

**Working Document**  
Management of Obsolete  
Pesticides

**Republic of Tajikistan**



Food and Agriculture  
Organization of the  
United Nations



Content		
Part I	The assessment of the legal framework on the pesticides waste management in the Republic of Tajikistan	4
Section I	General background information (International Treaties participation)	4
Section II	Regulatory framework on waste management	5
Chapter I	Political & legal framework	5
Chapter II	Specific laws and regulations that govern waste management	7
Chapter III	Institution(s) involved in waste management (focus on pesticides)	9
Section III	Analysis of existing national waste management legislation	10
Theme 1	Scope	10
Theme 2	Definitions	10
Theme 3	Administrative and institutional structure	10
Theme 4	Licensing	10
Theme 5	Trans-boundary movement, import/export	11
Theme 6	Economic initiatives	12
Theme 7	Transport	12
Theme 8	Labelling requirements	13
Theme 9	Packaging and containers	13
Theme 10	Emergency procedures	13
Theme 11	Disposal obligations	13
Theme 12	Incineration	14
Theme 13	Recording, monitoring, and reporting	15
Theme 14	Offences and penalties	15
Theme 15	Official controls and inspection	15
Theme 16	Research and development	16
Section IV	Information supplementing legal analyses – from other Experts	17
Section V	Disposal, Storage, Recycling and Recovery Facilities – practical information from other Experts	18
Part II	Technical assessment of the management of obsolete pesticides and POPs waste and soil contamination in the Republic of Tajikistan	19
Section I	Benchmarking of current POPs management against international best practice	19
1	Institutional arrangements	19
2	Inventory	24
3	Environmental Assessment	27
4	Inventory and Environmental Assessment Management	28
5	Safeguarding	29
6	Storage and transport	30
7	Disposal	31
8	Containers	32
Section II	General overview of POPs and other hazardous waste data	33
Section III	Existing and planned treatment options for POPs pesticides, obsolete pesticides and related hazardous wastes, contaminated land	37
Section IV	Transportation logistics	39
Summary sheets on findings		40
References		41
Annexes		42
Annex 1	Terms of Reference for IHPA for Coordination of a Disposal Study for Obsolete Pesticides in the Former	43

	<b>Soviet Union (only in English)</b>	
<b>Annex 2</b>	<b>Summary of facts, (from Tauw Consortium, World Bank project 2010)</b>	<b>46</b>
<b>Annex 3</b>	<b>Kathlon storage sites: table with quantities of obsolete pesticides and contaminated soils (from Tauw Consortium, World Bank project 2010)</b>	<b>47</b>
<b>Annex 4</b>	<b>IHPA's interpretation of Kathlon storage sites: table with quantities of obsolete pesticides and contaminated soils (from Tauw Consortium, World Bank project 2010)</b>	<b>48</b>
<b>Annex 5</b>	<b>Taken from FAO Project: Inventory of Obsolete Pesticides in Tajikistan Initiative for Pesticides and Pest Management in Central Asia, Azerbaijan and Turkey, GCP/RER/035/TUR, 2012, Annex 1: Overview of sites with obsolete pesticides in Kurgantube zone</b>	<b>49</b>
<b>Annex 6</b>	<b>Overview of all OPs and related contaminated soils/rubble/empty packaging in Tajikistan, as used in Part II, Section II: General overview of POPs and other hazardous waste data</b>	<b>52</b>

*This publication has been produced with the assistance of the European Union. The contents of this publication are the sole responsibility of IHPA and can in no way be taken to reflect the views of the European Union.*

All IHPA reports can be found in the library of IHPA at <http://www.ihpa.info/resources/library>



Food and Agriculture  
Organization of the  
United Nations



## Part I – The Assessment of the legal framework on the pesticides waste management in the Republic of Tajikistan

### Section I: General background information (International Treaties participation)

#### 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)

Tajikistan did not ratify

#### The Stockholm Convention on Persistent Organic Pollutants (general information regarding statute of adaptation, signing and ratification, Focal Point Institute)

was adopted on the 22 of May 2001, in Stockholm, at the Conference of Plenipotentiaries on the Stockholm Convention on Persistent Organic Pollutants. According to its Article 24, the Convention was open for signature at Stockholm by all States and by regional economic integration organizations on the 23 of May 2001 at the Stockholm City Conference Centre/Folkets Hus, and at the United Nations Headquarters in New York from the 24 of May 2001 to the 22<sup>nd</sup> of May 2002.

This Convention was ratified by Decree of Majlisi Oli of the Republic of Tajikistan, on December 6, 2006

#### The Basel Convention on the Transboundary Movement of Hazardous Wastes and Their Disposal (general information regarding statute of adaptation, signing and ratification, Focal Point Institute)

Tajikistan did not ratify

#### International Agreements

There are a number of international agreements signed by **Republic of Tajikistan** in relation to waste management.

Among the signed by The **Republic of Tajikistan** following can be mentioned:

1. The Agreement “On control of transboundary movements hazardous and other wastes” between States Members of the Commonwealth of Independent States dated from April 12, 1996, signed in Moscow. Based on this Agreement the parties agreed to take measures to:

- manage and control the import (export) or transit through their territories of hazardous and other wastes;
- implement measures to ensure the environmental safety of transboundary movements of hazardous wastes and other wastes and promote interaction between the authorities responsible for their transportation;
- apply timely response measures arising in the transport of hazardous and other wastes;
- exchange information on the development and implementation of low-waste technologies and minimize such waste;
- perform an environmental impact assessment of agreements and contracts for the transport of hazardous and other wastes;
- monitor the compliance with the rules and regulations of transboundary movements of hazardous wastes and their disposal;
- establish appropriate checkpoints equipped with the required technical means



Food and Agriculture  
Organization of the  
United Nations



2. The Agreement on the coordination procedure for sanitary evaluation of potentially hazardous products imported to CIS countries was ratified by Majlisi Namoyandagon Majlisi Oli of the Republic of Tajikistan on the 25 of November, 2004

According to this agreement, the Parties – Participating States design and coordinate the procedure for hygienic evaluation of potentially hazardous imports produced within the Parties' territories, conduct coordinated organizational, preventative, sanitary and epidemiological activities aimed at ensuring their sanitary safety, design and coordinate the procedure of sanitary assessment (certification, examination, registration) of goods produced within the Parties' territories, mutually accept sanitary assessments (in presence of report on examination conducted at accredited testing centers and laboratories) issued by the agencies and institutions of state sanitation and epidemiological control of the Parties where the goods have been produced, unless this contravenes the requirements of the local legislation and the state sanitary and epidemiological regulations of the Parties. The Parties exchange samples of sanitary certificates. The Parties perform monitoring and form a joint databank on potentially hazardous products, exchange information on officially registered cases of disease and poisoning among the population of the Participating Countries, related to the impact of potentially hazardous products. The Parties jointly design and analyze sanitary and epidemiological regulations on potentially hazardous products, taking into account existing international norms and rules, as part of International Committee on Sanitary and Epidemiological Regulation of CIS countries. The Parties jointly design and agree the requirements to accredited testing centers and laboratories perform their accreditation in accordance with the legislation of the Participating Countries, mutually accept the results of the tests conducted. When performing state sanitary and epidemiological inspection of imports, the state sanitary inspection agencies and institutions of the Parties proceed from the priority of sanitary legislation in the importing country. In the area of sanitary safety, the manufacturer and supplier of imported product are responsible for its quality and safety for the life and health of consumers and their habitat in accordance with the legislation of the importing and exporting country. The presence of a positive sanitary certificate of the exporting country is a prerequisite for importing the product. In absence of this certificate, the goods cannot be allowed to enter the importing country, unless otherwise indicated by its national legislation. If products are found to break the established sanitary and epidemiological requirements, the state sanitary and epidemiological control agencies and institutions that identified this fact take measures to prevent further movement of this product, extract it from the circulation and notify the relevant authorities of the Parties' state sanitary and epidemiological authorities about the shipment of such product

## **Section II: Regulatory framework on waste management**

### **Chapter I Political and Legal Framework**

#### **Issues of pesticides and waste management**

The **current** challenges of waste management in Tajikistan:

- Poor management of waste, including waste from mining and other industries, medical, household and other municipal waste. There are no special facilities for the disposal of toxic and hazardous waste;
- The quality of surface water and groundwater is affected by diffuse pollution from agriculture (there are inadequate and inefficient drainage systems in Tajikistan). There is unauthorized dumping waste on the river banks.
- Tajikistan does not have financial and technical resources to implement efficacy of the laws and policies on such releases.
- Insufficient reliable information about the amounts and types of waste (there is no information at all about liquid waste);
- Classification and catalogue the types of waste;
- Statistical reporting form and submission procedure;
- Sorting mechanisms, and disposal of waste;
- Mechanisms of storage, use, and disposal of liquid waste;
- The rules for the construction and operation of landfills for waste storage.

As Tajikistan did not ratify the Basel Convention, the Tajik waste legislation is not complying with this Convention, namely:

- There is no reduction of hazardous wastes taking place in practice in Tajikistan;
- Adequate disposal facilities are not available in Tajikistan;
- There is no development and implementation of new environmentally technologies in Tajikistan;
- The State Cadastre of Waste does not exist in Tajikistan and there is no secondary legislation describing the rules of maintenance of such Cadaster;
- In Tajikistan, the waste is poorly managed. This includes waste from mining and other industries,



**Situation with  
stocks of  
obsolete  
pesticides**

medical, household and other municipal waste. There are no special facilities for disposal of toxic and hazardous waste;

- There is no procedure of the conducting the inventory of different types of waste (industrial, medical and household waste) existing in Tajikistan.

