



## **COUNTRY REPORT**

Legal and Technical Assessment  
of the Management of Obsolete  
Pesticides

**Republic of Azerbaijan**



Food and Agriculture Organisation  
of the United Nations



International HCH & Pesticides Association







# Country Report

Legal and technical assessment of the management of  
obsolete pesticides Republic of Azerbaijan

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The European Union and the Food and Agriculture Organization of the United Nations (FAO) have invested € 7 million to assist countries in Central Asia and Eastern Europe to foster an environment of cooperation and capacity development to eliminate the risks from obsolete pesticides and Persistent Organic Pollutants (POPs) and to develop a more sustainable agriculture in the future. This report was prepared by the International HCH and Pesticides Association (IHPA) under a contract from FAO to assess the need for, and legal and technical capacity for, the sound management of hazardous waste in the country and to develop a “road map” for achieving self-sufficiency in sound hazardous waste management in the region.

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# Content

Content. ....	4
Foreword .....	5
Acknowledgement .....	6
List of acronyms.....	7
Introduction .....	8
Summary .....	12
Suggestions and recommendations .....	14



## Data, Annexes and Working Document

All original data and Annexes are available in a separate document: 'Working Document, Legal and Technical Assessment of the Management of Obsolete Pesticides, Republic of Azerbaijan

### Annexes:

- Annex 1: Terms of Reference for IHPA for Coordination of a Disposal Study for Obsolete Pesticides in the Former Soviet Union
- Annex 2: Map of "Hot-spots" of OPs. The Map has been prepared according to the recent Report of the Interministerial Working group Inventory Report in 2013 by Khoshgadam Alasgarova.
- Annex 3: Yearly Statistic data book of 2013 (Original in Azeri)
- Annex 4: English translation of Yearly Statistic data book of 2013
- Annex 5: Report on management of chemical wastes in Azerbaijan by Prof Islam Mustafayev

# Foreword

Ladies and Gentlemen

The management of obsolete pesticides and persistent organic pollutants is one of the priorities for our country. We implement consistent measures together with relevant government agencies and international organizations, for tackling this problem which exists from the times of former Soviet Union.

Thanks to the attention of the President of the Republic of Azerbaijan to the stated issue, and according to the “Complex Action Plan on Improving the Environmental Situation in the Republic of Azerbaijan (2006 – 2010)”, Jangi pesticide landfill located 54 km far from Baku has been fully reconstructed and protected.

In 2011, the organization of the 11th International Pesticides Forum in Gabala – the oldest city of Azerbaijan- is a good example of attention of the President of the country to this field. The State Phytosanitary Control Service along with the representatives of the relevant ministries of the country has provided the inventory of POPs and obsolete pesticides, and the main part of obsolete pesticides from different regions of the country has been transported here. All actions taken in the landfill are ensured according to the corresponding legislative acts of the European Union and the Republic of Azerbaijan as well as EIA and environmental passport documents. Currently 10,000 tons of obsolete pesticides are reliably stored in this landfill.

Serious actions have been taken for improvement of legislative acts on pesticides in Azerbaijan, inventory of obsolete pesticides and transportation them to the reconstructed landfill. The institutional infrastructure in this field has been reconstructed and business relationship with other stakeholders has been strengthened. The amount of 50 – 60 thousand tons of pesticides annually used in agriculture during the Soviet period, has been currently reduced to several thousand tons due to the implementation of sustainable development of agriculture.

I welcome the publication of the document “The legal and technical evaluation of potential for destruction of obsolete pesticides and persistent organic pollutants in Azerbaijan” implemented under the supervision of the International HCH and Pesticides Association within the framework of the project “The elimination of obsolete pesticides in the territory of the former Soviet Union and the improvement of the capacities to prevent the generation of hazardous waste” supported by the UN Food and Agriculture Organization (FAO), the European Union.



I express my deepest gratitude to all stakeholders who support the implementation of these researches, for their fruitful cooperation.

Heydar Asadov  
Minister of Agriculture of the Republic of Azerbaijan



# Acknowledgement

IHPA would like to thank herewith both main authors Mr. Shamil Huseynov and Mr. Farid Garayev (translator), national legal expert responsible for Part I. The assessment of the legal framework on the pesticides waste management in the Republic of Azerbaijan and Mr. Islam Mustafayev, national waste management consultant who was responsible for Part II. Technical assessment of the management of obsolete pesticides and POPs waste and soil contamination in the Republic of Azerbaijan within the framework of a Disposal Study for Obsolete Pesticides in the Former Soviet Union, for their strong engagement and commitment to achieve these reports.

