

Chemicals in Europe: from burden of the past to vision for the future

1. Chemicals out of control

Although the European Union remains one of the largest chemical producing regions of the world, we still know virtually nothing about the hazards posed by the vast majority of chemicals currently being manufactured and marketed, such as environmental persistence, toxicity and effects on human health.

It is estimated that tens of thousands of chemicals have been intentionally produced and/or put on the European market without evaluating the hazards they may poseⁱ. Recent estimates suggest around 100,000 of these chemicals have been registered and 30,000 marketed with production volumes greater than one tonne. More chemicals enter Europe as additives or contaminants in chemical preparations or consumer products. Others are generated as unintentional by-products of chemical manufacturing or waste management processes and are released in waste streams or even distributed as contaminants in consumer products.

Only 140 chemicals have so far been prioritised for risk assessment and, of these, assessments are complete for only a handful. For the vast majority, we still know practically nothing about environmental fate and effects or hazards to human health. At the same time, many of those chemicals which are already known to be hazardous are nevertheless still in widespread use, as industrial or commercial chemicals or preparations or as constituents of consumer goods (e.g. brominated flame retardants and organotin compounds). Indeed, 70% of the so-called "new substances" tested have been identified as dangerousⁱⁱ.

As a result, known hazardous chemicals and chemicals that have not been tested for their risks are all around us. They are in many everyday products such as toys, floorings, computers, shower gels and detergents and have contaminated our food and our bodiesⁱⁱⁱ. Some have even reached areas of the planet remote from industrial and other human activities, in the high arctic, in alpine regions and in the deep oceans.

As part of the Bergen Declaration delivered at the close of the 5th North Sea Conference in March 2002^{iv}, environment ministers from all North Sea states stressed that:-
"a large number of chemicals which are either known to be hazardous or for which the intrinsic effects are largely unknown are still entering the North Sea."

The same is true of the European environment as a whole. There is a growing realisation that we are facing a situation in which our use and release of chemicals to our environment is out of control.

2. Stop trying to "manage risks": start dealing with hazards

The regulations and directives introduced at European level to deal with the problems of hazardous chemicals have proved painfully slow and wholly inadequate. There is even disagreement on the measures to be taken for the handful of chemicals that have been assessed as hazardous. The laudable goals of a high level of protection for human health and the environment enshrined in the EC Treaty itself are, in practice, reduced to lengthy discussions of acceptable exposure, economic disadvantages and legal competence. Opportunities to avoid chemical exposure are frequently ignored in the common assumption that the continued use of a chemical is inevitable, with efforts focusing on attempts to "manage" exposures and risks to levels deemed "acceptable" rather than to eliminate hazardous substances.

A good example is the perpetual debate on the use of phthalate plasticisers in children's toys and other PVC products. While attempts are still being made to determine a so-called "safe" dose of these hazardous chemicals to babies and children, and to design laboratory machines which mimic children chewing on toys, the regulators are missing the point that alternative materials and products are already available for all soft PVC applications which avoid the need for plasticiser additives^v.

Over the last decade, progress on chemicals policy in other fora has been more progressive and more visionary. Some of the most significant developments in the attempt to solve the chemical crisis can be seen on an international level, which has moved towards favouring the precautionary principle and the prevention/elimination of hazardous substances, based on their inherent characteristics.

In 1995, the agreement by North Sea states to work towards an end to the releases of hazardous substances to the marine environment within one generation (by 2020)^{vi} recognised the impracticality of predicting and managing the risks of such chemicals once in the environment, and marked a fundamental shift in environmental protection policy. In 1998, this cessation target was formalised as a strategic goal under the OSPAR Convention^{vii}, to which all North East Atlantic states and the European Commission are party. The intention is to prevent at source releases of chemicals which are intrinsically hazardous, rather than relying on assessments of risk (i.e. predictions of exposures and likelihood of effects) to identify current or future problems. Basing the need for controls on hazard rather than risk is a more effective and safer approach.

Under the Stockholm Convention, agreed by the international community in 2001, production and use of intentionally produced persistent organic pollutants (POPs) are to be prohibited and phased out globally. In addition, measures are to be adopted to reduce releases of unintentional POPs with the goal of their continuing minimisation and, where feasible, ultimate elimination. For both intentional and unintentional POPs, elimination through substitution is a priority.

