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# The environmental and health benefits of REACH, and how they can be increased by improving REACH

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## Contents

- **Why is WWF interested in REACH?**
- **Why are chemicals a problem?**
- **WWF's view of REACH**
- **Costs of REACH**
- **Benefits of REACH**
- **Conclusions**



## Why is WWF interested in REACH?

- **The problems caused by toxic chemicals are a global priority for WWF**
- **Wildlife - and humans - throughout the world are contaminated by industrial chemicals**
  - **And there is considerable evidence of wildlife (and human) impacts.**
- **WWF is working to support a more sustainable production and use of chemicals**
  - **REACH is a key part of this work**
- **WWF has therefore launched an international campaign in favour of a strong REACH:**



<http://www.panda.org/detox>



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## Chemical ignorance

- **There are more than 30,000 industrial chemicals in use in Europe - but we lack safety data on them**
  - We have very little safety information on most of these chemicals, those first produced prior to 1981
  - The European Chemicals Bureau found that only 14% of HPV chemicals had a basic set of data publicly available - there is even less information available on lower volume chemicals
  - These chemicals have been in production for over 20 years - often 50 or 60 years, yet have we have insufficient information to assess their safety
    - Responsible care?





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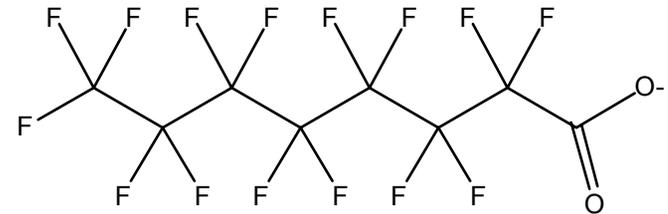
## Contaminating the world..

- **A growing number of industrial chemicals are known to contaminate wildlife and people, for example:**
- **Brominated flame retardants**
  - Contaminating people and wildlife across the world
  - Two phased out in Europe (penta and octa)
  - Deca is in increasing use, despite contamination of polar bears, birds of prey and people
    - Even though industry claimed it wouldn't accumulate
    - The EU decided in May not to phase out Deca, in the face of aggressive industry lobbying
- **Perfluorinated chemicals (PFCs)**
  - Including PFOS (Scotchguard) PFOA (used in teflon manufacture and telomers (used in coatings, break down into PFOA))
  - Contamination by PFOS and PFOA exists across the world
  - PFOS has been voluntarily phased out, PFOA and telomers are in widespread use
    - MacDonaldis have admitted using telomers in their food packaging

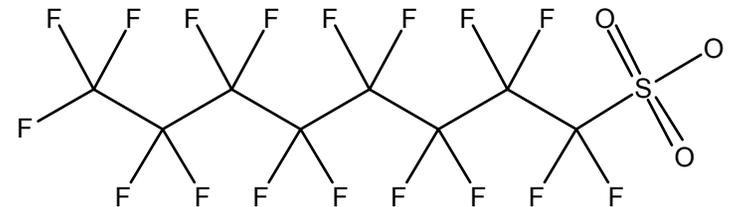


# My perfluorinated chemicals

- From WWF's sampling of the blood of 47 people for 101 chemicals.
- All 45 samples (including mine) analysed for PFCs contained these 7 PFCs:
  - PFHxS, PFOA, PFNA, PFOS
  - PFOSA, PFDA, PFUnA
- All unregulated in EU
- A liability in future?



Perfluorooctanoate (PFOA)



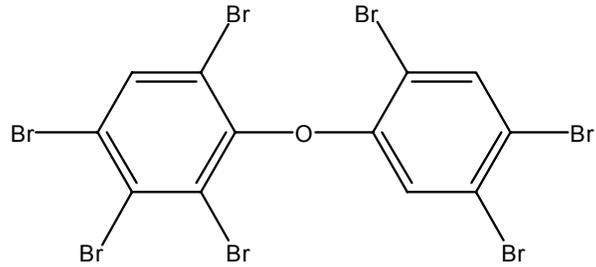
Perfluorooctane sulfonate (PFOS)



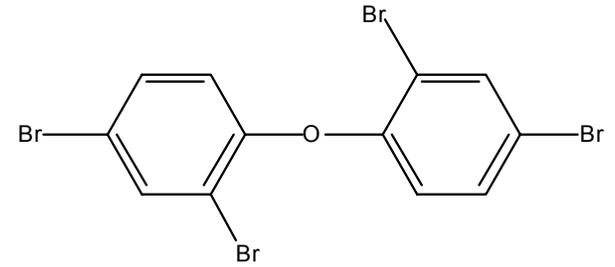
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# My PDBEs

