and other POPs is an inevitable consequence of their life history and diet. The relatively long lactation period in cetaceans also enables considerable PCB transmission from mother to calf, predominantly in mother's milk. Killer whales remain the most highly PCB-contaminated mammalian species on earth, with very high concentrations found in individuals throughout their global range. Other cetacean species at particular risk of PCB toxicity include false killer whales (*P. crassidens*), harbour porpoise (*P. phocoena)* and coastal bottlenose dolphins; all marine mammal species in the Mediterranean and Black Seas; beluga (*D. leucas*) in St Lawrence River, Canada and several coastal/river dolphin and porpoise species in SE Asia.[2]

What is the International Whaling Commission (IWC) doing to address PCBs?

The IWC has been concerned about threats from PCBs to cetaceans for over three decades.[3] It has actively supported the work of its Scientific Committee on this issue via its comprehensive research programme known as Pollution 2000 (and thereafter a 2000+ and 2020 programme), to examine the impacts of pollutants, including PCBs, on cetaceans.[4] Recent studies submitted to the IWC Scientific Committee have shown that high PCB exposures are associated with long-term population declines or contraction of range in a number of dolphin species in Europe and are at levels associated with reproductive toxicity in marine mammals.

What action has been taken under the Stockholm Convention?

The Stockholm Convention was created to address POPs, including PCBs, and entered into force in 2004. There are now 180 parties to the Convention who have committed to seek the elimination of PCBs through prohibiting their production and their use. However, despite the wide global support for addressing PCBs, a 2015 United Nations Environment Programme (UNEP) assessment estimates that around 14 million tonnes – the vast majority of PCB (containing or contaminated) equipment and materials – still requires elimination, and the efforts to date have only eliminated 11- 22% of PCB (containing or contaminated) equipment and materials.[5] Clearly, there has been insufficient action by Stockholm Convention parties to address this severe persistent threat. It is likely that there are ongoing sources of PCBs pollution entering the environment because of a systemic underperformance of Stockholm Convention parties in implementing their obligations, with the result that many European and global cetacean populations are still severely threatened by PCBs today.

IWC engagement on the issue can help!

The IWC has helped raise awareness on the threats from PCBs through IWC Resolutions 1981-7, 2000-6, 2001-10, and 2012-1 expressing its deep concern on the serious threats posed to cetaceans by persistent organic pollutants. Furthermore, IWC Resolutions 2000-6 and 2001-10

encouraged the ratification of the Stockholm Convention by Contracting Parties and their adherence to its obligations to address threats from persistent organic pollutants.

The IWC's global leadership on conservation and welfare of cetaceans places it in an authoritative position to communicate to the Stockholm Convention's Secretariat the IWC's views on the critical need for effective implementation of the Stockholm Convention by its parties as well as the rapid conclusion of the Stockholm Convention's Article 17 negotiations to establish an effective compliance and enforcement mechanism in light of the increasingly dire contemporary threat PCBs pose to Europe's, and potentially global, populations of cetaceans.

Stockholm Convention parties are intending to conclude Article 17 compliance negotiations at the April 2017 Conference of the Parties (CoP). A strong, enforceable compliance framework that incentivises both developed and developing countries alike will help ensure that all parties to the Convention take their commitments seriously and that efforts to eliminate PCBs need to be rapidly enhanced across the world.

In addition, there should be support for further research to investigate pathways of PCB contamination of the marine environment – on a global basis – and future environmental monitoring to assess PCB levels in marine sediments, discharges and freshwater outflow. The IWC Scientific Committee should continue its work on the assessment of the full impact of PCB exposure on cetaceans, with particular reference to Europe, especially in Iberian (NE Atlantic), Mediterranean and Black Sea countries.

What more can be done?

Improved implementation of the Stockholm Convention to address PCBs will not only help save cetaceans, but will also help protect human health and the environment. Actions needed to help reduce the threat from PCBs include the proper disposal of large stocks of PCBs and PCB-containing equipment and materials, improving management and monitoring of landfills to reduce PCBs leakage, limiting the dredging of PCB-laden rivers/estuaries which will help reduce PCB mobilization in marine sediments and regulating the disposal of PCBs in joint sealants in old buildings such as European tower-blocks built in the 1950s-80s.

Ultimately, there needs to be a global movement to call for:

- more ambition and accountability of Contracting Parties through the Stockholm Convention
- improved state practice implementing the Stockholm Convention with greater emphasis on destruction or irreversible transformation for all PCB (containing or contaminated) equipment and materials
- increased assistance to developing countries for PCB elimination efforts, including infrastructure and capacity building for destruction facilities
- additional funding for research and monitoring to identify PCB pollution sources and their toxic effects on marine mammals and other marine apex predators.

All IWC Commissioners can be champions on this important issue and encourage their country to take action and to help create an effective, enforceable compliance mechanism in the Stockholm Convention.

Wildlife and Countryside Link represents more than 8 million people through 45 voluntary organisations across the UK concerned with the conservation and protection of wildlife. Our call to address the threat from PCBs is supported by 12 organisations. Contact PCBs@wcl.org.uk for further information. If you wish to speak to a representative at IWC66, please contact Mark Simmonds, Humane Society International.

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[1] Jepson, Paul D et al. 'PCB pollution continues to impact populations of orcas and other dolphins in European waters' *Nature – Scientific Reports* (2016) 6:18573
[2] Jepson, Paul D and Robin J. Law 'Persistent pollutants, persistent threats' Science (2016) 352: 1389; http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0131085
[3] See: Resolution 1981-7 'Resolution relating to Pollutants in Whales' *International Whaling Commission* (1981), Resolution 2000-6 'Resolution on POPs and heavy metals' *International Whaling Commission* (2000), Resolution 2001-10 'Resolution on the Stockholm Convention on Persistent Organic Pollutants' *International Whaling Commission* (2001) and Resolution 2012-1 'Resolution on the importance of continued scientific research with regard to the impact of the degradation of the marine environment on the health of cetaceans and related human health effects' *International Whaling Commission* (2012).
[4] SC/65a/E04 'Assessing the Population Consequences of Pollutant Exposure in Cetaceans (Pollution 2000+) – from Ingestion to Outcome'; https://iwc.int/chemical-pollution
[5] UNEP, 'Preliminary assessment of efforts made towards the elimination of polychlorinated biphenyls' (2015); Stockholm Convention, 'Report of the meeting of the Bureau of the Conference of the Parties to the Stockholm Convention on Persistent Organic Pollutants, Geneva, Switzerland, 28-29 June 2016' (2016).

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