



## **COUNTRY REPORT**

Legal and Technical Assessment  
of the Management of Obsolete  
Pesticides

**Republic of Tajikistan**



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 Tajikistan

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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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## 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 Tajikistan

Annexes:

Annex 1: Terms of Reference for IHPA for coordination of a Disposal Study for Obsolete Pesticides in the Former Soviet Union

# Foreword

**The problem and the solution of Obsolete and POPs pesticides is standing as a high priority on the environmental and agricultural agenda of the government of the Republic of Tajikistan.**

Recently, in the framework of the Stockholm Convention the update of the NIP has been finalized. It has given new insight on present and new POPs. All this new has been incorporated in this report. The Committee of Environmental Protection under the Government of the Republic of Tajikistan has been fully involved in all activities that deal with the problem.

The problems are huge in the country, but step by step new initiatives have been implemented and are taking place.

As part of the FAO project “Initiative for Pesticides and Pest Management in Central Asia and Turkey” from 1 February to 15 May 2014, the inventory of 51 warehouses of pesticides was implemented.

In the frame of the GEF financed UNEP project “Demonstrating and scaling up sustainable alternatives to DDT for the control of vector borne diseases in Southern Caucasus and Central Asia (DDT Project) a pilot repackaging campaign for obsolete stocks of DDT and associated waste is planned at Anorzor, in the Khatlon Oblast, Southern Tajikistan. As part of the same project an intermediate collection centre (ICC) for obsolete pesticides will be implemented at Vakhsh Burial Site in Khatlon Oblast, Southern Tajikistan. The Vakhsh Burial site is one of the most problematic obsolete pesticides hot-spots in Central Asia that reportedly contains 4,000 tonnes of obsolete pesticides including large volumes of DDT. Also in the northern part of the country, in Kanibadam, recently a Swiss led mission together with Milieucontact and the International HCH & Pesticides Association are preparing plans for proposals to reduce the risk at the Pesticides landfill.

Although these are great initiatives, it may be clear that Tajikistan needs more concrete financial support to solve these complex and expensive measures as needed in Vakhsh that have to be taken better sooner than later.

We are very happy with the publication of the Legal and Technical assessment of the management of obsolete pesticides of Tajikistan as an outcome of the regional study “Assessment of Capacity for Environmentally Sound Disposal of POPs and Obsolete Pesticides Wastes”, executed by the International HCH & Pesticides Association in the context of the EU supported FAO Project “Improving capacities to eliminate and prevent



recurrence of obsolete pesticides as a model for tackling unused hazardous chemicals in the former Soviet Union”. The implementation was done by our national consultants in close cooperation with the Committee of Environmental Protection and its “Center for Stockholm Convention Implementation”.

The report reflects very clear where we are standing today with the present capacities including our gaps and needs for the future.

I like to thank all involved parties for the excellent cooperation and for the support of this study.

Sincerely,

Mr. Khayrullo IBODZODA

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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	SAICM	Strategic Approach to International Chemicals Management
CIS	Commonwealth of Independent States	CSO	Civil Society Organization
CMR	Conditions for the international carriage of goods by road. (original: Convention relative au contrat de transport international de Marchandises par route)	SC	Stockholm Convention
		SCO	Shanghai Cooperation Organization
		TEQ	Toxic Equivalent
DOT	US Department of Transport (DOT) classification of dangerous material	UNDP	United Nations Development Programme
EA	Environmental Assessment	UNEP	United Nations Environment Programme
EEC	European Economic Community	UNITAR	United Nations Institute for Training and Research
EIA	Environmental Impact Assessment	USA	United States of America
EMP	Environmental Management Plans	USSR	Union of Soviet Socialist Republics
EMTK	Environmental Management Tool Kit for Obsolete Pesticides (FAO)	WB	World Bank
		WTO	World Trade Organisation
EU	European Union		
FAO	Food and Agriculture Organization of the United Nations		
FSCI	Fund for Support of Citizens' Initiatives		
GBAO	Gorno-Badakhshan Autonomous Oblast		
GEF	Global Environment Facility		
GHS	Globally Harmonized System of Classification and Labelling of Chemicals		
Gosstandard	Gosudarstvennyy standart, means state standard		
HDPE	High Density Polyethylene		
IMDG	International Maritime Dangerous Goods Code		
IUCN	International Union for Conservation of Nature		
MAC	maximum allowable concentration		
MKI	Milieukontakt International		
MUE	Municipal Unitary Enterprise		
NA	Not Applicable		
NATO	North Atlantic Treaty Organization		
NATO PfP	NATO's Partnership for Peace programme		
NCC	National Coordinating Committee		
NFP	National Focal Point		
NIP	National Implementation Plan		
NSEM	National System of Environment Monitoring		
OP	Obsolete pesticides		
OSCE	Organization for Security and Co-operation in Europe		
PCB	Polychlorinated biphenyl		
PDF-B	Project Development Facility (GEF)		
POPs	Persistent Organic Pollutants		
PRTR	Pollutant Release and Transfer Register		
PSMS	Pesticide Stock Management System (FAO)		
RID	International Transport of Dangerous Goods by Rail (original: Reglement concernant le transport international ferroviaire des Marchandises Dangereuses)		
RT	Republic of Tajikistan		



# 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/>

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Director  
International HCH & Pesticides Association



# Summary

## for the Republic of Tajikistan

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. Assessment of the legal framework for pesticides waste management in the Republic of Tajikistan

#### Major findings

The Republic of Tajikistan ratified only the Stockholm Convention on Persistent Organic Pollutants (2007); signed, but did not ratify the Rotterdam Convention (1998) on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and did not sign the Basel Convention on the Transboundary Movement of Hazardous Wastes and their Disposal. As a consequence, the Tajik National waste legislation is not complying with these Conventions.