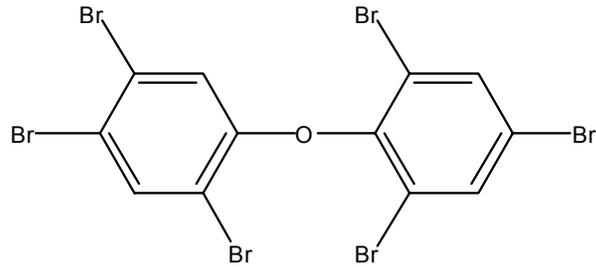
**34% of samples contained 'Deca', including one with the highest concentration ever published.**



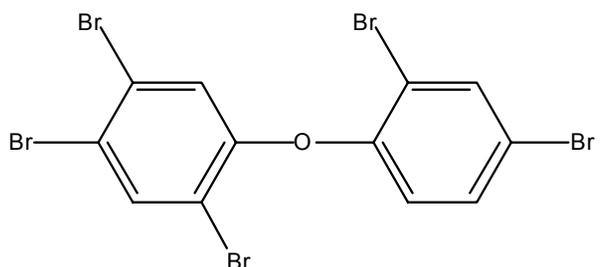
2,2',3,4,4',5',6-Heptabromodiphenyl ether (BDE183)



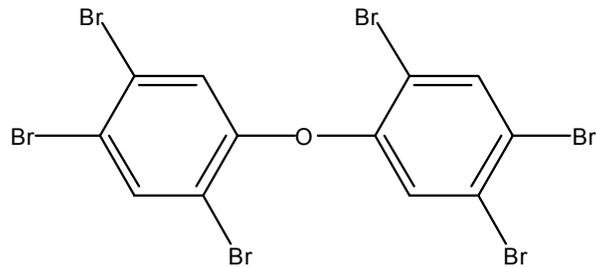
2,2',4,4'-Tetrabromodiphenyl ether (BDE 47)



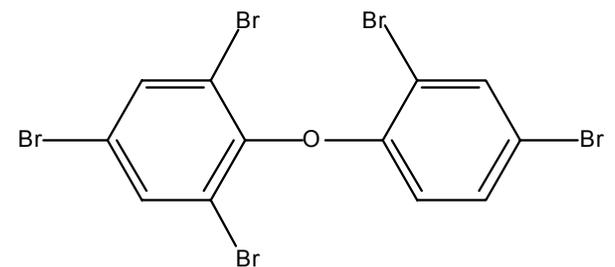
2,2',4,4',5,6'-Hexabromodiphenyl ether (BDE154)



2,2',4,4',5-Pentabromodiphenyl ether (BDE 99)



2,2',4,4',5,5'-Hexabromodiphenyl ether (BDE 153)



2,2',4,4',6-Pentabromodiphenyl ether (BDE 100)



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## The impact?

- **“Compromising our children” - new WWF report**
  - Reviews evidence on chemicals and brain development
    - Research showing PCBs affecting brain development of children within Europe
    - Worrying signs from animal studies that exposure to current chemicals such as flame retardants or bisphenol A may impact on brain development
- **It is always hard to prove effects in humans, however, the biomedical revolution is now providing more tools which will make it easier:**
  - to demonstrate harm caused by chemicals
  - to identify genetic susceptibilities to harm from chemicals.
  - This will make it easier to establish causation for injuries, which will make liability claims easier
- **However, it would be better to prevent the harm**
  - In particular, we should not be contaminating our bodies and the environment with industrial chemicals
  - The use of chemicals of very high concern should be phased out whenever safer alternatives are available



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## REACH - WWF's view

- **The current system is ineffective and has failed**
  - Industry has not provided safety data
  - Chemicals of very high concern continue to be used
- **REACH provides a good framework for a new system**
  - Based on information, not ignorance
  - Acting on the worst chemicals, not just eternally debating controls
  - Promoting an innovative industry - both chemical and downstream - developing safer products for consumers
- **REACH needs to be improved**
  - The highest priority is to improve the authorisation procedure
    - We must ensure that it is an **effective** method to **identify the worst chemicals** and then **push for their phase out wherever safer alternatives are available**.
  - Other improvements are needed, including in data requirements, audit of registration dossiers, chemicals in imported products and access to information
    - See WWF and other environmental NGO policy papers



# Authorisation: Identification of the worst chemicals

- The authorisation component of REACH is a key process for dealing with the worst chemicals
- A key element of this is the selection of the chemicals of very high concern (article 54)
  - CMRs, vPvB, PBT, based on criteria, and:
  - “f) substances, such as those having endocrine disrupting properties ... which do not fulfil the criteria of points (d) and (e) and which are identified as **causing serious and irreversible effects to humans or the environment** which are equivalent to those of other substances listed in points (a) to (e) on a case-by-case basis...”
  - Until a few weeks before commission release, this text stated:
    - “giving rise to a similar level of concern as”
  - This revised text effectively means no action until harm proven - rather than taking action on the chemicals of highest concern prior to harm
    - It is vital that this change is reversed.