Also, there are several factors that have a negative impact on the health of the population of the Republic of Tajikistan. For example:

- Storage of household waste and conducting the business activities in water protection zones;
- Bad conditions of storage of all types of waste, including toxic and radioactive wastes.

**National Laws and regulations that govern hazardous waste (especially OP) management**

- The Law No.44 "On production and consumption wastes" from May 10, 2002;
- The Law No.1002 "On radioactive waste management" from July 22, 2013;
- The Law No.705 «on ecological information" from 25 March 2011;
- The Law nr 817 "On plant protection" April 16, 2012;
- The Law No.1 "On the production and safe handling of pesticides and agrochemicals", April 22, 2003;
- The state ecological program of Tajikistan for the years 2009-2019" was approved by the Decree of Government dated from February 27, 2009, No.123;
- The Law No.707 "On ecological monitoring" from March 25, 2011;
- The Law No.37 "On licensing of certain activities" from May 17, 2004;
- The "Concept of environment protection in the Republic of Tajikistan", approved by the Government of Tajikistan, on December 31, 2008 No.645;
- The Decree of the Government of Tajikistan No.502 «regarding the national plan on the implementation of the obligations of Tajikistan according to the Stockholm Convention on persistent organic pollutants, from October 1, 2007;
- Resolution No.132 of the Government of the Republic of Tajikistan "On establishing the State Institution – Centre for the Implementation of the Stockholm Convention on persistent organic pollutants" from February 27, 2009;
- State program for the implementation of the concept of long-range plan for the development of the legislation of the Republic of Tajikistan in the agricultural sector and protection of the environment sphere for 2012 – 2015, approved by the Government of Tajikistan on the March 1, 2012;
- The procedure for identifying and collecting the statistics of the orphaned waste, approved by the Government of the Republic of Tajikistan, on November 2, 2012;
- "PROCEDURE, CONDITIONS AND METHODS OF USAGE, toxicity elimination, transportation, storage and disposal of industrial and domestic waste in Tajikistan" approved by the Government Decree from June 2, 2011, No.279, Prohibits: – burning garbage in containers, burning fallen leaves.
- "Regulations Of The Safe Disposal Of Drugs" Approved by Ministry of Health of the Republic of Tajikistan from December 16, 2002 No.370, defines the procedure of safe disposal of expired medicines. But in practice, there are no special incinerators for medical waste used in Tajikistan.
- The "Concept Of Environment Protection In The Republic Of Tajikistan", approved by the Government of Tajikistan, on December 31, 2008 No.645;
- Law No.760 «on environment protection» from 2 August, 2011;
- Code "On Administrative Offences";
- Criminal Code.

**Principles or strategies at the national level**

The basic principles of state policy in the field of environmental protection are provided in The Constitution of the Republic of Tajikistan that was adopted on 6 November 1994 and amended two times, in September 26, 1999 and June 22, 2003:

Article 13. Land, its entrails, water, airspace, flora and fauna, and other natural resources shall be owned by the state, and the state guarantee their effective use in the interests of the people.

Article 38. Everyone shall have the right to health care. Everyone shall enjoy free of charge medical assistance in the state medical establishments, within the framework of law. The state shall take measures aimed at protecting environment, developing mass sport, physical culture, and tourism.

Article 44.The protection of natural, historical and cultural heritage shall be the duties of everyone.



The “Concept Of Environment Protection In The Republic Of Tajikistan”, approved by the Government of Tajikistan, on December 31, 2008 No.645, describes the following main principle of the Concept:

- support at the government level the enterprises and organizations of all types of the legal entities, dealing with saving natural resources, energy conservation, recycling and disposal of wastes of production and consumption;
- reduction of the waste production and distribution of all types of wastes and conducting the monitoring of their storage;
- development the system of the state ecological monitoring;
- reduction, disposal and safe storage of wastes

Chapter II Specific Laws and Regulations that govern waste management	Sector	EU legislation	Republic of Tajikistan legislation
	General waste management	Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance), <i>OJ L 312, 22.11.2008, p. 3–30</i>	<ul style="list-style-type: none"> <li>• The Law No.1 “On the production and safe handling of pesticides and agrochemicals” from April 22, 2003</li> <li>• The Law No.44 “On production and consumption wastes”, from May 10, 2002.</li> <li>• The Law No.705 «on ecological information”, from March 25, 2011.</li> <li>• The Law No.707 “On ecological monitoring” from March 25, 2011.</li> <li>• The Law No.37 “On licensing of certain activities” from May 17, 2004.</li> <li>• The Law No.817 “On plant protection” from April 16, 2012.</li> <li>• The state ecological program of Tajikistan for the years 2009-2019, approved by the Decree No.123 of Government of Tajikistan, from February 27, 2009.</li> <li>• The Decree No.502 of the Government “about the national plan on the implementation of the obligations of Tajikistan according to the Stockholm Convention on persistent organic pollutants”, from October 1, 2007.</li> <li>• The Government Regulation No.94 “On medium-term implementation of environmental protection in Tajikistan for 2010 – 2012”, from February 27, 2010.</li> <li>• The list of foreign goods “that cannot be placed under the customs regime of disposal” approved by the Government on December 2, 2008 (No.607).</li> <li>• List of chemical and biological substances allowed for usage in the Republic of Tajikistan, from June 11, 2004.</li> <li>• The Administrative Code of Tajikistan.</li> <li>• The procedure for identifying and statistic of the orphaned waste”, approved by the Government, on November 2, 2012, (No.626).</li> <li>• “The procedure, conditions and methods of</li> </ul>

		<p>usage, toxicity elimination, transportation, storage and disposal of industrial and domestic waste in Tajikistan” approved by the Government Decree No.279 from June 2, 2011. Prohibits: – burning garbage in containers, burning fallen leaves.</p> <ul style="list-style-type: none"> <li>• “The regulations of the safe disposal of drugs” approved by Ministry of Health of the Republic of Tajikistan, December 16, 2002 (No.370), defines the procedure of safely disposal of expired medicines. But in practice, there are no any special incinerators for medical waste used in Tajikistan</li> </ul>
<i>Import/Export</i>	<p>Regulation (EC) No.689/2008 of the European Parliament and of the Council of 17 June 2008 concerning the export and import of dangerous chemicals, <i>OJ L 204, 31.7.2008, p. 1–35.</i></p> <p>Regulation (EU) No.649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals Text with EEA relevance, <i>OJ L 201, 27.7.2012, p. 60–106</i></p>	<p>There are no specific national legal acts in Tajikistan clearly prohibiting exports of hazardous wastes in accordance with the Basil Convention.</p> <p>But there are some acts in RT concerns the export of hazardous wastes. Such as:</p> <ul style="list-style-type: none"> <li>• RT joined the Agreement on control of transboundary movements hazardous and other wastes between States Members of The Commonwealth of Independent States dated from April 12, 1996.</li> <li>• Agreement on the coordination procedure for sanitary evaluation of potentially hazardous products imported to CIS countries. Agreement ratified by Majlisi Namoyandagon Majlisi Oli of the Republic of Tajikistan (Parliament) No.1246 of November 25, 2004.</li> <li>• The Law of RT “On Production and Consumption Wastes” dated May 10, 2002 No.44 only says that <b><u>import of wastes into the territory of the Republic with the aim of disposal is prohibited.</u></b></li> <li>• Regulation of the “Control over the export from Tajikistan of the chemicals, equipment and technologies, which have peaceful purposes, but might be used in development of the chemical weapons” from 12 of January 1996, No.32</li> <li>• The Law No.37 "On licensing of certain activities" from May 17, 2004, stipulates the following activities as a subject to licensing</li> </ul>
<i>Landfill of waste</i>	<p>Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste, <i>OJ L 182, 16.7.1999, p. 1–19</i></p>	<ul style="list-style-type: none"> <li>• The Law No.44 “On production and consumption wastes” dated from May 10, 2002</li> </ul>
<i>Incineration</i>	<p>Directive 2000/76/EC of the European Parliament and of the Council of 4</p>	<p>No specific legal act found</p>



		December 2000 on the incineration of waste, <i>OJ L 332, 28.12.2000, p. 91–111</i>	
	<i>Shipment of waste</i>	Regulation (EC) No.1013/2006 of the European Parliament and of the Council of 14 June 2006 on shipments of waste, <i>OJ L 190, 12.7.2006, p. 1–98</i>	<ul style="list-style-type: none"> <li>• The Law No.44 “On production and consumption wastes” states that Transportation of hazardous waste is allowed only when having the waste passport and by means of specially equipped vehicles</li> <li>• Government regulation No.314 “On approval of the rules on transportation of dangerous goods by vehicles”, from July 4, 2003, states that these rules have been designed by the Government of the Republic of Tajikistan with the purpose of ordering the traffic of motor vehicles transporting hazardous materials.</li> <li>• Government regulation No.314 “On approval of the rules on transportation of dangerous goods by vehicles” dated from July 4, 2003.</li> </ul> <p>The Law No.37 “On licensing of certain activities” stipulates the following activities as a subject to licensing</p>
<b>Chapter III Institution(s) involved in waste management (focus on pesticides)</b>	<p>The government body which is responsible the waste management is the <b>Committee of the Environmental Protection under the Government of the Republic of Tajikistan.</b></p> <p>According to the Regulation of the <b>Committee</b> approved on April 24, 2008 No.189 <b>Committee has the right to:</b></p> <ul style="list-style-type: none"> <li>- regulate the entry into the territory of the Republic of Tajikistan, as well as the transit of environmentally hazardous goods, biological production and production of secondary use, engineering, technology, waste and raw materials;</li> <li>- control import, manufacture and use of chemicals previously used techniques and technologies and substances that destroy the ozone layer</li> </ul>		

