

POPs-International Action To Address Dioxins And Furans

Environmentally Sound Management of POPs Wastes Secretariat of the Basel Convention

Vincent Jugault
Programme Officer
UNEP/SBC, 15 chemin des Anémones, CH-1219 Châtelaine (GE), Switzerland

I - The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was signed in 1989 and entered into force in May 1992. As of 21 July 1999, 124 States were Party to the Convention as well as the European Economic Community.

The overall goal of the Basel Convention is to protect human health and the environment against the adverse effects which may result from the generation, transboundary movements and management of hazardous and other wastes. To achieve this a number of interrelated objectives are to be fulfilled:

- Reducing transboundary movements of wastes to a minimum consistent with their environmentally sound and efficient management, and controlling any permitted transboundary movement under the terms of the Convention;
- Minimising the quantity and the hazardousness of wastes generated and ensuring their environmentally sound management including the treatment of these wastes as close as possible to their source of generation;
- Assisting developing countries and countries with economy in transition in environmentally sound management of the hazardous and other wastes they generate.

Wastes that are considered “hazardous wastes” for the purposes of the Basel Convention are wastes listed in Annex I (Categories of Wastes to be controlled) unless they do not possess any of the characteristics contained in Annex III (List of Hazardous Characteristics) of the Basel Convention. In order to clarify a number of uncertainties, the Conference of the Parties added Annex VIII and Annex IX to the Convention. Annex VIII lists specific wastes that are characterized as hazardous in the Convention, Annex IX lists those wastes that are normally not considered hazardous by the Convention. Waste POPs are considered hazardous wastes under the Basel Convention.

II - The concept of Environmentally Sound Management of Hazardous Wastes

The concept of the environmentally sound management is central to the implementation of the Basel Convention and is defined as taking all practical steps to ensure that hazardous wastes and other wastes are managed in a manner which will protect human health and the environment against adverse effects which may result from such wastes. It is subject to further elaboration in the context of the implementation the Convention and encompasses all aspects of the management of hazardous wastes from generation to final disposal also giving consideration to the transboundary

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movements of such wastes which involve the joint responsibility of exporting, transit and importing countries in the protection of the environment and human health.

Criteria to assess environmentally sound management include:

- (a) there exists a regulatory infrastructure and enforcement that ensures compliance with applicable regulations
- (b) sites or facilities are authorized and of an adequate standard of technology and pollution control to deal with hazardous wastes
- (c) operators of sites or facilities at which hazardous wastes are managed are required to monitor the effects of those activities
- (d) action is taken in cases where monitoring give indications that the management of hazardous wastes has resulted in unacceptable emissions
- (e) persons involved in the management of hazardous wastes are capable and adequately trained

The Technical Working Group of the Basel Convention defined a set of interrelated principles upon which the concept of the environmentally sound management was developed. These are:

- (a) *The Source Reduction Principle* - by which the generation of waste should be minimized in terms of its quantity and its potential to cause pollution. This may be achieved by using appropriate plant and process designs;
- (b) *The Integrated Life-cycle Principle* - by which substance and products should be designed and managed such that minimum environmental impact is caused during their generation, use, recovery and disposal;
- (c) *The Precautionary Principle* - whereby preventive measures are taken, considering the costs and benefits of action and inaction, when there is a scientific basis, even if limited, to believe that release into the environment of substances, waste or energy is likely to cause harm to human health or the environment;
- (d) *The Integrated Pollution Control Principle* - which requires that the management of hazardous waste should be based on a strategy which takes into account the potential for cross media and multimedia synergistic effects;
- (e) *The Standardization Principle* - which requires the provision of standards for the environmentally sound management of hazardous wastes at all stages of their processing, treatment, disposal and recovery;
- (f) *The Self-sufficiency Principle* (to be considered with (g) and (h)) - by which countries should ensure that the disposal of the waste generated within their territory is undertaken there by means which are compatible with environmentally sound management, recognizing that economically sound management of some wastes outside national territories may also be environmentally sound;
- (g) *The Proximity Principle* (to be considered with (f) and (h)) - by which the disposal of hazardous wastes must take place as close as possible to their point of generation, recognizing that economically and environmentally sound management of some wastes will be achieved at specialized facilities located at greater distances from the point of generation;
- (h) *The Least Transboundary Movement Principle* (to be considered with (f) and (g)) - by which transboundary movements of hazardous wastes should be reduced to a minimum consistent with efficient and environmentally sound management;

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- (i) *The Polluter Pays Principle* - by which the potential polluter must act to prevent pollution and those who cause pollution pay for remedying the consequences of that pollution;
- (j) *The Principle of Sovereignty* - under which every country shall take into account political, social and economic conditions in establishing a national waste management structure. A country may, for example, ban the importation of hazardous wastes into its territory in accord with its national environmental legislation;
- (k) *The Principle of Public Participation* - under which States should ensure that in all stages, waste management options are considered in consultation with the public as appropriate, and that the public has access to information concerning the management of hazardous wastes.

A number of these principles should be considered in relationship and balance.