Despite progress within OSPAR to address hazardous chemicals, the existing system of chemical regulation within the European Union has presented a fundamental barrier to effective measures. Current disagreements in the EU over how far to implement a ban on short-chain chlorinated paraffins (SCCPs) agreed under OSPAR in 1995 illustrates the problems resulting from the Commission's claims of "exclusive competence" to regulate chemicals^{viii}.

The severe and inherent limitations of the existing EU system in delivering, or even approaching, the required level of protection from chemicals have been recognised for some time. In 1998, these problems led EU Ministers to initiate a current review of chemicals policy^{ix}. In early 2001, the European Commission published a White Paper outlining its framework for a new approach to chemical control^x. Since then, working groups have met to try to fill in some of the detail required for implementation. The Commission is now deliberating the outcome of these discussions and is due to deliver its conclusions in the spring of 2003.

3. The new EU chemicals policy

The White Paper on EU chemicals policy contains many positive elements but fails to provide instruments to eliminate the production, use and release of all hazardous substances. It also lacks a framework to ensure the producers and importers of chemicals are held liable for any adverse effects chemicals may have on the environment and human health in the past, present and future. The positive elements in the White

Paper are summarised below, along with the conditions Greenpeace considers necessary to make them effective^{xi}.

1. **Aims to provide a high level of protection for human health and the environment** – it is essential that this Treaty obligation is not compromised by overriding emphasis on protecting chemical industry profits
2. **Identifies a central role for the precautionary principle** – the application of precaution must take precedent over requirements for precise knowledge of exposures and effects as a prerequisite for action (i.e. hazard instead of risk)
3. **Aims to contribute to the OSPAR goals of the prevention of marine pollution** – the strategy must ensure the OSPAR goal of the cessation of releases of all hazardous substances by 2020 is implemented
4. **Aims to provide a single system to cover “new” and “existing” chemicals** – this must be extended to include all chemicals, i.e. those intentionally manufactured and unintentionally produced, industrial, commercial and household chemicals, pesticides, biocides and pharmaceuticals, under one framework and with one set of goals and guiding principles
5. **Sets deadlines for the provision by industry of basic data on chemicals' properties** – this must mean “no data, no market”, and also be applied in situations where it is the properties of by-products and wastes which are unknown. This data should be made available to the public
6. **Prohibits chemicals of very high concern other than for certain authorised uses** – authorisation under the REACH system puts the burden of proof on industry but, to be protective, must cover more than just POPs and CMRs. Persistent and bioaccumulative substances (e.g. including vPvB, PBT) and substances of equivalent concern must also require authorisation for continued use. Any authorisations must be time-limited
7. **Promotes the substitution of hazardous chemicals with safer alternatives** – manufacturers and users of chemicals must be obliged to substitute hazardous chemicals and/or processes with progressively safer alternatives. All options must be considered, including use of different materials and redesign of products. Lack of alternatives must be a stimulus for innovation not a barrier to substitution^{xii}
8. **Supports the goal of the Stockholm Convention** – this should be extended to ensure that the production, use and release of all hazardous substances is eliminated and that no new hazardous substances of any kind are introduced^{xiii}
9. **Aims to address hazardous chemicals in consumer products (articles)** – such uses, including in imported products, must be addressed as a priority, with the aim to phase them out as soon as possible and by 2010 at the latest^{xiv}
10. **Commits to providing information on chemical hazards to the public** – this must ensure that consumer products containing hazardous substances are labelled until the substances are removed^{xv}
11. **Places greater responsibility for chemical assessment on industry** – effective co-ordination and oversight of assessments by an independent international body will be essential, with severe sanctions for inadequate or misleading assessments
12. **Aims to minimise reliance on animal testing** – this will necessitate precautionary action to phase out persistent and bioaccumulative substances^{xvi}, grouping of similar chemicals for assessment and control and further development of non-animal tests to indicate toxicity. It will also mean open sharing of data^{xvii}

ⁱ recent estimates suggest around 30 000 chemicals with production volumes greater than 1 tonne (source: EC White Paper on a Strategy for a Future Chemicals Policy,

<http://europa.eu.int/comm/environment/chemicals/whitepaper.htm>)

ⁱⁱ (source: EC White Paper on a Strategy for a Future Chemicals Policy,

<http://europa.eu.int/comm/environment/chemicals/whitepaper.htm>)

