

Ban toxic chemicals

To protect the world's waters, there is a clear and urgent need for a global ban on persistent organic pollutants

The health of the world's peoples is closely linked to the health of its water - the oceans, seas, lakes and rivers. Many of the persistent toxic pollutants that are now found in the world's oceans and waterways are also found in the bodies of virtually all peoples and other living creatures of the world. These pollutants have contaminated humans, fisheries and wildlife either directly or indirectly from polluted water.

Due to this threat, over 100 governments from around the world are expected to assemble in the United States for a two-week meeting to examine ways to eliminate human-made pollution that is rapidly degrading the world's oceans.

As part of the implementation of the Earth Summit's Agenda 21 formulated at Rio de Janeiro in June 1992, an Intergovernmental Conference on the Protection of the Marine Environment from Land-based Activities will take place in Washington DC from 23 October to 3 November 1995, hosted by the US government.

Delegates will review and adopt a Programme of Action, which principally addresses land-based sources of marine pollution at global, regional and national levels. A high-level segment of the Conference is also likely to adopt a Ministerial Declaration that addresses the priority issues.

At Washington, action will be needed in a number of areas. The most far-reaching centres around a proposal by certain governments for a global, legally binding agreement to ban persistent organic pollutants usually abbreviated to POPs.

POPs are a group of mainly synthetic chemicals that are known to have a wide

range of harmful effects on ecosystems and human health. The other defining, and very worrying, characteristic of POPs is that they can not easily be broken down by natural processes in other words, they are persistent. In some cases, when breakdown does occur, it creates chemicals that are even more hazardous than the original substances.

POPs include some naturally occurring substances such as polycyclic aromatic hydrocarbons (PAHs), but their inputs to the biosphere have dramatically increased as a result of human activities including oil and gas extraction, the combustion of fuel (including vehicles) and from the steel and non-ferrous metal industries.

However, the group of POPs that have attracted the greatest attention are synthetic organohalogenes, i.e. carbon-based chemicals also containing chlorine, bromine, fluorine or iodine. Of these, the majority are organochlorines. The world's largest chlorine 'producers' include the chemical giants Akzo, Bayer, Dow, Enichem, Hoechst, ICI, Norsk Hydro, Occidental, Olin, PPG and Solvay.

Staggering amount

It is estimated that a staggering 11,000 organochlorines are now in use around the world. They include pesticides such as DDT, toxaphene, chlordane, heptachlor and the dioxins; solvents such as perchlorethylene, and chemicals with multiple uses, such as PCBs. There are also organochlorine by-products such as hexachlorines listed to be targeted for action by the UN in the context of the Convention on Long-Range Trans-boundary Air Pollution (LRTAP).

Some of the hazards of POPs have been known for many years, although our understanding of the threat they pose has

increased with time. POPs have been shown to cause serious immune and metabolic effects, neurological defects, reproductive anomalies and cancer in both humans and wildlife. Recent studies suggest that they have even more far-reaching effects than previously envisaged.

POPs can have deadly consequences for people who work in close proximity to these chemicals, such as agricultural workers, subsistence farmers, people in manufacturing industries, as well as those who depend on food from areas contaminated by POPs, including lakes and high-latitude seas.

More recently, there has been increasing evidence, which indicates that POPs may be causing widespread and insidious harm to entire populations. This is a result of their effects, at very low levels, on the endocrine system, for example, by affecting fertility.

POPs have also been shown to be responsible for similar adverse effects on marine life, and are causing particular concern for animals at the top of the marine food chain, including fish, seabirds and marine and arctic mammals.

Their persistent nature makes POPs a global problem. They can be transported for long distances by ocean currents. For example, toxaphene, used as a pesticide on cotton in the Caribbean and Central America, is conveyed all the way across the Atlantic by the Gulf Stream, to appear in significant amounts in the atmosphere towards polar environments where, in the cold conditions, they condense and are deposited. This mechanism is now believed to account for the surprisingly high concentrations of POPs present in

arctic environments, and in the indigenous people who live there. Inuit women of northern Quebec carry in their breast milk some of the highest levels of organochlorines ever found in people. From arctic regions POPs can be returned by ocean currents to lower latitudes. As a result, local or regional action to control POPs will not solve the problem.