# Authorisation: Substitution of the worst chemicals

- **Once a chemical has entered authorisation as “very high concern”, and been prioritised by the Agency and Member States, there are two routes by which an authorisation for a use can be given.**
  - **Route 1:**
    - Article 57(2) “An authorisation shall be granted if the risk to human health and/or the environment from the use of a substance arising from the intrinsic properties specified in Annex XIII is adequately controlled.....”
    - **This system will force regulators to allow continued use of chemicals of very high concern, even if safer alternatives are available.**
  - **Route 2 (Article 57(3) ) considers the existence of alternatives, and socioeconomic implications, but only applies if ‘adequate control’ test is failed.**
- **We consider that authorisations should only be granted if the use is necessary and there is no available safer alternative - these chemicals of high concern should be phased out.**



## The cost benefit debate

- **Which policy would cause:**
  - *“very large” costs leading to “redesign and re-equipping of large sectors of vital industry..., smaller firms going out of business...and an effect on inflation and employment nationally and internationally”*
    - According to CEFIC ???
- **Answer:**
  - Phase out of CFCs in order to protect the ozone layer
  - These impacts did not happen
- **Industry has a long history of exaggerating impacts of future legislation**
  - see WWF “Cry Wolf” report, on the DetoX campaign web site:
    - <http://www.panda.org/detox>



## Costs of REACH

- **Many claims have been made about the costs of REACH**
  - Notably by BDI/ADL (Germany) & Mercer (France)
  - These studies have been heavily criticised by economists, and are extremely misleading.
  - They have been extremely politically effective
- **Commission impact assessment:**
  - Direct costs of REACH to the chemicals industry of €2.3 billion over an 11 year period
    - €0.5 per person per year for the EU
    - the amount the European Chemical Industry spent in 1999 on environmental improvements relating to waste.
  - Costs to downstream users are estimated to be between €2.8-5.2 billion, including €2.3 billion passed on from the chemical industry.



## Benefits (i) Health

- **Calculating health benefits of this legislation is very difficult**
  - What is the cost of BFR or PFC contamination?
    - May depend on how toxicity develops
    - Or a willingness to pay approach?
  - What is the precise value of a life - or uncontaminated foetus?
- **A few economic valuations have been attempted**
  - The Environmental economist David Pearce has done a study for WWF UK, which estimates EU benefits of €230 billion by 2020, based on health costs and productivity savings
  - The Commission's impact assessment has estimated €50 billion
- **All studies have to ignore many benefits due to lack of data**
  - wasn't lack of information one reason for REACH?



## Benefits (ii) - Environmental

- **Currently totally ignored**
  - Therefore viewed as Zero in the debate
- **Clearly will be significant**
  - E.g. Prevention of future contamination
    - What is cost of polar bear loaded with brominated flame retardants?
    - What is the cost of cleaning up contamination?
  - Environmental costs from chemicals are high
    - including ozone depletion and climate change
- **Is it really acceptable to totally ignore these benefits?**



## Benefits (iii): To Business

- **New markets for safer and more environmentally friendly products;**
- **Easier introduction of new chemicals onto the market will encourage development and innovation;**
  - (This is the only benefit that has been calculated)
- **A more predictable regulatory system will aid future long-term planning by industry;**
- **Safer products will reduce the risk of future liability lawsuits,** which can result in enormous costs (as has happened with asbestos);
- **Increased trust** among consumers, employees, students, local communities and investors, leading to a more positive business environment; and
- **Improved transparency and communication through the supply chain** will lead to increased power and confidence for downstream users and SMEs.



## Benefits (iv): To the wider world

- **The new safety information will be available on the internet across the world**
- **This data will assist regulatory agencies across the world - particularly those in poorer countries**
- **REACH will encourage innovation to safer chemicals**
  - **The lure of the 500 million consumer EU market will encourage companies outside Europe to join this innovation**
  - **REACH will lead to the production and use of safer chemicals outside the EU**
- **REACH is already encouraging debate on improving chemicals regulation outside Europe, e.g. in US, Canada**
- **No-one has tried to cost these benefits**
  - **To human health - workers and consumers**
  - **To the environment**



## Conclusions

- **REACH provides a good framework for a new system**
  - Based on information, not ignorance
  - Acting to phase out the worst chemicals
- **REACH must be improved**
  - To ensure the worst chemicals are identified and then phased out if safer alternatives are available
  - To create an more open and transparent system
- **The benefits of a strong REACH are substantial**
  - Increasing the development of safer, greener products
  - Empowerment of downstream users
  - Reducing the negative impacts of chemicals
- **The REACH debate has been distorted by exaggerated impact studies. This needs to change:**
  - Comments should be based on the reality of REACH
  - Industry needs to accept that they have a responsibility to know the safety of products they make and use
  - Industry needs to acknowledge the need to improve the protection of health and the environment.