ⁱⁱⁱ see e.g. Unseen Poisons (<http://www.greenpeace.org/~toxics/reports/unseenpo.pdf>),

- POPs in the Baltic (<http://www.greenpeace.org/~toxics/reports/popsbaltic.pdf>),
Flame Retardants/Organotins in Dusts (<http://www.greenpeace.org/~toxics/reports/eudust.pdf>),
Hazardous Chemicals in Carpets (<http://www.greenpeace.to/pdfs/carpet.PDF>),
Hazardous Chemicals in PVC Floors (http://www.greenpeace.to/pdfs/pvc_flooring.PDF),
POPs in Butter (<http://www.greenpeace.org/~toxics/reports/popsbutter.pdf>),
Recipe for Disaster (<http://www.greenpeace.org/~toxics/reports/recipe.pdf>),
Tip of the Iceberg (<http://www.greenpeace.org/~toxics/reports/tipoficeberg.pdf>)
- ^{iv} Full text of the Bergen Declaration (March 2002) is available at <http://odin.dep.no/archive/mdvedlegg/01/09/Berge041.doc>. More information on the 5th North Sea Conference is available at <http://www.northseaconference.no>
- ^v For critique of ongoing studies and evaluations of EU phthalate leaching tests for PVC toys, see http://www.greenpeace.to/pdfs/cstee_2001_comments.PDF. For reports on hazardous chemicals in PVC toys and other PVC articles see http://www.greenpeace.to/pdfs/espr199910_007.pdf and <http://www.greenpeace.org/~toxics/reports/pvcchildsworld.pdf>
- ^{vi} Full text of the Esbjerg Declaration from the 4th North Sea Conference (1995) is available at <http://odin.dep.no/md/nsc/declaration/022001-990243/index-dok000-b-n-a.html>
- ^{vii} OSPAR Strategy with Regard to Hazardous Substances, available at http://www.ospar.org/eng/html/sap/Strategy_hazardous_substances.htm
- ^{viii} Greenpeace submission to UK Government consultation on EC proposals for regulation of SCCPs, available on request from the Greenpeace Research Laboratories, University of Exeter
- ^{ix} Informal Council of Environment Ministers, Chester (UK), April 1998
- ^x EC White Paper on a Strategy for a Future Chemicals Policy, <http://europa.eu.int/comm/environment/chemicals/whitepaper.htm>
- ^{xi} Greenpeace's detailed comments to the Commission's White Paper are available at http://www.greenpeace.to/pdfs/white_paper_critique.PDF
- ^{xii} In the Bergen Declaration (5th North Sea Conference) Ministers agree on the need for further initiatives on substitution which should, *inter alia*, "request industry to seek for safer alternatives to hazardous substances and promote and facilitate the identification and development of such safer, and preferably non-hazardous alternatives where they do not currently exist" (<http://odin.dep.no/archive/mdvedlegg/01/09/Berge041.doc>, paragraph 54 v & vi)
- ^{xiii} The concept of "no new hazardous substances" is already agreed in the OSPAR Hazardous Substances Strategy (http://www.ospar.org/eng/html/sap/Strategy_hazardous_substances.htm)
- ^{xiv} In the Bergen Declaration, Ministers also agree that the use of hazardous substances in consumer products "should be addressed as a priority issue in the reform of the EU chemicals policy and the development of the EU integrated product policy" (<http://odin.dep.no/archive/mdvedlegg/01/09/Berge041.doc>, paragraph 53)
- ^{xv} Ministers of OSPAR countries agreed in their 1998 Sintra Statement to develop the means for dissemination of information to consumers on hazardous chemicals in products (<http://www.ospar.org/eng/html/md/sintra.htm>). This commitment is reaffirmed in the Bergen Ministerial Declaration (<http://odin.dep.no/archive/mdvedlegg/01/09/Berge041.doc>, paragraph 54 iii)
- ^{xvi} The new Technical Guidance Document for marine risk assessment due shortly for co-adoption by the EU and OSPAR stresses that "since long-term effects can be anticipated for very bioaccumulative substances (vPvB), further animal testing for such substances is deemed unnecessary."
- ^{xvii} A common position paper on the need to reduce and as far as possible avoid the use of animals for the toxicity testing of chemicals has recently been adopted by a consortium of European environmental and animal rights NGOs, and is available at <http://www.eeb.org/press/press.htm> press release of 15.4.2002