<b>Section III: Analysis of existing national waste management legislation</b>	
<b>Theme 1 Scope</b>	
<b>Theme 2 Definitions</b>	<p><b>Definition of waste-</b> "Waste – any substances, materials and items that are formed in the process of human life and activity and do not further use in the place of their formation or their location and from which their owner wants to get rid of, or has the intention to get rid by disposal".</p> <p><b>Definition of hazardous waste</b> – waste containing in its composition the stuff, which have one of the hazardous characteristics (such as toxicity, infectivity, explosiveness, flammability, high reactivity) and contains in such quantity and in such a type which can have directly or potential danger to the human health or the environment, both independently and when in contact with other substances".</p>
<b>Theme 3 Administrative and institutional structure</b>	One of the current lacks in Tajikistan in the field of waste management is the classification and categorization of the types of waste
<b>Theme 4 Licensing</b>	<p>The Law No.37 "On licensing of certain activities" stipulates the <u>following activities as a subject to licensing</u>:</p> <ul style="list-style-type: none"> <li>- <u>the activity on management of radioactive waste;</u></li> <li>- <u>the activities related to import and export, production, sale, use, transportation, storage, processing and disposal of radioactive substances;</u></li> <li>- <u>the activity on collection, use, storage, transportation and disposal of hazardous waste.</u></li> </ul> <p>According to article 9 of the Law "On licensing of certain activities", <u>the following documents are needed for the issuance a license</u>:</p> <ul style="list-style-type: none"> <li>- the application for the issuance of a license submitted by an individual entrepreneur or legal entity;</li> <li>- a copy of the document confirming the state registration of the license applicant;</li> <li>- the copy of the of the taxpayer identification number from the tax authority;</li> <li>- document confirming the payment of a license fee;</li> <li>- Information on the qualifications of employees of the license applicant.</li> </ul> <p><u>The following additional documents are required for obtaining a license</u>:</p> <ul style="list-style-type: none"> <li>- the conclusion of the State Sanitary and Epidemiological Surveillance;</li> <li>- the conclusion of the Fire Department;</li> <li>- the conclusion of Geology, in the case of impact of waste on ground water and minerals;</li> <li>- the positive conclusion of the state ecological expertise.</li> </ul> <p><u>The additional licensing requirements and conditions are</u>:</p> <ul style="list-style-type: none"> <li>- the Certificate issued to persons allowed to work on hazardous waste management, confirming their participation on training, on management of hazardous wastes;</li> <li>- the existence of waste disposal facilities, complied with technical standards and requirements necessary to carry out the licensed activity;</li> <li>- the existence of the measurements and control facilities, confirming compliance with the standards of permissible impact on the environment during the implementation of the licensed activity.</li> </ul> <p>According to the article 8 of the Law on license, the duration of a license is not less than 5 years. The duration could be extended for the same term.</p> <p>According to the article 14 of the Law on license the licensing authority can suspend the license in case of repeated violations or flagrant violation of license requirements and conditions.</p> <p>The suspension of the license also can be applied only in exceptional cases where it is necessary to prevent a danger to life or health of people, the onset of manmade disaster, causing irreparable damage to natural objects or to the environment and the prevention of these circumstances is not possible by other ways.</p>

	<p>The licensing authority shall give a time to the grantee of license for eliminating the licensee violations that led to the suspension of the license. This term may not exceed three months. If during this time the licensee fails to eliminate the violations, the licensing authority must apply to the court to revoke the license.</p> <p>The license could be revoked by a decision of court, upon application of the licensing authority in case if the infringement of the license requirements and conditions entailed damage to the rights and health of citizens, defence and national security, and to the cultural heritage of the people of the Republic of Tajikistan</p>
<p><b>Theme 5</b> <b>Transboundary movement, import/export</b></p>	<p>There are no any specific national legal acts in Tajikistan clearly prohibiting exports of hazardous wastes in accordance with the Basel Convention.</p> <p>But there are some acts in RT concerning the export of hazardous wastes, such as:</p> <ul style="list-style-type: none"> <li>- RT joined the Agreement on control of transboundary movements hazardous and other wastes between States Members of The Commonwealth of Independent States (April 12, 1996).</li> </ul> <p>Based on this Agreement the parties agreed to take measures to:</p> <ul style="list-style-type: none"> <li>- management and control of the import (export) or transit through their territories of hazardous and other wastes;</li> <li>- implement measures to ensure the environmental safety of transboundary movements of hazardous wastes and other wastes and promote interaction between the authorities responsible for their transportation;</li> <li>- timely response measures arising in the transport of hazardous and other wastes;</li> <li>- exchange of information on the development and implementation of new technologies and minimize sound waste;</li> <li>- an environmental impact assessment of agreements and contracts for the transport of hazardous and other wastes;</li> <li>- Implementation of monitoring compliance with the rules and regulations of Transboundary Movements of Hazardous Wastes and their Disposal;</li> <li>- establishment of appropriate checkpoints equipped with the appropriate technical means;</li> </ul> <p>This Agreement defines "hazardous waste" as waste (Annex 1 to this Agreement), which do not have the properties listed in Annex 2 of this Agreement, as well as waste as defined hazardous under the domestic law of the State of export, import or transit;</p> <p>Agreement on the coordination procedure for sanitary evaluation of potentially hazardous products imported to CIS countries. Agreement No.1246, ratified by the Majlisi Namoyandagon Majlisi Oli of the Republic of Tajikistan on November 25, 2004.</p> <p>the Law No.44 "On production and consumption wastes" only says that <u>import of wastes into the territory of the Republic with the aim of disposal is prohibited.</u></p> <p>According to the article 14 <u>any transboundary movement of waste for use as the recyclable materials is carried out only with a permit issued by the Committee for Environmental Conservation 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 RT.</u></p> <p>But there is no any procedure established by the government of Tajikistan for the transboundary movement of the waste.</p> <p>Also According to Regulation of the «control over the export from Tajikistan of the chemicals, equipment and technologies, which have peaceful purposes, but might be used in development of the chemical weapons» from 12 of January 1996, No.32the export, and also re-export from Tajikistan of chemicals, equipment, and also technologies with multiple applications cannot be carried out in to the states, violating prohibition on usage of the chemical weapons, established by the Geneva Protocol on prohibition of military use of suffocating, poisonous and other similar gases and bacteriological weapons, dated June 17, 1995. The requirements of the current Regulation extend on all subjects of economic activities under jurisdiction of the Republic of Tajikistan irrespectively of types of property.</p> <p>The present Regulation defines a complex of actions on control over the export (transfer, exchange) from Tajikistan of the equipment and technologies, which have peaceful purpose, but can be applied in development of the chemical weapon.</p> <p>The requirements of the current Regulation extend on all subjects of economic activities under jurisdiction of</p>

	<p>the Republic of Tajikistan irrespectively of types of property.</p> <p>The control of the export from Republic Tajikistan of the chemicals, equipment and technologies of double application envisages: preparation and delivery of the conclusion; licensing of the export; custom control and custom registration of export of such materials and technologies.</p> <p>Licensing of the export (transfer, exchange) from Tajikistan of the chemicals, equipment, technologies of double application is carried out in accordance with the current Regulation on any foreign trade activities, including direct industrial and scientific and technical communications, border trading, and goods exchange operations.</p> <p>Export (transfer, an exchange) of such materials and technologies is carried out only under the licenses, given out by the Ministry of economics and external economic relations of the Republic of Tajikistan.</p> <p>The license is given upon decision of the Government of Tajikistan on possibility of the export (transfer, exchange) of the chemicals, equipment, and technologies with multiple applications.</p> <p>In order to receive the permission for the export (transfer, exchange) of each type of the chemicals, equipment and technologies with multiple applications the exporter apply to the Government of Tajikistan, submitting the following documents: the application (statement) for the licensing, issued according to requirements of the Ministry of Economics and external economic relations of Tajikistan; the certified copy of the contract, the agreement, the contract on export (transfer, an exchange) of the chemicals, equipment, technologies of double application; the certified copy of the contract between the Tajik manufacturers and the exporter in the cases when the export of the chemicals, equipment, technologies with multiple applications is carried out through the intermediary; original documents containing the responsibilities of the importer or in case when such information is not available, final users if the importer is the intermediary, and also authorized state body of the country-importer</p>
<b>Theme 6 Economic Initiatives</b>	
<b>Theme 7 Transport</b>	<p>Articles 13 and 14 of the Law No.44 "On production and consumption wastes" dated from May 10, 2002, states that the <u>transportation of hazardous waste is allowed only when having of the waste passport and by means of specially equipped vehicles.</u></p> <p><u>Government regulation "On approval of the rules on transportation of dangerous goods by vehicles" dated from July 4, 2003, No.314 states that these rules have been designed by the Government of the Republic of Tajikistan with the purpose of ordering the traffic of motor vehicles transporting hazardous materials.</u></p> <p>Hazardous materials include substances and devices, which in the process of transportation, loading and unloading works and storage can cause explosion, fire and/or damage of vehicles, storage facilities and buildings, as well as death, injury, poisoning, burns, exposure to radiation and/or disease in humans and/or animals.</p> <p>Hazardous materials, in accordance with GOST 19433-88, are divided into 9 classes according to their chemical properties:</p> <ul style="list-style-type: none"> <li>Class 1 – explosive materials, which, by their chemical nature, can explode or cause fire, as well as pyrotechnic devices containing explosive substances.</li> <li>Class 2 – Gases compressed, liquefied, cooled and dissolved under pressure.</li> <li>Class 3 – volatile flammable liquids, liquid mixtures, as well as liquids containing solid matter (in dissolved or suspended state), which produce flammable vapours whose ignition temperature in closed space is 61°C or lower.</li> <li>Class 4 – flammable substances and materials (excluding those classified as explosive), capable of easy combustion from external flame sources, as a result of friction, moisture absorption, spontaneous chemical reactions, or as a result of heating.</li> <li>Class 5 – oxidizing agents and organic peroxides, capable of producing oxygen, sustaining combustion, or can cause spontaneous combustion and explosion in certain conditions or in mixture with other substances.</li> <li>Class 6 – poisonous and infectious substances capable of causing death, poisoning or disease if digested or upon coming in contact with skin and mucous.</li> <li>Class 7 – radioactive substances with specific activity of more than 0.002 mCi/g.</li> <li>Class 8 – caustic and corrosive substances that cause damage of skin, mucous, eyes and respiratory tract,</li> </ul>