III - The role of the Secretariat of the Basel Convention

The Secretariat of the Basel Convention (SBC) is regularly approached by the different stakeholders involved in the issue of the environmentally sound management of hazardous wastes, including Persistent Organic Pollutants (POPs) when considered a waste or obsolete pesticides.

The areas of concern for which the SBC is solicited are wide-ranging and may have technical as well as institutional and legal implications, eg. :

- the identification of the main problems related to the generation, treatment, storage, transport and final disposal of hazardous wastes, i.e; the set up of national inventories and environmental monitoring programmes, the identification of technical solutions and technologies for minimizing waste generation and for the treatment/final disposal of hazardous wastes, including obsolete stocks of POPs and pesticides, the assessment of environmental and health effects to human health and the environment and of emerging hazardous waste related issues, etc;
- the strengthening of the capacity and capability of governments from developing countries to tackle the problems that have been identified, the preparation and implementation of training and capacity building programmes;
- the development and strengthening of appropriate legal frameworks related to the control of transboundary movements of hazardous wastes as well as the environmentally sound management of hazardous wastes, including storage, transport and final disposal of POPs;
- the preparation of national plans for the environmentally sound management of POPs, ie. Obsolete pesticides, PCBs.

The SBC is an instrumental body acting directly at the request of Parties in line with a specific mandate given in the text of the Basel Convention itself or through Decisions of the Conference of the Parties. Being part of the United Nations system, its activities are undertaken in collaboration with specialized UN agencies having competence in this field, in particular UNEP and the FAO. It is also in direct contact with industry groups and environmental NGOs which participate fully in the implementation of the Convention. Thus, considering the activities of others in this area, SBC's course of action follows a sound and pragmatic approach. Concrete activities are carried out in order to solve specific problems and are viewed as supportive of the medium term objective of the development of national and (sub)regional policies on hazardous waste and obsolete chemicals management. In this regard, the establishment in the framework of the Convention and operation of Regional Centres for Training and Technology Transfer for the Environmentally Sound Management of Hazardous Wastes provides a regional basis for

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addressing hazardous waste related issues. The implementation of the Convention in this area could thus be defined as following a fast track approach within a strategic framework. The SBC may be approached to ensure that the provisions of the Basel Convention are applied during POPs disposal operations, in particular when transboundary movements are involved. Transboundary movements would be in conformity with national and international legal obligations, the hazardous wastes would be disposed of under environmentally sound conditions and all stakeholders should be notified according to established procedures. Given its flexibility to react promptly, the SBC might also assist in undertaking urgent action for the assessment of critical environmental situations and the preparation of preventive and remedial plans of action involving national governments, industries and NGOs, i.e; characterization of stocks of wastes, recommendations for their environmentally sound packaging, transportation and disposal, identification of technical partners for their final disposal, etc.

IV - The case of PCBs.

Work of the Basel Convention subsidiary bodies

The environmentally sound management of PCB is defined in the Basel Convention as taking all practical steps to ensure the hazardous wastes are managed in a manner which will protect human health and the environment against the adverse effects which may result from such wastes. Consequently, the Convention supports the development and implementation of environmentally sound disposal technologies, recycling options and good house keeping practices. It recognizes the desire for the prohibition of transboundary movements of PCB from developed to developing countries and, it also recognizes, in some cases and under certain conditions, the necessity to export PCB-wastes from developing to developed countries for final disposal. The concept of the environmentally sound management of hazardous wastes has been developed by the Technical Working Group of the Basel Convention in the 'Guidance Document in Developing National and/or Regional Strategies for the Environmentally Sound Management of Hazardous Wastes' (SBC No: 96/001). The Technical Working Group further prepared the 'Technical Guidelines on Wastes Comprising or Containing PCBs, PCTs and PBBs' (SBC No: 97/009). These documents were adopted by the Conference of the Parties at its second meeting in 1994 and are widely used by Governments, industry and environmental non-governmental organizations.

Polychlorinated biphenyls (PCBs), polychlorinated terphenyls (PCTs) and polybrominated biphenyls (PBBs) are characterized as hazardous wastes under the Basel Convention. They are classified under category Y10 in Annex I to the text of the Basel Convention which reads as follows:

Y10 Waste substances and articles containing or contaminated with Polychlorinated biphenyls (PCBs), and/or polychlorinated terphenyls (PCTs) and/or polybrominated biphenyls (PBBs)

At its fourth meeting in February 1998, the Conference of the Parties decided to add two annexes to the Convention namely Annex VIII and Annex IX. The specific wastes contained on List A of Annex VIII and on List B of Annex IX are an elaboration and clarification of the provisions of Article 1, paragraph 1(a) of the Convention by reference to the Annex I and Annex III.

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- (a) List A of Annex VIII. Wastes contained in this list are characterized as hazardous under Article 1, paragraph 1 (a), of the Convention, and their designation on this list does not preclude the use of the Annex III to demonstrate that a waste is not hazardous.
- (b) List B of Annex IX. Wastes contained in this list will not be wastes covered by Article 1, paragraph 1 (a), of this Convention unless they contain Annex I material to an extent causing them to exhibit an Annex III characteristic.