IHPA likes to thank Mr. Heydar Asadov, Minister of Agriculture, Ms Khoshgadam Aleskerova, Head of section phytosanitary control, Ministry of Agriculture , Mr Adil Zeynalov, Head of section of solid waste management of Department of environment protection, Ministry of Ecology and Natural resources and National Focal Point for the Basel Convention, Mr Gulmali Suleymanov, National Focal Point for the Stockholm Convention for continuously supporting the authors.



We give special thanks for the methodological support, general coordination and encouragement of the work to FAO, Mr. Kevin Helps, former Project Coordinator of FAO-EU Partnership, Mr. Richard Thompson, present Project Coordinator of FAO-EU Partnership Project, Ms. Lalaina Ravelomanantsoa, Legal Officer, Development Law Branch, FAO Legal Office, Ms. Oxana Perminova, Agricultural Officer (Social and Economic Impact) of FAO-EU Partnership Project, Milieukontakt International, Green Cross Belarus and Blacksmith Institute.



# List of acronyms

ADR	International Carriage of Dangerous Goods by Road	UNEP	United Nations Environment Programme
BP	British Petrol	UNIDO	United Nations Industrial Development Organisation
CIS	Commonwealth of Independent States	UNITAR	United Nations Institute for Training and Research
CM	Committee of Ministers	USSR	Union of Soviet Socialist Republics
DDT	Dichlorodiphenyltrichloroethane	WB	World Bank
DOT	US Department of Transport (DOT) classification of dangerous material	WTO	World Trade Organisation
EA	Environmental Assessment		
EECCA	Eastern Europe, Caucasus and Central Asia		
EIA	Environmental Impact Assessment		
EMP	Environmental Management Plans		
EMTK	Environmental Management Tool Kit for Obsolete Pesticides (FAO)		
EU	European Union		
FAO	Food and Agriculture Organization of the United Nations		
GEF	Global Environment Facility		
GHS	Globally Harmonized System of Classification and Labelling of Chemicals		
HCB	Hexachlorobenzene		
HCH	Hexachlorocyclohexane		
IMDG	International Maritime Dangerous Goods Code		
MoA	Ministry of Agriculture		
MENR	Ministry of Ecology and Natural Resources		
MES	Ministry of Emergency Situations		
MH	Ministry of Health		
NATO	North Atlantic Treaty Organization		
N/A	Not applicable		
NCC	National Coordinating Committee		
NFP	National Focal Point		
NGO	Non Governmental Organization		
NIP	National Implementation Plan		
OP	Obsolete pesticide		
OSCE	Organization for Security and Co-operation in Europe		
PCB	Polychlorinated biphenyl		
PCDD	Polychlorinated dibenzo-p-dioxins		
PCDF	Polychlorinated dibenzofurans		
PFOS	Perfluorooctane sulfonyl fluoride		
PFOSF	Perfluorooctane sulfonyl fluoride		
POP	Persistent Organic Pollutant		
PRTR	Pollutant Release and Transfer Register		
PSMS	Pesticide Stock Management System (FAO)		
RID	International Transport of Dangerous Goods by Rail (Reglement concernant le transport international ferroviaire des marchandises Dangereuses)		
SAICM	Strategic Approach to International Chemicals Management		
SC	Stockholm Convention		
SOCAR	State Oil Company of the Azerbaijan Republic		
UNDP	United Nations Development Programme		



# Introduction

Within the EC / FAO project GCP/RER/040/EC “Improving capacities to eliminate and prevent recurrence of obsolete pesticides as a model for tackling unused hazardous chemicals in the Former Soviet Union” the International HCH & Pesticides Association (IHPA) has been tasked to develop capacity for management of hazardous wastes through the example of OPs and POPs pesticides. There is an estimated 200,000 tonnes of these materials known to be affecting the countries of the Former Soviet Union. Much of the previous work on disposal of waste from the countries has looked to export thousands of tonnes of pesticide stockpiles to high temperature incinerators operated commercially in EC member states. Whilst this strategy meets all international environmental compliance requirements it is prohibitively expensive. The vast distances involved for transport of waste from Central Asian Countries to facilities in Europe makes the option of finding a local solution appealing based on both risk management and cost considerations. Moreover, the huge volumes of hazardous waste generated in the region increases the need for local destruction hazardous waste capacity. Based on the national Legal and Technical assessment reports of the management of OPs that were produced in 2014, the “Road Map to Establishing Environmental Sound Management of POPs Pesticides and other Hazardous Waste in the EECCA region”, was published at the end of 2015.