	<p>corrosion of metals, damage to motor vehicles, facilities or other items in shipment, or cause fire in interaction with organic substances or some chemicals.</p> <p>Class 9 – substances with relatively low danger level in transportation, which are not related to any classes above, but require certain special treatment during transportation and storage.</p> <p>Transportation route is chosen by the company transporting hazardous materials. Transportation route is coordinated with the local body of the Ministry of Internal Affairs of the Republic of Tajikistan. To coordinate the transportation route of dangerous substances, the transportation company or a division of an industrial company must present the following documents at least 10 days before shipping:</p> <ul style="list-style-type: none"> <li>- Certificate about the vehicle being suitable to transport the dangerous substances;</li> <li>- Transportation route.</li> </ul> <p>The coordinated transportation route is valid for the entire duration of transportation of hazardous materials, up to six months. If any circumstances arise that require changing the agreed transportation route, the transportation company must repeat the coordination procedure for the new transportation route.</p> <p>Organization of vehicle movement for transportation of hazardous materials is performed in accordance with the motor traffic regulations and these Rules.</p> <p>Hazardous materials are transported by specialized vehicles, or by general-use motor vehicles specially equipped for this purpose.</p> <p>Drivers transporting hazardous materials are permitted to work independently only after special training in safe operation techniques, introductory and workplace briefing on safety rules and traffic regulations, a check of this knowledge by special committee and issuance of a special certificate (permit) allowing transportation of hazardous materials, as well as after passing initial (at time of recruitment) and subsequent regular medical examinations at intervals specified by law.</p> <p>Government regulation No.314 "On approval of the rules on transportation of dangerous goods by vehicles" dated from July 4, 2003, states that hazardous materials include substances and devices, which in the process of transportation, loading and unloading works and storage can cause explosion, fire and/or damage of vehicles, storage facilities and buildings, as well as death, injury, poisoning, burns, exposure to radiation and/or disease in humans and/or animals.</p> <p>The Law No.37 "On licensing of certain activities" from May 17, 2004, stipulates the following activities as a subject to licensing:</p> <ul style="list-style-type: none"> <li>- the activity on management of radioactive waste;</li> <li>- the activities related to import and export, production, sale, use, <u>transportation</u>, storage, processing and disposal of radioactive substances;</li> <li>- the activity on collection, use, storage, <u>transportation</u> and disposal of hazardous waste</li> </ul>
<b>Theme 8 Labelling requirements</b>	There is no information about this issue
<b>Theme 9 Packaging and containers</b>	There is no information about this issue
<b>Theme 10 Emergency procedures</b>	There is no information about this issue
<b>Theme 11 Disposal obligations</b>	<p>Adequate disposal facilities are not available in Tajikistan.</p> <p>Article 10 of the Law No.44 of the Republic of Tajikistan "On Production and Consumption Wastes" dated from May 10, 2002 states that <u>choosing the location for storage and disposal of waste is carried out on the basis of special (geological, hydrological and other) studies in coordination with the competent authority in the field of waste management having the positive conclusion of the state ecological expertise, the sanitary-epidemiological bodies and having the decision of the local authorities.</u></p> <p><u>Dumping of waste is prohibited</u> in cities and other settlements in the forest park, therapeutic areas in the</p>

	<p>catchment areas of ground water used for drinking and domestic purposes, as well as in areas of mineral deposits and mining (in the case of threat of mine safety).</p> <p>Dumping of waste is allowed only with permits issued by the authorized body in the field of waste management, as well as the bodies exercising state sanitary and epidemiological supervision.</p> <p>Art. 17 of the Law No.817 "On Plant Protection" from April 16, 2012 states that the procedure for disposal of pesticides is determined by the competent authority in consultation with the state authorities in the field of environmental and epidemiological control. For disposal of pesticides waste a <u>special storage</u> area should be used.</p> <p>Permit for the construction of special storage facilities, as well as for the <u>disposal</u> of pesticides waste, should be issued by an authorized state body in the sphere of environmental protection in coordination with the authorized state body of sanitary and epidemiological surveillance.</p> <p>Permit for the construction of special storage facilities, as well as for the disposal of pesticides waste, should be issued by an authorized state body in the sphere of environmental protection in coordination with the authorized state body of sanitary and epidemiological surveillance.</p> <p>They are no steps taken by Tajikistan to prevent pollution when managing hazardous wastes.</p> <p><i>There is no secondary legislation in Tajikistan, describing in detail the rules of storage and disposal of pesticides waste. This does not fully align with the International requirements.</i></p> <p>It is recommended that Tajikistan elaborates the rules of storage of pesticides waste stating the general requirements for the storage of pesticides waste, including specifications that storage must be safe in other words: no possible access for animals, but never built near hospitals, schools or shops, and not accessible for children or never be exposed to rain or other water damage.</p> <p>Article 24 of the Law No.1 of RT "On the production and safe handling of pesticides and agrochemicals" dated from April 22, 2003 says that disposal of obsolete and banned pesticides and agrochemicals, as well as their containers are carried out only by persons who have received special training in accordance with the laws of the Republic of Tajikistan.</p> <p>Methods of disposal of obsolete and banned pesticides and agrochemicals, as well as their containers should be developed by the Committee of the Environmental Protection under the Government of the Republic of Tajikistan and a specially authorized state body in the sphere of state sanitary and epidemiological supervision. But these methods do still not exist in Tajikistan.</p> <p>Also Article 12 of the Law No.44 of RT "On production and consumption wastes" states that Individuals and legal persons whose activities are related to the generation of hazardous waste are obliged to ensure the protection of the environment and the public from the harmful effects. But in practice this provisions do not work.</p> <p>The dumping of hazardous waste is allowed only in specially equipped facilities on the basis of permits issued. Individuals and legal entities engaged in the management of hazardous waste are required to keep records of hazardous waste in the way established by the state statistics and the authorized body in the field of waste management. According to article 15 the State control on waste management is carried out by an authorized body in the field of waste management, and by the local government authorities. Such body is the Committee of the Environmental Protection under the Government of the Republic of Tajikistan.</p> <p>According to Article 10 of the Law No.44, when disposal of waste taking place, there is a mandatory rule to conduct monitoring of disposal sites. The monitoring of disposal sites is conducted by the owner of the waste disposal sites in the manner agreed with the Committee of the Environmental Protection.</p> <p>Also the disposal of waste regulated by the "list of foreign goods that cannot be placed under the customs regime of disposal" approved by the Government on December 2, 2008 (No.607), which defines that disposal of the following goods is prohibited:</p> <ul style="list-style-type: none"> <li>- Goods prohibited from importation into the customs territory of the Republic of Tajikistan;</li> <li>- Radioactive and hazardous waste</li> <li>- Electricity, heat and other forms of energy;</li> <li>- Uranium and other materials and its products</li> </ul>
<b>Theme 12</b> <b>Incineration</b>	



