

## DG ENTR Workshop on PFOA 4th May 2010

### Global risks for health and environment – what the EU could do

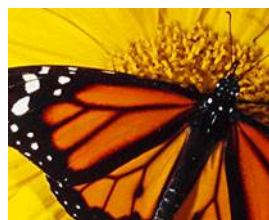
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# Legal action on PFOA long overdue

- § hazardous properties and ubiquitous exposure to wildlife and humans
- § high uncertainties in risk assessment
- § missed opportunity in context of EU's PFOS restriction (PBT properties)
- § 2006 TC C&L: concluded Repr. Cat 2, i.e. PFOA meets SVHC criteria under REACH





## PFOA: the 'B' question

### § REACH Annex XIII:

*“1.1.2. Bioaccumulation: A substance fulfils the bioaccumulation criterion (B) when the bioconcentration factor is higher than 2 000.”*

§ PFOA binds to blood proteins and not lipids (therefore low bioconcentration factor)

§ BCF test too limited: ignores uptake through food and via air

§ PFOA: persistent and bioaccumulative chemical biomonitoring data, magnification in food webs  
*(Houde et al, 2006, EST: Biological Monitoring of polyfluoroalkyl substances. A review)*







# Contamination of the global environment



PFOA monitoring data in remote areas

- § Indication of P and B properties
- § Long range transport potential







## Weight of evidence approach needed

### Stockholm Convention Annex D 1c) Bioaccumulation:

(i) (...)

(ii) *Evidence that a chemical presents other reasons for concern, such as high bio-accumulation in other species, high toxicity or ecotoxicity; or*

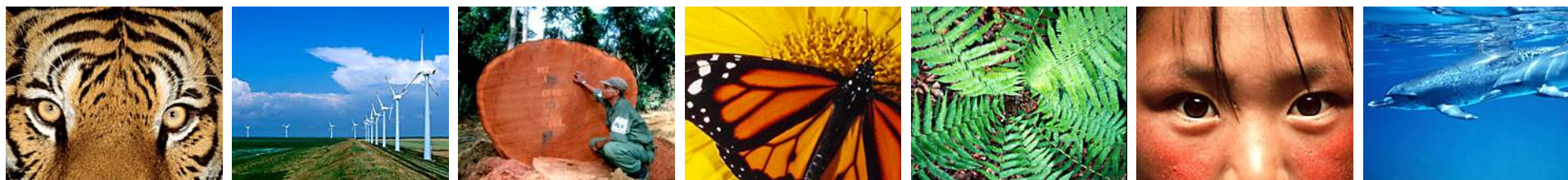
(iii) *Monitoring data in biota indicating that the bio-accumulation potential of the chemical is sufficient to justify its consideration within the scope of this Convention*





## Limitations of current REACH PBT criteria

- § current REACH PBT criteria need to reflect what happens in the real world (i.e. consider monitoring data)
- § Bioaccumulation should cover all bioaccumulation mechanisms including food webs with air-breathing animals (including humans) (B.C. Kelly *et al.*, Food web-specific biomagnification of persistent organic pollutants, *Science*, 317, 236 (2007))
- § Use opportunity to correct this in the upcoming comitology decision on REACH Annex XIII





## Proposed EU regulatory action

- § include on REACH candidate list: article 57 c) and d)
- § restrictions under REACH incl. relevant PFOA precursors
- § include in new list of priority hazardous substances under WFD
- § reduce exposure through other EU related rules such as food packaging: PFC in food wrappers found in human blood (DiPaPs) breaking down to PFOA
- § COM to consider proposing PFOA for Stockholm convention







# WWF generations X study (2005)



	Found in (out of 38)	Concentration (ng/g blood)
Perfluorooctanoic Acid (PFOA)	13	0 – 2.14
Perflurooctane sulphonate (PFOS)	37	0 – 35.3
Perflurooctane sulphonamide (PFOSA)	36	0 – 2.04
Perfluorononanoic Acid (PFNA)	5	0 – 0.63
Perfluorodecanoic Acid (PFDA)	3	0 – 0.31
Perfluoroundecanoic Acid (PFUnA)	2	0.24 (1 <sup>st</sup> value) 0.54 (2 <sup>nd</sup> value)
Perfluorododecanoic Acid (PFDoA)	23	0 – 2.45
Perfluorotetradecanoic Acid (PFTrDA)	-	-

available on [wwf.panda.org](http://wwf.panda.org)





## Beyond PFOS and PFOA

- § higher variety of PFCs and partly higher concentrations were found in children
- § C4 and C6 perfluorinated compounds used as replacements may still have problematic PBT-like profile
- § C 6 and other new PFCs found in US population (data from 2003/2004 National Health Survey, NHANES)
- § Links to decreased birth weight, reduced sperm quality, longer waiting time to pregnancy – data so far mostly on PFOS/PFOA





## Action needed on other PFCs

- § PT chemicals should trigger similar concerns as PBT chemicals: due to the persistence, the ongoing exposure can not be “turned off”
- § Need a different approach to PFCs, e.g. develop read across and place certain PFCs as a group on REACH candidate list
- § Recent study lists compounds likely to yield PFCAs  
(*P.H. Howard, D.C.G. Muir: Identifying new persistent and bioaccumulative organics among chemicals in commerce, Environ Sci Technol* **2010**, 44, 2277-2285)







## Too slow responses to a global problem

- § US EPA voluntary stewardship programme on PFOA (2006)
- § US EPA (2010) listed Long-chain perfluorinated chemicals (PFCs including PFAS and PFAC):” (PFHxS), (PFOS), (PFOA), higher homologues, salts and precursors.
- § Japan (2009): monitoring and assessment of PFOS and PFOA, regulation of product and use under consideration
- § Canada (2006): Action plan on assessment and management of PFCAs and precursors





## Conclusions

- § EU should take leadership and regulate PFOA and precursors under REACH and other EU laws
- § PFOA and precursors should also be addressed at global level (POP convention)
- § REACH PBT criteria need to be improved to catch all PBTs
- § Implement precautionary action on other PFCs, e.g. groupings on REACH candidate list