## **The Disposal Study involved (see Terms of Reference in Annex 1 of the Working document) the following activities:**

- Review of existing policy framework for the management and elimination (including inventory, assessment and transport) of POPs and OPs in line with the requirements of the respective EU Directives/ Stockholm Convention;
- Conduct benchmarking of current POPs management (including (temporary) storage and destruction) against international best practice on BAT/BEP as set out by the Basel / Stockholm Convention working groups; highlight and describe best ongoing practices in the country;
- Review of existing and planned treatment options for POPs pesticides, OPs and related hazardous wastes, contaminated containers and contaminated land;
- Assess potential treatment facilities such as existing modern cement kilns, as well as planned and/or implemented pilot plant investigations which can develop in the next years to important market players;
- Assess the Russian-Belarus-Kazakhstan customs union and its implications for hazardous waste in and through Russia, including an assessment of 1) experiences over the last years practical implementation and of 2) alternative transport routes from the republics avoiding Russian territory. This was completed with due reference to the requirements of the Basel Convention;
- Assess access (by road, train or water) to treatment options and economics of transport of waste across the region to treatment facilities/alternative storage facilities; and,
- Review existing POPs data (OPs and PCBs) as far as available, and make efforts to collect, if possible, total hazardous waste stream data as set out in national profiles such as the UNITAR chemicals profile. This was collated for the country in order to assess the potential need for future investment per country/region. Provide estimates of the scale of investments (in terms of tonnes of POPs for disposal) and a rough estimation of their national distribution, tonnes of other OPs, distribution and quantities of contaminated land and contaminated containers;
- Assess status of recycling options for empty containers or already planned or ongoing programs and initiatives;
- Prepare country summary sheets on findings and identify the gaps in information;
- Compile report of study findings, including recommendations for filling the information gaps.



#### Expected Outputs based on the Terms of Reference:

- i. Summary report of existing policy framework for the elimination and management of POPs and OPs (12);
- ii. Analysis of barriers (technical, legal, economic) to the development of national and regional waste management capacity;
- iii. Report on opportunities for introduction of new technologies (thermal and non-thermal) e.g specific stockpiles (DDT and HCH waste);
- iv. Summary report of existing and potential treatment facilities, pilot plant facilities and empty container recycling facilities/initiatives (12 countries);
- v. Report on POPs waste in relation to total hazardous waste market and approaches for Investment plan for POPs destruction for the region;
- vi. Presentation of the draft report to the SC meeting in February 2015, finalization of the report incorporating received comments.



#### Part I of the study on the assessment of the legal framework for pesticides waste management is structured into five main sections:

##### I. General background information (Participation in international treaties)

The introduction includes general information about international cooperation and the state's participation in international treaties in the waste management field. The purpose of this section is to identify and clarify the state's position in the field of waste management at an international level.

##### II. Regulatory framework on waste management

The first chapter is about the political and legal framework that determines the policies or strategies at the national/federal level aimed at the prevention of waste generation and minimization of risks associated with wastes. Also this section provides a general overview of all national laws and regulations that govern hazardous waste management.

The second chapter on specific laws and regulations that govern waste management is focused on the determination of all laws regarding waste management across different sectors such as: import/export, landfill of waste, incineration, shipment of waste and general waste management.

The third chapter on "Institution(s) involved in waste management (focus on pesticides)" studies the relevant institutions that are involved in waste management, and their obligations and responsibilities, in order to identify the competent organizations that are responsible for waste management planning.