<b>Theme 13</b> <b>Recording, monitoring, and reporting</b>	<b>Reporting and recording</b> <p>In Tajikistan, there is no comprehensive record database for waste management.</p> <p>The Law No.44 "On production and consumption wastes" stipulates the creation and maintenance the Cadastre of wastes in Tajikistan, but in practice this cadastre is not established and is not maintained</p>
<b>Theme 14</b> <b>Offences and penalties</b>	<p><b>According to the Administrative Code of Tajikistan:</b></p> <p>Article 239: Breach of environmental requirements during storage, transportation, usage, disposal of toxic industrial waste and production and consumption wastes entails the imposition of fines on individuals in the amount of from five to ten, on officials – from thirty to forty and legal entities from two hundred to three hundred index for the calculation.</p> <p>Article 269: Provisions prohibiting the use of land for the production of agricultural products contaminated with chemicals, pesticides, industrial waste and waste waters, are subject to fines on natural persons in the amount of from ten to fifteen and officials – from thirty to forty indicators for the calculation. (1 indicator for the calculations equal to 40 Tajik somoni or 9 USD)</p> <p>Article 281: Provisions establishing liability for violation of the rules of storage, transportation and use of agrochemicals and pesticides, are subject to fines on natural persons in the amount of from three to five and officials – from ten to fifteen indicators for the calculations.</p> <p>Article 147: Provisions prohibiting land contamination by chemical and radioactive substances, industrial wastes and sewage, bacterial and parasitic infestation by pests, are subject to fines on natural persons in the amount of from ten to twenty, on officials – from thirty to forty, and on legal entities – from one hundred to two hundred indicators for the calculations.</p> <p>Article 224: Pollutants into the environment in excess of the standards with or without permission, waste disposal are subject to fines on natural persons in the amount of from three to seven, on officials – from ten to fifteen, and on legal entities – from one hundred to two hundred indicators for the calculations.</p> <p>Article 240: Violation of environmental requirements when using of radioactive materials in the national economy and their disposal: Violation of environmental requirements during storage, transport, use in the national economy, and disposal of radioactive materials, toxic are subject to fines on natural persons in the amount of from five to ten, for officials – from thirty to forty and legal entities – from two hundred to three hundred indicators for the calculation.</p> <p><b>According to the Criminal Code of Tajikistan:</b></p> <p>Article 223 (Violation of safety rules when managing environmentally hazardous substances and wastes): Violation of safety rules, production, transportation, storage, disposal, usage radioactive, bacteriological, chemical substances or wastes if it created a threat of causing substantial harm to human health or the environment, shall be punished with correctional labour for a term not exceeding two years, or deprivation of liberty for up to three years, or imprisonment for a term up to two years.</p> <p>Article 228 (Spoiling/Damaging of land): soil contamination or poisoning by harmful products of economic or other activity as a result of violation of the rules of the management of pesticides, fertilizers, plant growth stimulants or other hazardous chemicals or biological substances during their storage, use, transport, as well as other spoiling of land which caused harm to human health or significant harm to the environment – shall be punished with a fine of five hundred to eight hundred minimum monthly wages (minimum monthly wages in Tajikistan is 200 TJ Somoni), or deprivation of liberty up to two years</p>
<b>Theme 15</b> <b>Official controls and inspection</b>	<p>Concerning a control functions over waste management: according to article 15 of the Law No.44 "On production and consumption wastes" from May 10, 2002:</p> <p><u>The Committee on Environmental Protection under the Government of the Republic of Tajikistan and the local government authority are the national authorities carrying out the control functions over waste management.</u></p> <p>According to article 15 of the Law No.44 "On production and consumption wastes"</p> <p>The state control over the waste management includes:</p> <ul style="list-style-type: none"> <li>- carrying out the control over compliance with the requirements of waste management legislation by the natural and legal persons, the detection of violations of these requirements, and undertaking the measures to remedy of detected violations;</li> <li>- carrying out the control over compliance with the requirements of waste management legislation by the</li> </ul>

	<p>natural and legal persons, including the compliance with the requirements of international agreements and treaties on the control of transboundary movements of hazardous wastes used as raw materials;</p> <ul style="list-style-type: none"> <li>- carrying out the control over the compliance with the environmental, hygienic, anti epidemic measures, sanitary and environmental rules, regulations, hygienic and environmental regulations on waste management;</li> <li>- carrying out the control over compliance with fire safety requirements over waste management;</li> <li>- carrying out the control over procedure of maintenance of prime records of wastes;</li> <li>- collection, processing and analysis of information over the waste management, conducting the assessment of their impact on the environment;</li> <li>- carrying out the control over reliability of the information submitted by the natural and legal persons and carrying out the control over their reporting on waste;</li> <li>- carrying out the assessment of existing productions, identification of opportunities and ways to reduce the volume and toxic level of waste, control over the full involvement of wastes into the economy as a raw material;</li> <li>- carrying out the control over the compliance of free access to information on waste management by the population;</li> <li>- bringing to responsibilities the individuals and entities for violating the law of the Republic of Tajikistan on waste;</li> <li>- taking the decision on restriction, suspension or termination of activities in the field of waste management, bringing the potential hazard to the environment and humans</li> </ul>
<b>Theme 16</b> <b>Research and development</b>	



#### Section IV: Information supplementing legal analyses – from other Experts

##### Topic 1 – Pesticides Manufacturing Industry

*Are there pesticides manufacturers in the country?*

Tajikistan doesn't have any pesticides manufactures in whole history. All pesticides in country were imported

##### Topic 2 – Management of Obsolete Pesticides Stocks

*Whether there have been carried inventory/storage/disposal activities regarding obsolete stocks?*

Yes, inventory field visits and data collection: data were collected in 2009/10 by Tauw as part of a World Bank project, and by FAO in 2013 available on website <http://psms.fao.org>. However these data are not accessible, but can be viewed by contacting the POPs Centre. Also the Ministry of Agriculture has access to these data.

Inventory data entry into PSMS: 2009 – till now (53 places), see also Part I, under 2. Inventory, 2.1 National/regional inventory updated. Detailed information can be found in Annex 2-6 of this report

*Who carried them out, and what are the results? Provide the list of activities in chronological order.*

See Part II, under 2.2 Data sources and existing inventories (only Obsolete Pesticides)

##### Topic 3 – Methods used for treatment of pesticides wastes

*What are the methods used for the treatment of pesticides wastes?*

See under Part II, 6. Disposal



Food and Agriculture  
Organization of the  
United Nations



## Section V: Disposal, Storage, Recycling and Recovery Facilities – practical information from other Experts

### Topic 1 – Disposal facilities

*Are there any disposal facilities in the country?*

None

*Are there created permanent facilities for the disposal of pesticides wastes or there are used ad-hoc methods and facilities in this respect?*

Tajikistan doesn't have any capacity for the disposal of pesticides wastes. Several times, was discussion about the possibility of the use of cement plants for the destruction of obsolete pesticides. However, at present this feature is not reflected in any of the available official documents. There are no plans for the construction of special facilities for the destruction of obsolete pesticides. However UNEP is working on a proposal for destruction of DDT waste at the Vakhsh burial site, which will be submitted to the GEF in 2016

### Topic 2 – Storage facilities

*Are there any storages of pesticides waste facilities in the country?*

The UNEP/GEF DTT constructed an Intermediate Storage Center (ISC) for 90 ton of safeguarded obsolete pesticides. Additionally adjacent to the ISC two containers are placed and have the capacity to store 20 tons each.

*Whether there are any pesticides waste final storage facilities constructed and operated in accordance with the environment standards?*

No

### Topic 3 – Recycling facilities

*Are there any recycling/re-use facilities in the country?*

Currently, there are no recycling/reuse facilities in the country. Only in Soviet times there was a system of reuse of containers used for pesticides

### Topic 4 – Recovery facilities

*Are there any disposal/destruction facilities for pesticides wastes or recovery facilities (especially for liquid and high concentration toxic)? Please offer examples*

No information

*In case if the country does not have such facilities what are the methods or actions used by the national authorities to fulfil this task?*

Looking for temporary storage until more funding comes available for final disposal

*Is there any foreign financial assistance?*

No

*Are the any mutual/bilateral agreements with international organizations or states that offered its assistance in this respect?*

No



Food and Agriculture  
Organization of the  
United Nations



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

**Section I: Benchmarking of current POPs management against international best practice**

**1. Institutional arrangements**

Responsibilities in the Republic of Tajikistan

*Inter-ministerial Steering Committee for Obsolete Pesticides established?*

No

*If yes, when is it established, and how many times does it meet per year?*

National Body Representation	Responsible Ministry	Contact person (name/contact details)	Activity and outcome	No. of reference/annex if needed
<b>SAICM focal point</b>	Ministry of Health and Social Protection of Population	Deputy Chief Sanitation Doctor, sanitation and epidemiologic surveillance, Mirzoev Azam Safolovich, 734025, 8 Chapaev str. Dushanbe, Tajikistan tel.: (+992)907-709-872 e-mail: <a href="mailto:azamdjon@mail.ru">azamdjon@mail.ru</a>	Initiative of Tajikistan and Kyrgyzstan for development of national systems of chemicals' classification and labelling with their eventual harmonisation with the Globally Harmonised System of Classification and Labelling of Chemicals (2009). Supported by the Trust Fund of the SAICM Quick Start Program. Initiative of Tajikistan and Belarus "Enhancing Capacity Building for the Development of the National Registers of Pollutant Release and Transfer in Two Countries in Transition: Republic of Belarus and Republic of Tajikistan under the Aarhus Convention on Access to the Information, Public Participation in Decision-making and Access to Justice in Environment Matters" (2010-2012). Supported by the Trust Fund of the SAICM Quick Start Program. The main results of the activities under the Project are: review of the existing national reporting system on pollutant releases and transfer; development of preliminary list of enterprises and pollutants according to the Annexes to the PRTR Protocol; preparation of the draft legal documents for the accession to the Protocol; Structure, database, web site of National PRTR; successfully tested and filled database of the National PRTR; several round tables, meetings, seminars for stakeholders and NGOs. Conducted case study on the strategic assessment of illegal pesticide trading. Implemented by Foundation in Support of Civil Initiatives (2008). In 2008 the Fund for Support	[1]