Moreover, in an era of free trade agreements like GATT and NAFTA, binding international agreements to protect health and environment have become essential.

Single countries, or even regions, are finding it increasingly difficult to phase out sources of POPs when such trade agreements inhibit necessary measures. Dirty industries may respond not by cleaning up, but by relocating elsewhere and then demanding the right to import the product.

Companies, which have accepted prohibitions or restrictions in some market dead products elsewhere, with little or no control. This is why the global action being considered for the Washington

Conference is of such critical importance.

Many industrialized countries are formally committed to reducing the amount and toxicity of pesticides, and to increasing the proportion of organic farming. The conversion to organic farming can proceed far faster than at present without, as claimed by the agrochemical industry, causing insoluble problems.

For developing countries, too, a shift to organic farming has advantages, not just with the elimination of POPs, but also in reducing other problems, such as eutrophication and soil loss. Real market opportunities exist for clean, organic,

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food. Greater research and development effort for organic farming would pay dividends for industrialized and developing countries alike.

PCBS, used in electrical transformers, as well as for other purposes, are an example of a problem that should have been resolved long ago. Many alternatives are available. Similarly, there is ample evidence that the use of POPs as solvents is unnecessary. There are also alternatives to chlorinated plastics such as PVC. And there is really no need for chlorine bleaching of paper and fibres.

Many experts have shown that if priority is given to the use and development of existing alternatives, the majority of POPs could be phased out relatively rapidly by alternatives that are economically viable, create less environmental damage, and provide numerous job opportunities.

The obligation to take global action on POPs stems from the 1992 Earth Summit. While there are global treaties to regulate deliberate dumping at sea (the London Dumping Convention, 1972) and the operational discharge of wastes from shipping (the MARPOL 73/78 Convention), these sources of pollution represent less than 20 per cent of total marine pollution.

On the other hand, the vast majority of marine pollution comes from land-based

sources (LB5). These are understood to include point-source liquid discharges of wastes into riverine systems, estuaries and coastal waters; diffuse sources of pollution, such as from pesticides, fertilizers and storm water; and atmospheric emissions from both point and diffuse sources.

Only a few regional regulatory agreements exist for LBS. There is no global convention or mechanism to regulate them, to harmonize different approaches and to share experiences effectively.

To deal with this glaring omission, governments agreed at the Earth Summit to invite the United Nations Environment Programme (UNEP) to convene, as soon as practicable, an inter-governmental meeting on the protection of the marine environment from land-based activities (para. 17.26 of Agenda 21).

Preparatory meetings

The Washington Conference is the result of this commitment, and two preparatory meetings have already been held, at Montreal in June 1994 and at Reykjavik in March 1995.

Some industries and governments have maintained that land-based sources of pollution are too broad a problem to be addressed globally. Others, including Greenpeace, argue that, precisely because of the broad and overwhelming nature of

the problem, only global action will be effective. Such action will encourage the growth of clean production, and the phasing out world-wide of the dirtiest, most hazardous, industrial practices.

Specifically, the Earth Summit brought about the current discussion on POPs. Commitments were made in Agenda 21 on "eliminating the emissions and discharge of organohalogen compounds that threaten to accumulate to dangerous levels in the marine environment" and "reducing the emission or discharge of other synthetic compounds that threaten to accumulate to dangerous levels in the marine environment" (para. 17.28 (d) and (e)).

The Washington Conference is where these good words must be put into effective action.

At UNEP's Governing Council in May 1995, a resolution (Decision 18/32) was agreed on the assessment of POPs and their alternatives. It asked the Inter-governmental Forum on Chemical Safety (IFCS) to lead the assessment and to report its conclusions to the next session of UNEP's Governing Council, scheduled for January 1997.

Those efforts as well as others at the regional and national levels, should make a significant contribution to the continuing development, marketing and use of cost-effective alternatives to pops. However, this important assessment process should not be used as an excuse to delay actions that are already justified, and which should be agreed at the Washington Conference. In particular, as far as UNEP's short list of prioritized POPs is concerned, an immediate phase-out and ban is needed.

Beyond the global UN setting, a growing number of governments have agreed on measures to phase out POPs. These, however, will only be of limited effectiveness unless a global agreement can be reached.

