



Exhibition

# Obsolete and POPs Pesticides in Eastern Europe, Caucasus and Central Asia





## Obsolete and POPs Pesticides in Eastern Europe, Caucasus and Central Asia

- **About this exhibition**

This exhibition is a joint project of the Convention Project Chemical Safety of the GIZ – a project first commissioned by the Federal Ministry for Economic Cooperation and Development (BMZ) in 1997 – in cooperation with the International HCH and Pesticides Association (IHPA) and the Pesticide Action Network (PAN), Germany.





## Obsolete and POPs Pesticides in Eastern Europe, Caucasus and Central Asia

### ■ Why this exhibition?

This exhibition is intended to raise awareness about the situation of the people in Eastern Europe, the Caucasus and Central Asia (and more generally in developing countries around the globe) who live close to dumps containing obsolete pesticides. The photos show the situation in its full reality, and the exhibition offers an invitation to the audience to support the elimination of obsolete pesticides around the globe. It calls for the sound management of pesticides and more sustainable methods of pest control, as this will help avoid building up new stocks of obsolete pesticides in the future.





## Obsolete and POPs Pesticides in Eastern Europe, Caucasus and Central Asia

### ■ Why this exhibition?

Obsolete pesticides are a threat both to human health and the environment. They can cause acute poisoning or long term effects such as cancer. Moreover, stocks of obsolete pesticides also have substantial economic repercussions. Contaminated food can lead to export restrictions and the excess purchases of pesticides create an additional financial burden due to the high cost of their disposal at the end of their life-cycle.

Disposal of one ton of obsolete pesticides can cost as much as EUR 4,000.





## Proximity



**Georgia 2006, “People in close proximity to hazardous waste”**  
Photo: Jan Betlem (Tauw – European Consultants and Engineers)



## Proximity



**Kyrgyzstan 2008, "Shepherd leading his cattle over POPs polygon"**  
Photo: Khatuna Akhalaia (Milieukontakt International)



## Proximity



**Kyrgyzstan 2007, "Cattle grazing on poisoned ground"**  
Photo: Berto Collet (Tauw - European Consultants and Engineers)



## Proximity



**Georgia 2006, “Pesticides getting into the food chain”**  
Photo: Jan Betlem (Tauw – European Consultants and Engineers)



## Obsolete and POPs Pesticides in Eastern Europe, Caucasus and Central Asia

- **What are obsolete pesticides?**

Pesticides become obsolete when they cannot or can no longer be used for their intended purpose. There are many reasons why stockpiles of these obsolete pesticides accumulate. Among the most common factors are a lack of management, inadequate storage, and the poor quality of the chemical formulation used. Often they no longer satisfy the minimum requirements of FAO standards, and they can pose serious health hazards and cause major damage to the environment. A number of pesticides are banned due to their persistence. <

At present, 14 of the 20 so-called 'Persistent Organic Pollutants' or POPs are pesticides, of which DDT, Dieldrin, and Lindane gained most negative publicity worldwide.





## Obsolete and POPs Pesticides in Eastern Europe, Caucasus and Central Asia

### List of POPs Pesticides

- Aldrin
- Chlordane
- Dieldrin
- Endrin
- Heptachlor
- Hexachlorobenzene (HCH)
- Mirex
- Toxaphene
- DDT
- Chlordecone
- alpha Hexachlorocyclohexane ( $\alpha$ -HCH)
- beta Hexachlorocyclohexane ( $\beta$ -HCH)
- Lindane
- Pentachlorobenzene





## Remains



**Azerbaijan 2008, “Haphazard stockpiling”**  
Photo: Khatuna Akhalaia (Milieukontakt International)



## Remains



**Azerbaijan 2007, “Uncontrolled dumpsite of hazardous waste”**  
Photo: Wolfgang A. Schimpf (Convention Project Chemical Safety, GIZ)



## Remains



**Azerbaijan 2007, “Former pesticide store with large remaining pesticides stock”**  
Photo: Wolfgang A. Schimpf (Convention Project Chemical Safety, GIZ)



## Remains



**Azerbaijan 2007, “Aggravation of the problem due to poor storage”**  
Photo: Wolfgang A. Schimpf (Convention Project Chemical Safety, GIZ)



## Remains



**Azerbaijan 2007, “Improper handling of barrels with remaining pesticides. endangering the environment”**

**Photo: Wolfgang A. Schimpf (Convention Project Chemical Safety, GIZ)**



## Remains



**Albania 2006, "Former DDT store with HCH waste and other chemicals, removed and disposed with the financial help of the Dutch Embassy in Tirana"**

Photo: SAVA GmbH Germany



## Obsolete and POPs Pesticides in Eastern Europe, Caucasus and Central Asia



- At present, some 260,000 tons of obsolete and POPs pesticides can be found in tens of thousands of locations throughout Eastern Europe, the Caucasus and Central Asia – a region stretching from Poland to Kyrgyzstan. After the collapse of the centrally-planned economies, many of the Soviet kolkhozes and collective farms across the region were abandoned.
- Their stores were often neglected or destroyed due to poverty. As a result, the danger of pesticide contamination has become severe, placing people, animals and the environment at risk. It is that threat which is documented in this exhibition.