			of Citizens' Initiatives (FSCI) in Tajikistan analyzed the situation of DDT importation and use in the country	
<b>GEF Focal Point /Coordinating Unit</b>	Committee for Environment Protection	Chairman of Committee for Environmental Protection under the Government of the Republic of Tajikistan, Ibodzoda Hairullo 743034, 5/1 Shamsi str, tel.: (+99237)236-40-59 fax: (+99237)236-13-53 e-mail: <a href="mailto:muhit@hifztabiat.tj">muhit@hifztabiat.tj</a>	<p>GEF Focal Points play a critical coordination role regarding GEF matters at country level as well as serving as the liaison with the GEF Secretariat and Implementing Agencies while representing their constituencies on the GEF Council.</p> <p>The GEF Political Focal Points and Operational Focal Points have different functions, although the exact specifications of the two designations may vary from country to country. All GEF member countries have Political Focal Points, while only recipient member countries eligible for GEF project assistance have Operational Focal Points.</p> <p>GEF Political Focal Points are concerned primarily with issues related to GEF governance, including policies and decisions, as well as relations between member countries and the GEF Council and Assembly.</p> <p>GEF Operational Focal Points are concerned with the operational aspects of GEF activities, such as endorsing project proposals to affirm that they are consistent with national plans and priorities and facilitating GEF coordination, integration, and consultation at country level.</p> <p>Project Title: "Preservation and restoration of unique local wild plant species, together with communities residing nearby protected areas (PAs) of Kulyab in Khatlon region". The main goal of the Project: The preservation and restoration of endemic, rare and endangered plants, involving local communities located around PAs of Kulyab. The Project of SCO "Ganji Tabiat" made a significant contribution to the conservation of rare and endangered species, which are used by the local population as a food spices or herbs. Previously residents used to harvest these plants (some of them are listed in the <b>IUCN Red List of Threatened Species</b>), leading to damage of natural habitat and significantly reducing numbers of such plants: nowadays, the local population is able grow such plant species at their households. Environmental component of the project is particularly important, given that the planned activities were carried out next to the nature reserve Dashtijum and Childukhtaron reserve, where unique mountain ecosystems are under protection</p>	[2]

<b>Stockholm Focal Point/POP Centre</b>	Committee for Environmental Protection	Deputy Chairman of Committee for Environmental Protection under the Government of the Republic of Tajikistan, 743034, 5/1 Shamsi str, tel.: (+992 37) 236 40 59 fax: (+992 37) 236 13 53  email: <a href="mailto:sharipova_5959@mail.ru">sharipova_5959@mail.ru</a>	Republic of Tajikistan has ratified the Convention in 22 May, 2002. Republic of Tajikistan has ratified the Stockholm Convention in 6 December, 2006. Resolution of the Government of the Republic of Tajikistan Ref. No.502, dated 1 October, 2007 has approved National Implementation Plan to implement commitments of the Republic of Tajikistan on Stockholm Convention of UN to establish a POPs Centre. In 2009, based on the Resolution of the Government of the Republic of Tajikistan Reg.No.132 State Agency "Center for Stockholm Convention Implementation on POPs" has been established. Updating of National Implementation Plan taking into account new POPs has started in 2013 and will be available end of 2014.	[3] [4]
<b>Basel Focal Point</b>	Not ratified (in the stage of consideration by the Government of the Republic of Tajikistan)		OSCE Office project in Tajikistan on justification of necessity to join Basel Convention. A Working Group has been established to draft a report on the ratification of Basel Convention. Justification has been prepared and all documents have been submitted to the Government. Rules of utilization of wastes containing mercury have been developed by taking into account joining to the Basel Convention that were approved by the Resolution of the Government of the Republic of Tajikistan, RegNo.97, dated 3 March, 2011	
<b>Rotterdam Focal Point</b>	Not ratified		Tajikistan signed the Rotterdam Convention on 28-09-1998, but never ratified. The Committee for Environmental Protection under Governmental of Republic of Tajikistan drafts documents for the ratification of the Convention	
<b>FAO National Focal Point</b>		FAO Representation in the Republic of Tajikistan, Viorel Gutsu 44 Rudaki Avenue Dushanbe, Tajikistan tel: (+99248)701-14-80 email: <a href="mailto:FAO-TJ@fao.org">FAO-TJ@fao.org</a>	Implementation of FAO programs in Tajikistan Coordination of activities of all ongoing programs in the Republic of Tajikistan	
<b>EU/other project implementation units for hazardous waste</b>			In 2011, OSCE Office has implemented a project on collection of light bulbs (waste) containing mercury from population, legal entities, entrepreneurs, storage of the waste, transportation and utilization	[5]

			From 2011 Blacksmith Institute (USA) conducted a research to review presence of hazardous substance in the soil and water to make an inventory of toxic pollutions. More than 30 objects have been covered by inventory	
<b>Inter-departmental committees</b>	Interdepartmental Commission on Chemical Safety <b>Inter-Agency Coordination Committee on Ecological Statistics</b>  <b>National Coordination Committee on updating NIP</b>	Deputy Prime Minister  Chairman of the Committee Deputy Chairman of Committee for Environmental Protection under the Government of the Republic of Tajikistan, Sharipova Aihon Tairovna 743034, 5/1 Shamsi str, tel.: (+992 37) 236-40-59 fax: (+992 37) 236-13-53 email: <a href="mailto:sharipova_5959@mail.ru">sharipova_5959@mail.ru</a>	Complex ecological policy in sphere of regulation of hazardous chemicals, including POPs, responsible for implementation of unique state strategy and controlling of ecological statistics, elaboration of methods for monitoring of ecological statistics, coordination of elaboration criteria and evaluation of statistic ecological indicators, characterizing the ecological condition.  Coordinator of Stockholm Convention in the Republic of Tajikistan, on the level of Deputy Ministers of agriculture, health, industry and innovation, Ministry of Foreign Affairs, Ministry of Economic Development and Trade, NGO, Ministry of Justice and State Committee on Emergency and Civil Defense. Function is the coordination of activities on implementation of plan to update NIP	[4]
<b>Other national coordinating body</b>	Public agency "Center for Stockholm Convention Implementation" Committee for Environmental Protection under the Government of the Republic of Tajikistan	Center for Stockholm Convention Implementation Director – Abdusalim Juraev 734034, 5/1 Shamsi str. Dushanbe, Tajikistan tel.: (+99237) 880-80-82 fax: (+99298) 804-02-36 e-mail: <a href="mailto:popstj@mail.ru">popstj@mail.ru</a> <a href="mailto:abdusalim_juraev@mail.ru">abdusalim_juraev@mail.ru</a>	Implementation of provisions of Stockholm Convention included in the National Plan. Facilitation of the ratification process of the Basel and <b>Rotterdam</b> Convention. Organization and coordination of information activities on Stockholm Convention Prepare basis for the establishment of single centre for the implementation of three Conventions	[3] [4]
<b>National waste focal point</b>	State Dept. on supervision over land use and land management and waste management Committee of Environmental Protection under the Government of the Republic of Tajikistan	Head of the Department, Berdiev B. 743034, 5/1 Shamsi str, tel.: (+992 37) 236-40-59 fax: (+992 37) 236-13-53	<ul style="list-style-type: none"> <li>Organize development of the program on waste management and its implementation;</li> <li>Carry out control over the volume of formation of waste, develop measures and economic incentives targeted to decrease volume of waste formation, increase level of secondary use of waste or alternative use, decrease waste volume that object for waste burial;</li> <li>Control over collection, removal, burial, utilization and waste neutralization;</li> <li>Development of norms and other normative legal documents on waste management</li> </ul>	[6]
<b>PRTR Protocol</b>	Not ratified (in the stage of approval by the Government)	Deputy Chairman of Committee for Environmental Protection under the Government of the Republic of Tajikistan	Project "Development of Actions to Implement PRTR Protocols in two countries: Republic of Belorussia and Republic of Tajikistan" Initial version of National Database for the implementation of PRTR Protocol has been developed. A website has been established for	

		743034, 5/1 Shamsi str, tel.: (+992 37) 236-40-59 fax: (+992 37) 236-13-53	eight objects in test regime Justification has been developed, it was agreed upon with all state stakeholders, public discussions of Protocol were conducted with the participation of stakeholders, business and mass media	
--	--	--	---	--

**Other information:**



Food and Agriculture  
Organization of the  
United Nations



## 2. Inventory

If references needed please provide in the concerned Annex

### 2.1 National/regional inventory updated

*(latest update and methodology, e.g. National guideline/NIP/World Bank/UNEP/FAO toolkit)*

The latest national inventory of POPs has been conducted in January – May 2014. This activity was carried out by the “Center for Stockholm Convention Implementation on POPs” under the Committee for Environmental Protection under the Government of the Republic of Tajikistan under the Government of the Republic of Tajikistan in close cooperation with other state agencies, structures. Project GEF/UNIDO “Enabling Activities to Review and Update of National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants in the Republic of Tajikistan”.

Inventory has been conducted on the following spheres:

- electrical equipment containing PCB;
- POPs pesticides;
- inventory of unintentional POPs produced;
- inventory of new POPs.

The inventory information is still under verification. All materials will be published in May 2016

### 2.2 Data sources and existing inventories (only Obsolete Pesticides)

*(who, what, when, how, accuracy, validity?)*

GEF/UNEP Project GFL/2328-2761-4708 «Enabling Activities for the Development of a National Plan for Implementation of the Stockholm Convention on POPs in Tajikistan» had the following objectives:

The first National Plan for implementation of Stockholm Convention in the Republic of Tajikistan.