In North America, the joint US-Canadian Great Lakes Water Quality Agreement (GLWQA) has an explicit goal for the elimination of all persistent toxic substances. The Great Lakes have the

misfortune of being one of the earliest arid most highly contaminated areas in the world. Unless action is taken soon, the rest of the world awaits a similar fate. The International Joint Commission (IJC) of GLWQA recently concluded in its Sixth Biennial Report of 1992:

...persistent toxic substances have caused widespread injury to the environment and to human health. As a society, we can no longer afford to tolerate their presence in our environment and in our bodies...

Hence, if a chemical or group of chemicals is persistent, toxic or bioaccumulative, we should immediately begin a process to eliminate it. Since it seems impossible to eliminate discharges of these chemicals through other means, a policy of banning or sunseting (*sic*) their manufacture, distribution, storage, use and disposal seems to be the only alternative.

...In practice, the mix and exact nature of [organochlorine] compounds can not be precisely predicted or controlled in production processes. Thus, it is prudent, sensible and indeed necessary to treat these substances as a class rather than as a series of isolated, individual chemicals.

...We know that when chlorine is used as a feedstock in a manufacturing process, one can not necessarily predict or control which chlorinated organics will result, and in what quantity. Accordingly, the Commission concludes that the use of chlorine and its compounds should be avoided in the manufacturing process.

The rest of the world should not wait before taking similar action. The IJC's conclusions are indeed influencing wider North American policy. In 1993, the Clinton administration in the US undertook a special commitment to search for ways to reduce and eliminate the use of chlorine and chlorinated products.

Policy initiatives

In Europe, conclusions similar to those of the IJC have resulted in major policy initiatives. The Helsinki Convention (Baltic), the Paris Convention (North-east Atlantic) and the Barcelona Convention (Mediterranean) have all taken an increasingly restrictive attitude towards organohalogenes.

In 1992, for example, the Ministerial Declaration of the Oslo and Paris Commissions dealing with the prevention of marine pollution in the North-east Atlantic stated that

..as a matter of principle for the whole Convention area, discharges and ● emissions of substances which are toxic, persistent and liable to bioaccumulate, in particular, organohalogen substances, and which could reach the marine environment should, regardless of their anthropogenic source, be reduced, by the year 2000, to levels that are not harmful to man or nature, with the aim of their elimination.

The most recent, and extremely significant, development came in June 1995 at the International Ministerial North Sea Conference. There, in the Fourth Ministerial Declaration, eight countries (plus the European Commission) re-oriented their guiding policy such that

the objective is to ensure a sustainable, sound and healthy North Sea ecosystem. The guiding principle for achieving this objective is the precautionary principle.

This implies the prevention of pollution of the North Sea by continuously reducing discharges, emissions and losses of hazardous substances, thereby moving towards the target of their cessation within one generation (25 years), with the ultimate aim of concentrations in the environment near background levels for naturally occurring substances and close

to zero concentrations for man-made synthetic substances.

The Declaration states that priority should be given to the development of environmentally sound products, taking into account the whole life cycle of substances or products; to substitute the use of hazardous substances by less, or preferably non-hazardous, substances; to pursue the development and use of clean technology for production processes; and to employ usage and practices that avoid losses of hazardous substances to the marine environment.

It also requires the development and use of treatment technology, which will be important for dealing with historic sources of pollution.

In effect, this represents the adoption of the principle of clean production, which has also been endorsed by UNEP's Governing Council, and which has received growing recognition in a wide range of international forums, including the Basel Convention. Zero-discharge, a key objective framed in the North Sea Ministerial Declaration, can and must be reached well within the 25 year time-frame.

This commitment to a total cessation of environmental contamination represents an important advance.

The North Sea Conference's goal for the cessation of all discharges, emissions and losses of hazardous substance "within 25

years” has been singled out as a formula, which lets industry implement alternatives effectively and in an orderly manner. It was made clear that within this overall goal, significant action is required in the next few years, for example, on organochlorines.

At the Washington Conference, it is important to adopt such goals at a global scale. Otherwise, there is a real risk that dirty industries will move from highly regulated regions to less-regulated areas of the world, instead of developing clean production processes.