## Rehabilitated Dump



**Azerbaijan 2008, “Rehabilitated polygon filled with pesticides”**  
Photo: Khatuna Akhalaia (Milieukontakt International)



## Dump



**Lithuania 2009, "Underground Pit"**  
Photo: Bekim Blakaj (SAVA GmbH Germany)



## Dump



**Azerbaijan 2007, “Uncontrolled dump with large quantities of obsolete pesticides and other hazardous chemicals created at the foot of the Caucasus mountains”**

**Photo: Wolfgang A. Schimpf (Convention Project Chemical Safety, GIZ)**



## Approach to the elimination of chemicals –1–

- The basis of all the following solutions is formed by the international conventions (Basel, Stockholm and Rotterdam), followed by awareness-raising and the implementation of the disposal itself.
- The collection, safeguarding and shipment of obsolete pesticide stocks from emerging countries to industrial countries with dedicated waste disposal facilities is the most common way to dispose of this type of waste in an environmentally sound and economical manner. Better than the disposal option is the prevention approach – the implementation of measures to avoid the formation and accumulation of obsolete pesticide stocks in developing as well as industrial countries.





## Approach to the elimination of chemicals –1–

- **Disposal operations are complex, expensive and time consuming**

Practical steps for an environmentally sound management of obsolete pesticides include a number of complex technical and administrative aspects such as

- the identification of obsolete pesticide stockpiles,
- the management of hazardous wastes,
- the development of treatment and elimination options, including
- the export of these wastes to industrial countries for final disposal,

based on the regulations laid down by the international conventions, like

- the Basel Convention (March 1989),
- the Stockholm Convention (February 2004) and
- the Rotterdam Convention (May 2004)





## Approach to the elimination of chemicals –1–

### ■ Problem identification and inventory

The basis of the management of obsolete pesticide stockpiles is the knowledge about the quantity, the location and the environmental and health risks related to the stocks of obsolete pesticides.

The questions are:

- > **Where are the obsolete wastes?**
- > **What kinds of waste are there?**
- > **How much waste is there to be disposed of?**
- > **What are the acute risks?**

The management of obsolete pesticide stockpiles includes the following four main steps – with many administrative, technical and logistic sub-activities.





## Approach to the elimination of chemicals –1–

- The management of obsolete pesticide stockpiles includes the following four main steps – with many administrative, technical and logistic sub-activities.





## Clean-Up Works



**Poland 2007, "Cleaning up obsolete pesticides"**  
Photo: Tomasz Stobiecki (Plant Protection Institute Poznan)



## Approach to the elimination of chemicals –2–

- **Practical steps in the management of obsolete pesticides**
  - Evaluation of the **inventory** and the relevant information available in co-operation with national and international partners
  - Drawing-up a budget / finding **financial resources**
  - Drafting a **Plan of Action** based on the available information
  - Development of a **Waste Management Plan** for identified stockpiles according to their characteristics, suggested treatment and final disposal capacities
  - Development of a **Health, Safety and Environment Management Plan (HSEMP)**
  - Implementation of the **Notification Process** and Trans-Frontier-shipment **application** according to the Rules of the Basel Convention and the relevant national and international regulations





## Approach to the elimination of chemicals –2–

- Implementation of a **safeguarding operation** and **temporary storage** to reduce the acute environmental and health risks on-site. This comprises the following actions:
  - Containment (repackaging) of waste and contaminated materials in special transport containers
  - Clean-up of spills on-site
  - Labelling of containers according to UN regulations
  
- **Shipment** of the waste to a selected disposal facility in an OECD country for final treatment
  
- **Documentation** and implementation/realization of a Lesson Learned Workshop to evaluate the completed disposal operation and to learn from the experience for the next operation





## Approach to the elimination of chemicals –2–

- **Prevention Measures**

The **International Code of Conduct on the Distribution and Use of Pesticides** of the Food and Agriculture Organization (FAO; Rome), demands the prevention of the formation of obsolete pesticide stocks.

