

Disposal of Unwanted Chemicals



Large quantities of unwanted and obsolete chemicals have been piled up in nearly all developing countries. The main hazard is their acute toxicity and persistence, which presents an environmental and health risk. This is also a barrier to sustainable development. Most developing countries have neither the technical expertise, nor the facilities and the necessary financial means to carry out surveys, disposal operations and prevention measures.

Background

The chemicals sector made a significant contribution to the industrialisation of developing countries and has enjoyed consistently high growth in the international trade during the last 50 years. A problem is that chemical products are being exported to countries which lack the preconditions for proper management and safe handling. In industrialized countries the enhancing awareness on environmental matters led to the introduction of tighter regulations on the handling of chemicals, including the treatment and disposal of wastes. In some industrial countries the high costs for the environmental sound treatment and disposal of chemical wastes led to the uncontrolled export of waste into developing countries without the availability of appropriate disposal facilities and techniques. Some non-OECD countries had received offers relating to toxic waste from industrialised countries and in some cases had accepted them.

The UN Environment Programme (UNEP) took this matter upon itself and organised international negotiations on the problem. These led to the **Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal**, which was concluded in March 1990.

Problematic substances

In the Agenda 21 of the United Nations Conference on Environment and Development (UNCED) the following chemicals have been identified as major problematic:

- ▶ **Obsolete pesticides**
- ▶ **Polychlorinated biphenyls**
- ▶ **Dioxins and furans**

Obsolete pesticides: The main problems in developing countries are the large stocks of obsolete pesticides. Studies conducted by the Food and Agriculture Organisation of the United Nations show that there are around 100,000 tonnes of obsolete pesticide stocks in developing countries. Africa alone probably accounts for up to 48,000 tonnes. But they are not only being found in developing countries of Africa, the Near East, Asia and Latin America, they are also an environmental problem in Central and Eastern Europe.



Dumps of unwanted chemicals in corroding containers are dangerous for the population and the environment.

(Picture: Wolfgang Schimpf)



Transfer of dieldrin from drums into an Isotank in Mauritania.

(Picture: Wolfgang Schimpf)



Polychlorinated biphenyls (PCBs): In nearly all developing countries are still electrical transformers and capacitors in use which contain the highly toxic PCBs as cooling agent. They are persistent organic pollutants (POPs) and banned under the Stockholm Convention.

Dioxins (PCDD) and furans (PCDF): They are formed as unintentional by-products in a wide range of chemical processes, especially incinerations. Those substances are persistent in the environment and are suspected to be carcinogenic. They are also regulated by the Stockholm Convention.

Fields of action

Developing countries are not in a position to solve the problems on their own. They have neither the technical expertise, nor the facilities and the necessary financial means. In the Agenda 21, the Stockholm and the Basel Convention, the industrialized nations promised to engage in the transfer of technical know-how in the field of environmental sound disposal. The chemical industry is supporting this effort within the concept of "responsible care", to improve the safety, health and environmental performances of the manufacturing processes and products, especially in the area of pesticides.

The Convention Project Chemical Safety has long term experience in the assistance of partner countries to develop strategies for the final disposal of unwanted products under the consideration of the Stockholm and Basel Conventions, in close cooperation with the chemical industry.

This includes activities, like:

- ▶ Evaluation of unwanted chemicals and their environmental risks in the partner countries (development of inventories, surveys and risk assessments).
- ▶ Development of monitoring programmes for the reduction of hazardous by-products.
- ▶ Management of disposal operations.
- ▶ Establishment of prevention measures, to avoid the future formation of unwanted chemicals.
- ▶ Assistance to develop joint projects with relevant stakeholders.

Commissioned by:



Bundesministerium für
wirtschaftliche Zusammenarbeit
und Entwicklung



Donors, governments and industry have contributed to the compilation of toxic waste in developing countries.

(Picture: Wolfgang Schimpf)



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