##### III. Analysis of existing national waste management legislation

This section is dedicated to an analysis of existing national waste management legislation that reflects the legal framework regarding the different activities of waste management such as:

- Register of pesticides waste and general classification of waste
- Licensing
- Trans-boundary movement, import/export rules
- Economic initiatives regarding transport
- Labelling requirements
- Packaging and containers
- Emergency procedures
- Disposal obligations
- Incineration
- Recording, monitoring, and reporting
- Offences and penalties
- Official controls and inspection
- Research and development

##### IV. Information supplementing legal analyses – from other experts includes three main topics:

- Pesticides manufacturing industry
- Management of OP Stocks – legal provisions regarding the conditions/methods for inventory/storage/disposal activities related to obsolete stocks.
- Methods used for treatment of pesticides wastes



**V. Disposal, storage recycling and recovering facilities – practical information from other experts is composed of four topics:**

- Disposal facilities
- Storage facilities
- Recycling facilities
- Recovery facilities

This section aims to identify the legal norms that apply to any disposal/storage/recycling/recovery facilities of pesticides waste.

**Part II of the study, the national technical assessment (waste management report)**

We realized that in order to fulfil the specific conditions on capacity building and benchmarking in each country, as specified in the terms of reference, an adequate analysis of the whole cycle on how to deal with OPs was required. This applies from the very beginning of the process, including who is responsible and who is involved in every step from finding the OPs to the final step of complete elimination. Having carefully worked this out, it was then necessary to design a clear and standardized structure that all national waste management consultants could simply follow in order to assess each step. It was also important to allow comparison between the assessments of each country and therefore it was decided to develop a standardized template for each report using a tabular format. For clarity and brevity the entries have been made as concise as possible.

The report has been built up in four main sections containing a large number of individual items that have been assessed, these being:

**1. Benchmarking of current POPs management against international best practice**

This section includes detailed information on each step of all actions necessary for elimination of OPs and POPs pesticides:

1. **Institutional arrangements** that include the responsibilities of the concerned organisations in the country.
2. **Inventory** with all national/regional inventory updates, data sources and existing inventories, first National Implementation Plan (NIP), recent NIP update

(specifically on new POPs), UNITAR Chemicals Profile, if existing, National Pesticides and/or POPs Inventory, FAO PSMS Inventory and other information.

3. **Environmental Assessment** consistent with national requirements, and also with International experience often implemented by the UN and other agencies. This includes the capacity of the government and private sector to develop such an Environmental Assessment, as well as the FAO stages in Environmental Assessment (EA) and Environmental Management Plans (EMP) experiences from the FAO Toolkit EMTK v 3.
4. **Inventory and Environmental Assessment Management** including vital questions on the inventory and the assessment, and if the organisational capacity is in place to complete the task. For example if the relevant organisation is in place and also operational, and if so whether all managers and coordinators are in place and operational, as well as if all field teams are established and operational. Also if all Inventory data management people are in place and operational, whether the National/Regional Inventory is being updated or not, a National Pesticides and/or POPs Inventory has been established, and if a contaminated sites register exists or not.
5. **Safeguarding** defining what has been implemented at national and international level such as under the FAO projects.
6. **Storage and transport** includes all items on packaging, containerization, storage and transportation with assessment of transport regulations, driver regulations, existence of storage regulations and available storage capacity, and Incident and accident reporting.
7. **Disposal**, assessing the national, international and FAO experience to date, including reporting on the technologies that have been selected, the process on transboundary transport under the Basel Convention and the national transport within the country, disposal capacities in the country, quality and standards applied (national/international), and current ownership of facilities.
8. **Containers** assessing the national and international experience, the FAO supported plans, amounts and type of empty containers and/or packaging materials, and the use of collection centres for empty containers



## 2. General overview of POPs and other hazardous waste data

This section has been set up around the following six categories:

- A. Agricultural chemical waste that includes OP waste, POPs pesticides waste and new pesticides waste such as counterfeit pesticides, waste empty containers, and contaminated sites. These contaminated sites consist of burial sites or polygons (landfills) which often contain huge volumes of waste, storage sites, and sites which are still in use;
- B. Industrial chemicals,
- C. By-products,
- D. Petroleum wastes,
- E. Inorganic wastes,
- F. Health care high risk waste.

This effectively means the majority of hazardous waste has been listed. It has also to be mentioned that many of the required data are either preliminary or missing as many countries are in a first stage of such an assessment. Often quantities are listed but not verified in the field. The data also change rapidly as new inventory and assessment activities such as the current NIP updates are planned, so the data can be seen as a “snapshots” of the situation and are likely to be updated again in the near future.