One of the preferred tools of prevention is the **Integrated Pest Management (IPM)** approach.

IPM can help to prevent stockpiles of pesticides as it can reduce the overuse of and dependency on pesticides.





## Approach to the elimination of chemicals –2–

- **Prevention Measures**

*“In agricultural production IPM means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that prevent the development of pest populations and keep pesticides and other interventions to levels that are economically justifiable and reduce or minimize risks to human health and the environment” (FAO; Rome).*





## Clean-Up Works



**Lithuania 2009, EU Project Hazardous Waste Management**  
Photo: Bekim Blakaj (SAVA GmbH Germany)



## Approach to the elimination of chemicals –3–

- **Treatment of hazardous chemicals**

The **Waste Management Plan** is the basis of any appropriate final treatment and disposal of hazardous wastes.

Management Plans are necessary to guarantee the environmentally sound elimination of hazardous wastes based on their characteristics, chemical composition, preferable treatment and final disposal capacities available (within the country).





## Approach to the elimination of chemicals –3–

- **Treatment of hazardous chemicals**

- **International transportation of obsolete pesticide waste:**

Those obsolete pesticides that need to be exported for destruction in countries with appropriate technologies must follow the requirements of the internationally valid regulations of the Basel Convention. The hazardous wastes must be packaged in special transport containers and labelled according to the rules of the **Globally Harmonized System (GHS)** and transported in conformity with the generally accepted and recognized international rules and standards of the ***“United Nations Recommendations on the Transport of Dangerous Goods”***.





## Approach to the elimination of chemicals –3–

### ■ Treatment of hazardous chemicals

The **Basel Convention** has established a control system of trans boundary movements of hazardous wastes based on a written international consent procedure prior to the transportation.

The final **treatment of waste** consists of transformation processes to modify the (hazardous) characteristics of the original waste. The treatment methods can be subsumed under the following categories:

- Physicochemical treatment
- Biological transformation
- Thermal treatment





## Approach to the elimination of chemicals –3–

- **Treatment of hazardous chemicals**

**High temperature incineration** and **co-processing** of waste in cement kilns are the most common thermal treatment methods and are accepted by the FAO/ UNEP/ WHO.

*“High temperature incineration is the preferred method for safe disposal of the most hazardous chemicals that cannot be re-used or recycled. Incineration is the most economical and ecologically sound method for the disposal of hazardous waste – including obsolete pesticides” (FAO).*





## Approach to the elimination of chemicals –3–

### ■ Disposal activities of the GIZ

Since 1990, the GTZ (now: GIZ) has been carrying out a number of disposal activities in developing countries in Africa, Asia and Central America to evaluate the risks related to obsolete pesticides and to eliminate obsolete pesticide stockpiles. The former GTZ has already collected and disposed of more than 1.600 tons of obsolete pesticides in 10 countries, including Madagascar, Mauretania, Mozambique Namibia, Niger, Pakistan, Tanzania and Zambia – in close cooperation with USAID, the FAO and different companies of the pesticide industry.





## Clean-Up Works



**Georgia 2008, "Preparation for clean-up"**  
Photo: Khatuna Akhalaia (Milieukontakt International)



## Obsolete and POPs Pesticides in Eastern Europe, Caucasus and Central Asia

- Who are we?

- The **International HCH and Pesticides Association (IHPA)** is an independent, non-political network of committed individuals. Our aim is to draw international attention to the worldwide problems arising from the production and use of HCH and other now obsolete pesticides and the dangers they pose to human health and the environment. IHPA has committed its resources and know how to the search for solutions to the problems of HCH and other obsolete pesticides in the countries of Central and Eastern Europe, the Caucasus and Central Asia.

- If you are interested to use this exhibition, please*

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- Pesticide Action Network (PAN)** is a network of over 600 participating non-governmental organizations, institutions and individuals in over 90 countries working to avoid the use of hazardous pesticides with ecologically sound and socially just alternatives. PAN Germany was established in 1984 as part of the global network and has been continually involved in initiatives to reduce pesticide use and to promote sustainable alternatives on national, European and global levels.

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## Obsolete and POPs Pesticides in Eastern Europe, Caucasus and Central Asia



- **Who are we?**

The **Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)** is the German agency with the mandate to implement the development goals of the German Government. The Convention Project on Chemical Safety, first commissioned through the BMZ in 1997, assists all relevant stakeholders in developing countries and emerging economies in addressing and dealing with hazards and risks of chemicals. This includes the entire lifecycle of chemicals – production, transport, storage, use and disposal – in line with international conventions and standards.

- **Contact:**

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