Inventory of POPs pesticides, **PCB**, inventory of unintentional POPs. Researches have been carried out from 2003 to 2006, using the methodology of **UNEP**. Coverage did not exceed 50% of all objects, its outcome served as basis for the drafting National Action Plan (NIP) to implement Stockholm Convention in the Republic of Tajikistan (2007).

- inventory of pesticides that have POPs properties;
- develop an action plan on liquidation of storage and wastes of POPs pesticides;
- organization of training for Working Group in the sphere of detailed inventory methods with use of the newest standard FAO Forms (PSMS);
- conducting of complex ecological researches in pesticides burial place for elaboration of suggestions on their further functioning or liquidation;
- destruction of forbidden and obsolete pesticides, including POPs-related ones, and their mixtures.

A World Bank funded pilot project “Technical Study of Obsolete Pesticides in Tajikistan” (World Bank, Project 100020592) 2009-2010 had the following objectives:

- to train a team of 10 people to be able to carry out a country wide inventory of pesticide storage sites including a limited soil survey;
- to present a repackaging strategy for obsolete pesticides and a remedial option for the contaminated soil at the storage sites;
- to present a rehabilitation option for the Vakhsh burial site and fifteen priority sites (Southern Tajikistan).

A World Bank funded project «POPs Pesticides Elimination, Mitigation and Site Management Project» (World Bank, Project No.TF 095085) had the following objectives:

- reduction of risks related to storage of pesticides having POPs properties in priority sites;
- decrease of farmers dependence on pesticides, having POPs properties;
- strengthening and enacting law that will regulate POPs issues.

Project GEF-UNEP “Demonstrating and scaling up sustainable alternatives to DDT for the control of vector-borne diseases in Southern Caucasus and Central Asia” (completed) had the following objectives:

- undertaking an integrated management approach for the participatory safeguarding of (on average) 60 tons of prioritized POPs stockpiles per country and the development of participatory disposal concepts (mainly DDT) as example for similar projects in other countries in the region;



- presenting measures to safeguard stockpiles; and
- communicating on the hazards of DDT to specific target groups.

Project GCP/RER/035/TUR “Inventory of Obsolete Pesticides (OPs) and Related Wastes in Countries of Central Asia, Caucasus and Turkey”

Within the project framework 34 sites were covered by inventory (including Vakhsh landfill) where 47 ton of obsolete pesticides are kept. Data on 21 sites have been entered into the web based FAO Pesticides Stock Management System (PSMS). There are stocks of 17.61 ton of DDT. In Sogd province, in 2005 and 2012, 6.175 ton of DDT has been seized during an attempt for illegal import from Uzbekistan.

Project GEF/UNIDO “Enabling Activities to Review and Update of National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants in the Republic of Tajikistan” had the following objectives:

- coordination mechanism and awareness raising. Coordination mechanism in place with stakeholders aware of new POPs risks and policy implications;
- inventories of new POPs and NIP review. Inventories of new POPs (and updating of initial 12 POPs) validated by relevant stakeholders;
- national capacities assessment and priority setting for management of new POPs. National capacities for new POPs management identified and priority of new POPs risk reduction options set by stakeholders;
- NIP formulation, endorsement and submission. Updated NIP endorsed and submitted by the Government to the Conference of the Parties to the SC.

Project “Storage of Pesticides in mother’s breast milk in toxic substance landfills” (WHO) 2010.

This survey was conducted by the Ministry of Health.

A survey has been conducted in settlements located around two toxic substance landfills of the Republic of Tajikistan. Experts from WHO were invited to carry out this survey and the major findings were that each kg of adipocyte of mother’s breast milk contained 8,500 gr of DDT. Information is not complete and still there is no formal report

### 2.3 First National Implementation Plan (NIP)

*(e.g. responsible, year, No. of sites, estimated tons, desk study/field surveys (% of total locations), POPs pesticides, PCB and Dioxins)*

Ministry of Agriculture and environmental protection (2004)

Desk and field surveys

POPs pesticides – 10,660 t (2005) (160 ton – pure)

2013 – 300,000 m<sup>3</sup> of contaminated soil out of which 220,000 m<sup>3</sup> contain pesticides 50 or more mg per kg of soil.

DDT – 24 ton

Tiodan (endosulfan) – 5.5 ton

PCB – 82.5 ton (2003)

Dioxin and Furans – 263 gr T3/year (2003)

There are 145 contaminated sites in NIP, 5 of which are serious and need urgent actions

### 2.4 NIP update (specifically on new POPs)

*(e.g. responsible, year, No. of sites, estimated tons, desk study/field surveys (% of total locations))*

Committee for Environmental Protection, in 2014, conducted preliminary inventory of New POPs in the Republic of Tajikistan. The outcome of inventory showed the following:

PFOS – total import – 33,410 kg in 2013, research methodology – desk study. Initial assessment has been carried out that covered about 30% of possible sites.

PBDE – total 6,200 kg, research methodology – desk study. Initial assessment has been carried out that covered about 30% of possible sites.

Lindane – there is no information but it has been proven that it was used 25 years ago. It was found in the soil during conducting analysis of landfills and landfills of unknown pesticides. Desk study was conducted. To identify an exact quantity, quantity of contaminated territory in this stage of inventory was impossible (because of desk study methodology and limited volume of work)

### 2.5 UNITAR Chemicals Profile



Food and Agriculture  
Organization of the  
United Nations



(e.g. responsible, data on organic hazardous waste available?)

No

## 2.6 National Pesticides/POPs inventory

(e.g. responsible, other inventories independent from Convention frameworks)

Responsible state body on pesticide management is the Ministry of Agriculture i.e. State agency on protection of plants and chemicalization of agriculture.

There are also two other regulating state bodies:

- Committee for Environmental Protection;
- Ministry of Health and social protection (sanitary epidemiological services).

None of the above-mentioned state bodies carried out independent research beyond Stockholm Convention on pesticides and POPs management

## 2.7 FAO PSMS inventory

### Inventory Implementation:

#### 1. inventory training

World Bank funded pilot project "Technical Study of Obsolete Pesticides in Tajikistan" (World Bank, Project 100020592) 2009-2010 – ten people – representatives of Committee for Environment Protection (Dushanbe and Khatlon), Ministry of Emergency, Khatlon Department of the Ministry of Agriculture;  
2011 project "FAO Turkey" – Committee for Environment Protection, Ministry of Health and Ministry of Agriculture – 3 people  
2012 project "FAO Turkey" and 40 EU projects – training and practical work – 3 people Ministry of Agriculture, Sanitation and epidemiological station, Committee for Environment Protection

#### 2. inventory work plan

to conduct inventory of 51 sites for the period of 1 February to 15 May, 2014 (warehouses of pesticides)

#### 3. inventory field visits and data collection

data were collected on all 51 sites, available on website <http://psms.fao.org>

#### 4. inventory data entry into PSMS

2009 – till now (53 places)

#### 5. inventory data validation – stocks and contaminated sites

37 warehouses went through validation of inventory and the other two are in the stage of validation

### Other information:



### 3. Environmental Assessment

If references needed please provide in the concerned Annex

#### 3.1. National requirements

*EIA= Environmental Impact Assessment etc.) + national experience*

Ministry of Agriculture. Assessment is carried out by the unit "Toxic laboratory control", major task of the assessment is to identify maximum permissible concentration of pesticides in agricultural products and also identification of maximum permissible concentration of pesticides in soil and water. The latest research was conducted in 1992. There were no further similar activities due to the absence of accreditation in the state standardization agencies because of outdated laboratory equipment. Besides that, it has to be mentioned that there is no basis for conducting research because methodology was developed under the USSR system by the institute that today is known as the L.I. Medved's Research Center of Preventive Toxicology, Food and Chemical Safety, Ministry of Health, in Ukraine.

Ministry of Health and Social Protection. Structural unit "Sanitation and epidemiological control" has "Industrial hygiene" unit. It carries out state surveillance over storage, transportation and use of pesticides. It has a laboratory "Industrial Laboratory" that conducts analysis of sanitation, chemical and toxic evidences of the agricultural products. (Republican laboratory, Dushanbe city laboratory and Sogd province laboratory is actually functioning. Other laboratories are not fully equipped due to the lack of qualified and trained staff and modern equipment).