Relevant for waste management is the Law of the Republic of Tajikistan “On Production and Consumption Wastes” dated from May 10, 2002, № 44. This law stipulates the creation and maintenance of the Cadaster of wastes in Tajikistan, but in practice this cadaster is not established and is not maintained. There is no procedure for conducting the inventory of different types of waste (industrial, medical and household waste) existing in Tajikistan. This results in a lack of information about waste types and quantities.

According to article 14 of this law, any transboundary movement of waste for the use as recyclable materials is carried out only with a permit issued by the Committee for Environmental Protection and other authorized bodies. This law also states that wastes that are subject to sales or exports and imports, must be certified in the manner specified by regulations of Republic of Tajikistan. But in practice, the government of Tajikistan has not established any procedure for the transboundary movement of the waste.

An important role regarding the legal regulation of the waste management, in the Republic of Tajikistan, plays the Law “On licensing of certain activities” from May

17, 2004, № 37 that stipulates the following activities as subject to licensing: management of radioactive waste, including import and export, production, sale, use, transportation, storage, processing and disposal of radioactive substances and the collection, use, storage, transportation and disposal of hazardous waste.

But due to the incomplete classification and cataloguing of waste types (as an example there is no information on liquid waste) and the lack of proper recording, such rules are not effective for hazardous waste management.

Regarding waste disposal there are no adequate facilities, even the rules for construction and operation of landfills are lacking. There is a lot of uncontrolled waste dumping, even on the riverbanks directly affecting water quality. There is no legislation regarding waste incineration and there are no special facilities for disposal of toxic and hazardous waste.

There are no measures, nor policies for the prevention and reduction of hazardous waste.

Regarding pesticides there is no secondary legislation in Tajikistan, describing in detail the rules of storage and disposal of pesticides waste. The quality of surface water and groundwater is affected by diffuse pollution from agriculture (drainage systems in Tajikistan are inadequate and inefficient).





At the moment the Republic of Tajikistan does not have the financial and technical resources to develop an adequate legal framework for proper waste management including the management of hazardous waste. Therefore international support is urgently needed to improve this situation on the short term.

The government body which is responsible the waste management is the Committee for Environment Protection under the Government of the Republic of Tajikistan.

## **Part II. Technical assessment of the management of obsolete pesticides and POPs waste and soil contamination in the Republic of Tajikistan**

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

Currently, an inventory of obsolete pesticides has been carried out in the Republic of Tajikistan defining site locations and quantities. The country needs to develop a National Clean-up Plan for the repackaging, collection, storage and destruction of obsolete pesticides and the inventory of the related site contamination. In this plan at least the following elements have to be defined:

- the state agency that will be responsible for the management of this Plan;
- the standards to be developed for storage, transportation, repackaging and utilization, based on international standards and fit for

implementation in the actual practice in the Republic of Tajikistan;

- the activities and campaigns needed for the destruction of POPs and POP pesticides and other obsolete pesticides in the Republic of Tajikistan;
- what measures will be required to prevent the creation of new obsolete pesticides.

Tajikistan is not a producer of new POPs and during the inventory of 2014 there was no producer that used new POPs in its activities. Additionally, the Republic of Tajikistan needs the development of measures on conducting researches, assessment and development of National Program for new POPs (management of electric and technical and electric wastes, management of automobile utilization, control over import of food products and goods that may have POPs)

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

The most serious barrier for the implementation of adequate state measures on obsolete pesticides and POPs is the lack of coordination between the Committee for Environmental Protection, the Ministry of Agriculture, the Ministry of Health and Social Protection and the Committee for Emergency Situations and Civil Defense. In spite of the fact that there is a law, additional documents



(by- laws, instructions and regulations) are not developed or in the stage of approval.

Practical measures on destruction of POPs and obsolete pesticides were not taken in the country. Partially, this is because of the lack of the necessary infrastructure for the repackaging, transportation, temporary storage and destruction in the country. Currently all actions are targeted to maintain existing landfills in an acceptable condition. There is a need to establish specific warehouses for temporary storage, prepare special transport, train specialists and develop destruction plans.

For the destruction of POPs and obsolete pesticides, according to senior officials' ideas, the Republic of Tajikistan does not have a real opportunity to construct a plant for the destruction of pesticides (economically it is not feasible). Therefore export and destruction abroad will be necessary.

The laboratory and research capacity (although existing) has to be improved on the short term by improving the availability of qualified staff, equipment and financial resources.

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

Currently, it is important to focus on repackaging, transportation and temporary storage in order to reduce actual risks and be prepared for final destruction in the future.

- **Other findings that need to be addressed**

None





# Suggestions and recommendations for future activities

It is recommended that the Republic of Tajikistan urgently ratifies the Rotterdam Convention and signs and ratifies the Basel Convention and develops, with international assistance, the modernization of the Tajik waste legislation in order to comply with the international conventions.

In this modernization attention has to be paid to as well the whole waste chain (production, management, reduction, prevention and recycling of wastes), the different types of waste (categorization, definitions, Cadaster, access of public to information) the required infrastructure (waste companies, disposal and destruction facilities) and the systems for practical enforcement (licenses and permits, penalties and fines, registration, control and supervision), financial provisions and incentives. The EC regulations and Directives (being internationally evaluated as best practices) for waste management can be used as models for these developments.

These improvements should be based on a set of Principles for Environmental Protection and/or an Ecological Code, to be defined by the Government of the Republic of Tajikistan.

In all these developments an active communication, increasing the awareness of the population, decision-makers, representatives of ministries, waste producers and the waste sector is strongly recommended.





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