PCBs, PCTs and PBBs are classified under Category A3180 under the new Annex VIII of the Basel Convention.

A3180 Wastes, substances and articles containing, consisting of or contaminated with polychlorinated biphenyl (PCB), polychlorinated terphenyl (PCT), polychlorinated naphthalene (PCN) or polybrominated biphenyl (PBB), or any other polybrominated analogues of these compounds, at a concentration level of 50 mg/kg or more¹

The Parties to the Basel Convention have recognized the importance to assist countries, in particular developing countries, to build up their capacity to manage hazardous wastes in an environmentally sound way, and in particular PCB. Planned activities aim at the three following mutually supportive objectives:

- the promotion of awareness that could influence attitude and practice with regard to maintenance of PCB containing equipments and the environmentally sound management of PCBs;
- the building up of elements for the preparation of national and regional plans;
- the enhancement of regional cooperation with a view to controlling transboundary movements of PCBs, preventing and monitoring illegal traffic, and ensuring application of prohibition of export or import when and where applicable.

The cooperation and contribution of international organizations and national governments from Parties to the Basel Convention is essential. In addition, the Basel Convention is aiming at creating the conditions for a full partnership with the private sector for durable commitments. Close cooperation with private companies has materialized within the context of pilot activities related to PCB management having exemplary effects. Promising preliminary results were achieved in:

- the development of (pilot) inventories;
- the development of governmental and institutional expertise for the set up of sound interim storage platform;
- the development of governmental decision-supportive tools (information systems, etc);
- the editing of practical hand-books for the environmentally sound management of PCBs destined to waste managers;

The Secretariat of the Basel Convention is working closely with UNEP Chemicals on several activities, including the development of a joint capacity building programme on the identification, management and destruction of PCBs and PCB-containing wastes.

¹ The 50 mg/kg level is considered to be an internationally practical level for all wastes. However, many individual countries have established lower regulatory levels (e.g., 20 mg/kg) for specific wastes.

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Occurrence of practical difficulties

In addition to known difficulties concerning the practical implementation of PCB environmentally sound management practices, Parties may be required to act in regard to irregularities relating to the shipment and/or the disposal of PCBs that may take place in the context of the Basel Convention.

For instance:

- Export from a Party of the Basel Convention to a non Party
- Export of second hand transformers (retro filled) as new (painted)
- Lack of banking warranty for transportation and destruction
- Lack of insurance for environmental risks
- Undeclared changes of boat during shipments
- Unauthorised transit in Ports
- Lack of absorbing materials in containers for transformers
- Marine Transportation invalidated "last shipment" containers

In relation to packaging:

- Lack of mandatory packaging certificate for dangerous goods
- Un-labelled containers
- Second hand drums having contained other chemical
- Packing allowing leakages

In relation to the disposal of PCB wastes:

- Dismantling of equipment not declared as containing PCBs;
- Dilution of oils in order to achieve smaller concentrations;
- Lack of protection equipment in case of accidents;
- Lack of analytical control upon arrival;
- Non-conformity of products upon arrival;
- Non declaration of non- conformity to Authorities;

Supportive tools for the environmentally sound management of PCBs

A number of tools for the environmentally sound management of PCBs have been developed e.g.:

- Technical Guidelines for the environmentally sound management of PCBs, PCTs and PBBs (UNEP-SBC)
- Database for the Inventory of Transformers (<http://nt1.kister.ch/transfo>) (UNEP-SBC-Côte d'Ivoire)
- Identification methods for PCBs (UNEP-Chemicals)
- Inventory for PCB Destruction Capacity (UNEP-Chemicals)
- Inventory of Information Sources on POPs (UNEP-Chemicals)

Furthermore a number of tool are being/will be developed, e.g.:

- PCB Hand Book (UNEP-SBC)
- Guidance manual on the preparation and implementation of national PCB management plans in the context of the implementation of the Basel Convention (UNEP-SBC)

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V - The case of obsolete pesticides and dioxins

A number of tasks relating to POPs are contained in the programme of work of the Technical Working Group. These include:

- Implementation of a work programme on dioxins and dibenzofurans
- Classification of waste pesticides destined for reformulation together with details of recovery operations of concern
- Consideration of the issue of the stockpiling for the purpose of disposal/destruction or for recycling
- Consideration of the preparation of further technical guidelines for the environmentally sound management of persistent organic pollutants and
- Issue guidance notes or materials to the organizations involved in PIC and POPs on the classification and hazard characterization of wastes within the framework of the Basel Convention.

Furthermore with a view to adoption at the fifth Conference of the Parties to the Basel Convention to be held in December 1999 a draft declaration on the environmentally sound management of hazardous wastes and an associated decision is being prepared. These will constitute the agenda for the Basel Convention for the next decade. One of the key elements is that environmentally sound management of hazardous wastes and other wastes as defined by the Basel Convention, emphasising on cleaner technologies and the minimisation of waste generation should be accessible to all Parties. One of the more practical elements which have been suggested, is to contribute actively to solve the problems of obsolete pesticides.

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