## 3. Existing and planned treatment options for POPs pesticides, OPs and related hazardous wastes, and contaminated land

This section assesses existing and potential destruction plants, planned facilities and planned and/or implemented pilot plants, as well as existing and/or planned empty container (plastic and/or steel) recycling facilities or initiatives in the country. Data that need to be entered are: type of plant or technology, address/location, contact person (name/contact details) and a brief summary of the technical data, with treatment capacity, types hazardous waste permitted for treatment, permit information, and date of permit. However, it should be noted that there are only a very few plants available in most of the countries.

## 4. Transportation logistics

This section includes five main issues:

- 1. The assessment of various transport alternatives from main stockpile locations to the existing and or planned treatment facilities including cost estimates;
- 2. Assessment of possible storage networks: waste transfer stations e.g. at main railway stations or at existing landfills (polygons) or waste handling stations;
- 3. Assessment of transport capacity;
- 4. Reference to the requirements of the Basel Convention and previous experience of international export Implications of custom facilities; and
- 5. A brief description of the cases that should be reported.

Due to its clearly defined structure the report is very easy to update periodically, for the use of the national authorities and donors that are interested to support further actions on the elimination of OPs and POPs in the future.

The main report is available in both English and Russian, and all country reports will be accessible in the library of IHPA at <http://www.iHPA.info/resources/library/>

John Vijgen  
Director  
International HCH & Pesticides Association



# Summary

## for the Republic of Azerbaijan

It should be noted that the conclusions and recommendations in this report have been made on the basis of the information available in 2014. Additionally, this legal and technical assessment of the management of OPs report was followed by a second report: “Road Map for the Development of Hazardous Waste Management in the EECCA Countries”. During the work on the last report the country’s conclusions and recommendations have been intensively discussed with the national authorities and national consultant, leading to final summaries of legal and waste management issues, which are then specifically addressed for each country in the Road Map report.



### Part I. The assessment of the legal framework for pesticides waste management in the Republic of Azerbaijan

#### Major Findings

The Republic of Azerbaijan adheres to two International treaties that are directly related to waste management: the Basel Convention on the Control of transboundary movements of hazardous wastes and their disposal and the Stockholm Convention on Persistent Organic Pollutants.

Azerbaijan is not a party to the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade. The relevant documents for adherence to this Convention, as well as to the Protocol “On registration of wastes and transportation of pollutants” of the Aarhus Convention are under review.

On National level the main aspects are regulated in the Law “On Industrial And Domestic Wastes”. Also relevant for waste management and specifically to prevent and regulate harmful effects on the environment is the Law “On Ecological Safety”.

Regulations for specific types of waste are found in the Law “Radiation safety of the population” and more relevant for this study the Law “On Phytosanitary Control”.

These laws contain relevant regulations on the management of hazardous wastes (as collection, transport, storage, neutralization, disposal, etc.).

There are also national legal instruments on the export and import of hazardous chemical substances. These documents were prepared in accordance with the European Union Directives and the guidelines of the Basel Convention. The implementation of the different regulations of the Basel Convention in the national

legislation has been realized in the period between 2004 and 2008, as a consequence of the ratification of 2001.

In 2004 a State Strategy on the Management of Hazardous Wastes in the Republic of Azerbaijan has been adopted. A hazardous waste classification system is in force, based on the regulations of the Basel Convention.

For the classification of pesticides waste as well the provisions of the Law “On Industrial And Domestic Wastes” as the Law “on Phytosanitary control” apply.

According to the Law dated on May 12, 2006 “on Phytosanitary Control” of Azerbaijan Republic, Decree No. 1697 dated on September 28, 2006 of the President of Azerbaijan Republic on the approval of “Complex Measures Plan for 2006-2010 on the improvement of ecological condition in Azerbaijan Republic” and decision dated on 22.01.2007 No. 10 of Cabinet of Ministers of Azerbaijan Republic, the measures of neutralization and removal of pesticides, biological substances, their combinations and packages which are inappropriate for usage and whose usage was prohibited by taking back from their owners was appointed to the State Phytosanitary Control Service under Ministry of Agriculture.

On national level there is a specific infrastructure for the disposal of pesticides wastes: the Jangi Pesticide Polygon, under the responsibility of the State Phytosanitary Control Service.