Globally, the commitment to urgent action on organohalogen and other synthetic compounds has already been made in the Earth Summit’s Agenda 21. The purpose of the Washington Conference is to establish the means by which this will be achieved.

The lead in developing an action programme to meet this commitment has been taken by the four Nordic States of Iceland, Denmark, Finland and Norway, supported by other countries, especially from the Pacific and Africa. As a result, the preparatory committee for the Washington Conference agreed to address organohalogen compounds and other organic contaminants under the broad heading of POPs.

It has become apparent that many States consider the establishment of a legally binding instrument to prohibit the use and production of POPs known or suspected of creating harm, as an essential goal for the Washington Conference.

However, some other States which appear to be a minority, albeit an active and important one have expressed at least doubts, and even outright opposition in a few instances, to the establishment of a legally binding instrument. The Final Meeting of the Preparatory Committee at Reykjavik adopted the draft Programme of Action, which contains the pivotal text (para 85) reflecting such agreements and disagreements~(the latter put between square brackets). The most important passage states:

There is agreement that international action is needed to initiate an expeditious [International Negotiating Committee] process for [considering] the development of a global, legally binding instrument for the reduction and/or elimination of emissions and discharges of certain POPs [e.g., PCBs, and such others as may be agreed] about which there is sufficient scientific knowledge [taking into account the precautionary principle].

From this it is clear that, depending on the fate of the text in square brackets, the outcome on this critical issue could range from an important advance to a major failure.

What cannot be seen from the draft text is the underlying political dynamic which leads countries to take a particular stance. Briefly summarized, those countries urging action on POPs are convinced that we already know or suspect enough to require urgent action, and that viable alternatives either already exist or must and can be developed. Moreover, given a poor track record of implementing previous agreements, a legally binding commitment is essential to galvanize action.

Those delegations opposing such measures have a variety of motives. In part, it may be a belief that alternatives are not available. Some are concerned about domestic industries involved in the production and use of POPs. Some are concerned about the financial arrangements for technology transfer.

There is also, amongst some of the delegates, a bureaucratic desire for an easy life, so that any global agreement should not go further, or depart from, national policy and legislation. And, in some cases, the technical experts either fail to comprehend the political necessity for rapid action or, at worst, actually subvert their government’s stated policies.

More research needed?

During the Conference, and its attendant media briefings, it is certain that much time will be spent by some delegations arguing that much more research is needed on the effects of POPs before action can be contemplated.

But this hides the real argument, as insiders on both sides are well aware. We already know or suspect a great deal about the effects of POPs. If viable alternatives exist or can be developed, there is no reason not to take precautionary action now.

The real battle hinges upon groups in the shadows, such as the chlorine industry, who know that they are fighting a rearguard action for their very existence.

Their only chance of survival is to dupe governments and public alike into believing that the industry's interests are identical to the public and global good, and to try and downplay both the risks and the alternatives.

In the past, they have been remarkably successful. Their performance and tactics have been compared to those used by the tobacco industry since the 1950s.

But now their power is waning. At Washington, they must be stopped. As is clear from the draft text, some governments are still in their pockets, but they must not be allowed to again postpone action and stall the process.

The time for action on POPs is long overdue. Failure would be a disaster for UNEP and for the US government as host as well as for other governments when they return home to face a critical public. Most important of all, it would be a disaster for public health, the oceans and the environment in general.

However, there is a very real prospect that the Conference will mark a global turning point, finally consolidating some remarkable regional agreements within a global framework.

It will not be the end of the pollution story, but will mark the beginning of the end the date when the world's political leaders finally state, loud and clear, what is obvious to most people: that it is neither sensible nor necessary to release persistent toxic pollutants into the environment.

For all the above reasons, ministers and other government officials from around the world need to commit to and agree on clear and decisive action on POPs at the

Washington Conference in both the Ministerial Declaration and the detailed Programme of Action.

To achieve this objective, governments must agree to:

- commit resources to the adoption of a global, legally binding instrument which will provide for a phase-out and ban of POPs, including an immediate halt in production and use of the short list of 12 priority substances contained in UNEP's Governing Council Decision (18/32) of 25 May 1995; and
- commit to such a process now, rather than wait for the conclusion of the UNEP assessment, which will not occur until 1997.

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