At the moment there is in Azerbaijan no legislation that regulates waste incineration. But a draft directive for Waste incineration, based on the EC Waste Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste, OJ L 332, 28.12.2000, has been designed and is submitted to the government.

In general it can be stated that the legislation in Azerbaijan contains provisions regarding permits and licenses for waste management, economic incentives as 'polluter pays', and provisions for recording, monitoring and reporting of waste data. In case of non-fulfilment of the defined duties, legal provisions for offenses and penalties are in place.

Regulations for transport, packaging and labelling and emergency procedures are defined in the legislation.

The main institutions involved in pesticides waste management at national level are

- the Ministry of Agriculture and the subordinated State Phytosanitary Control Service,
- the Ministry of Ecology and Natural Resources,
- the Ministry of Emergency Situations and
- the Ministry of Economy and Industry.

## **Part II. Technical assessment of the management of OPs and POPs waste and soil contamination in Azerbaijan**

### **• Identify the gaps in information (for all 5 sections):**

There are no correct data about planned pilot plants, percentages of POPs wastes in the OPs are not available. No periodic information system on disposal, treatment, landfilling of wastes. Access to these sources is limited.

### **• Analysis of barriers (technical, economic) to the development of national and regional waste management capacity:**

There are no results of feasibility studies on waste management in Azerbaijan. Specific issues of EIA for waste management in Azerbaijan are not defined. There is no structured approach for waste monitoring and a limited technical capacity.

### **• Analysis of opportunities (technical, economic) to the development of national and regional waste management capacity**

Azerbaijan has developed considerable capacity on hazardous waste disposal. The possibilities of treatment of OPs/POPs in one or more of the existing plants should be discussed with the concerned authorities, based on evaluation of the technologies, its adaptation, trial tests needed and adaptation of the existing licenses.

The destruction of 500 tons of PCB is already being dealt with by a pilot project led by UNIDO by means of sodium reduction plant with a capacity of 20 tons per month. The actual installation is now nearing completion.

If further developments of capacity are continuing, Azerbaijan could play a major role to assist neighbouring countries like Georgia to deal with their hazardous waste problem in the near and far future

### **• Other findings that need to be addressed:** none





# Suggestions and recommendations for future activities

Based on the findings listed above, it is recommended for the Republic of Azerbaijan:

- To enhance the activities regarding the ratification of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (general information regarding statute of adaptation, signing and ratification, Focal Point Institute)
- To decide for periodical (e.g. every three years) evaluation of the legislation, taking into account all aspects of environmentally sound waste management and including a permanent activity of improvement using international experiences
- To take the initiative to approach the neighbouring countries for an active sharing of experiences in both the environmentally sound (hazardous) waste management and the joint development of adequate technologies and capacities for hazardous waste disposal
- Regarding the progress under Stockholm convention, the following specific recommendations can be made:
  - Elimination of the OP stocks from the storages in all 20 regions
  - Elimination of PCB contaminated oils and equipment
  - Develop a national policy for empty container management, immediately followed by implementation thereof

Azerbaijan has progressed enormously on the built up of capacity for the destruction of waste and hazardous waste. However especially on the hazardous waste that includes legacy waste like obsolete and POPs pesticides, now temporarily stored at the Jangi special landfill, being in total 1,764,000 tonnes have to be dealt with. Additionally, every year 297,000 tonnes of hazardous waste are generated, from which only 2% is recycled and nearly 40% been disposed at landfills. In order to deal with both the legacy volumes and the annual arisings of hazardous waste in a sustainable way, it is recommended to develop a national plan, considering the following options:

- a. Possibility of using available capacity at the Balakhany (municipal) waste incinerator designed to handle 10,000 tonnes of medical waste per year. To be evaluated whether this capacity can be used for certain other hazardous waste types;
- b. Possibility of the use of the existing cement kiln capacity, for which EIA has been already performed, and which is owned by an international consortium that has global experience in hazardous waste treatment;
- c. If the first two options cannot be applied, investigate the installation of additional capacity of hazardous waste treatment capacity at the National Waste Center
- d. Look into options for continuation of the Sodium reduction plant, after the finalization of the pilot project for PCBs, to treat specific other small waste streams;
- e. Develop further the already tested capacity on biological treatment of oil contaminated soils and include in these developments the application for soils contaminated with pesticides and other POPs.







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