Committee for Environmental Protection conducting researches within the framework of projects implementation and programs via State agency "Centre for Implementation of the Stockholm Convention on POPs" (projects have been mentioned before). Though there is a structural unit "Analytical control service" under the Committee for Environmental Protection that has to conduct research on identifying volume and quantity of pesticides and POPs in sites of environment

#### 3.2. International experience

*non-FAO – WB, UNDP CESA etc.*

Tauw Consortium: Tauw Company (The Netherlands), Milieukontakt International (The Netherlands), International HCH & Pesticides Association (Denmark), Witteveen+Bos Company (The Netherlands), Green Cross (Switzerland)

#### 3.3. Capacity government and private to develop

*Are there consultants or government trained people?*

State structures have minimum capacity for conducting research. For example, Committee for Environmental Protection and its structural units make assessment (approximately 40 persons)

#### 3.4. FAO stages in Environmental Assessment (EA) and Environmental Management Plans (EMP) experience from EMTK v 3 Yes

*(Environmental Management Tool Kit for Obsolete Pesticides)*

This activity is carried out by Milieukontakt International within the framework of FAO project (project No.42) GCP|RER|042|GEF "Lifecycle management of pesticides and disposal of POPs pesticides in Central Asia and Turkey" by Mr. Wouter Pronk (now Green Cross Switzerland, e-mail: [w.pronk@milieukontakt.nl](mailto:w.pronk@milieukontakt.nl), tel.: +31(205)31-89-30). Document "Obsolete Pesticides safeguarding and Disposal Environmental Assessment" is in the stage of drafting. The document is planned to be finalized within the frame of a follow-up project

**Other information:**



Food and Agriculture  
Organization of the  
United Nations



<b>4. Inventory and Environmental Assessment Management</b> If references needed please provide in the concerned Annex
<b>4.1. Responsible Organisation for Inventory and Assessment in place and operational</b> <ul style="list-style-type: none"> <li>Ministry of Agriculture, State agency "Protection of plants and chemicalization of agriculture";</li> <li>Ministry of Health and Social Protection, State sanitation and epidemiological control, unit "Industrial hygiene";</li> <li>Committee for Environmental Protection</li> </ul>
<b>4.2. All managers/coordinators/field people in place and operational</b> Ministry of Agriculture, State agency "Plant protection and chemicalization of agriculture" – 4 persons (Head and deputy head in Dushanbe and RRS, Sogd and Khatlon provinces, GBAO). Ministry of Health and social protection, State sanitation and epidemiological control, "Industrial hygiene" unit – 3 persons: head and two leading specialists (republican level). State Committee for Environmental Protection, State agency "Centre for Implementation of the Stockholm Convention on POPs" – 1 person (republican level)
<b>4.3. All Field teams established and operational</b> Ministry of Agriculture, State agency "Plant protection and chemicalization of agriculture" – 62 persons, one from each district (RRS – 9, Khatlon province – 29, GBAO – 4, Sogd province – 20); Ministry of Health and social protection, State sanitation and epidemiological control, "Industrial hygiene" unit – 30 people. There are 67 sanitation and epidemiological stations all over the Republic of Tajikistan but only in 15 stations there is a position of industrial doctor that supervises province and big cities and one more person – assistant
<b>4.4. All Inventory data management people in place and operational</b> State Committee for Environmental Protection, State agency "Centre for Implementation of the Stockholm Convention on POPs" – 12 people (republican level), national experts on conducting inventory of POPs and to draft Action Plan
<b>4.5. National/Regional Inventory updated</b> Ministry of agriculture, State agency "Plant protection and chemicalization of agriculture" – publishes quarterly report. POPs/pesticides turnover, circulation/storage and etc. – should be taken into account in the document but there are no resources and specialists. Report gives information on seasonal prognosis of area of distribution and plant diseases. Ministry of Health and social protection, State sanitation and epidemiological control, "Industrial hygiene" unit does not develop reports on pesticide management and POPs. State Committee for Environmental Protection, State agency "Centre for Implementation of the Stockholm Convention on POPs" have developed two reports on inventory of POPs (2003 and 2014)
<b>4.6. National Pesticides/POPs Inventory Established</b> State Committee for Environmental Protection, State agency "Centre for Implementation of the Stockholm Convention on POPs" have developed two reports on inventory of POPs (2003 and 2014 being finalized)
<b>4.7. Contaminated Sites Register</b> State Committee for Environmental Protection, State agency "Centre for Implementation of the Stockholm Convention" within the framework of ongoing researches (inventory of POPs, PSMS) have identified 51 sites
<b>Other information:</b>

<b>5. Safeguarding</b> If references needed please provide in the concerned Annex
<b>5.1. National projects</b> Not available
<b>5.2. International projects</b> WHO/UNEP “Demonstrating and scaling up sustainable alternatives to DDT for the control of vector borne diseases in Southern Caucasus and Central Asia”, October 2013 – September 2015. All activities have been finalised in July 2015. <ul style="list-style-type: none"> <li>- repackaging of 77 tones of DDT</li> <li>- awareness raising campaign</li> <li>- construction of an intermediate store</li> <li>- transportation to intermediate store</li> <li>- intermediate storage of repacked DDT. It should be mentioned that a National contribution is made by the Environmental Committee which is making available permanent guarding of the store (ongoing activity)</li> </ul>
<b>5.3. FAO projects</b> Not available
<b>Other information:</b> Based on the statement of the Ministry of Agriculture starting from 1992 there is a situation that the level of pesticides utilization has sharply decreased. Currently agricultural sector uses the minimum quantity of pesticides due to the high prices. That is why the most dangerous source of pollution is POPs that are stored in warehouses and burial sites

<b>6. Storage and transport</b> Packaging/Containerization/Storage/Transportation
<p><b>6.1. Transport regulations</b>  <i>In-country transportation planning competences available?</i>  (e.g. ADR/IMDG/RID/DOT compliant, route planning, scheme, vehicle inspection scheme, certified local contractors)</p> <p>The following documents are applied in the country to regulate transportation of pesticides and hazardous chemical substances:</p> <ul style="list-style-type: none"> <li>• Sanitary rules of storage, transportation and use of pesticides (pesticides in agriculture)</li> <li>• Instruction of safety measures by storage, transportation and use of pesticides in agriculture</li> <li>• State Standard (State Standard 14189-81) "Pesticides: rules of reception, taking of samples, packaging, labeling, transportation and storage"</li> </ul>
<p><b>6.2. Driver regulations</b>  <i>Driver registration</i></p>
<p><b>6.3. Storage regulations</b>  <i>(Seveso – off and on site emergency planning)</i></p> <p>The following documents are applied in the country to regulate storage of pesticides and hazardous chemical substances:</p> <ul style="list-style-type: none"> <li>• Instruction on preparation and burying of forbidden and unserviceable pesticides and their containers</li> <li>• Methodical recommendations for sanitary- epidemiological services on sanitary protection of water-reservoirs from contamination with pesticides after their use in agriculture</li> </ul>
<p><b>6.4. Storage capacity</b>  <i>Private or government, collection centers available, (e.g. responsible, No. of suitable collection centers identified)</i></p> <p>All warehouses that were used in the past for the storage of pesticides and POPs were privatized (now they are private properties). Thus, currently there are no warehouses in the Republic of Tajikistan that could be considered as formal pesticides POPs warehouses. An intermediate collection centre for POPs pesticides has been constructed in June 2015 on the territory of Vakhsh adjacent to pesticides landfill with a capacity of 90 tones</p>
<p><b>6.5. Incident reporting and accidents</b></p> <p>There were no such cases. Besides that it was impossible to find rules and sequence of actions in emergency cases</p>
<p><b>Other information:</b> Ministry of agriculture, State agency "Plant protection and chemicalization of agriculture" is drafting the following normative legal documents: "Instruction on carrying out state phytosanitary control", "Instruction on safe use, storage and warehousing of pesticides in agricultural production", "Rules of conducting measures to control extremely hazardous organisms", "Rules of decontamination of pesticides", "Phytosanitary norms, forms of phytosanitary accounting and also rule for submitting phytosanitary account form. All documents are in the stage of agreeing upon with other stakeholders, expectation date for the approval of documents is 2015-16.</p> <p>And also based on the newly adopted law "On permit system" – methodology of pesticides destruction is developed by the State sanitation and epidemiological control under the Ministry of Health and social protection. Currently, the drafting of the methodology is ongoing</p>

<b>7. Disposal</b> Note: Map 7 (for benchmarking)
<b>7.1. National experience</b> No <b>Technology selection</b>  <b>Transboundary transport under Basel Convention</b>  <b>National transport</b>  <b>Disposal capacities in Country</b> <i>(e.g. type and number of disposal facilities, (landfill/destruction) permits, quality and standards applied (national/international), ownership (public/private), contact details)</i>  <b>Project examples</b> <i>(e.g. name project, tons, year, landfill or destruction facility, responsible authority (if possible, contact details))</i>
<b>7.2. International experience</b> No <b>Technology selection</b> <b>Transboundary transport under Basel Convention</b> <b>National transport</b>
<b>7.3. Experience with FAO</b> No
<b>Other information:</b> There is no experience in destruction of pesticides and POPs in the Republic of Tajikistan. The available measure, currently, is containment/burial of materials that in future would be destroyed. In the course of conducting research, representatives of the Ministry of Health and social protection, Ministry of agriculture and Committee for Environment Protection have a common position on impossibility of pesticides destruction on the territory of the Republic of Tajikistan. There were ideas that the most optimal version is to wait for the construction of such plant in Kazakhstan and only after that to export pesticides for destruction. The major concern is the issue of transportation over long distances and over mountain ranges is very dangerous due to possible accidents and crossing of borders because Tajikistan has not ratified Basel Convention yet and the country does not have experience in transportation of hazardous waste abroad for destruction

<b>8. Containers</b>
<p><b>8.1. National experience</b>  Based on the statement of the Ministry of Agriculture of the Republic of Tajikistan there is no accounting and management of usage of containers after using for pesticides. There is no official information on this issue. Informally very often plastic containers are used with 2 to 5 litres capacity. Such containers are usually used commonly or they are thrown away on the landfill.</p> <p>There are single cases when pesticides provided under humanitarian aid to the Ministry of Health and social protection by Global Fund on malaria, TB and HIV/AIDS control in containers but containers are returned to and utilized in the stove of warehouses. It was impossible to find out about utilization technology</p>
<p><b>8.2. International experience</b>  <i>e.g. Priorities on containers in NIP Action Plan</i>  No</p>
<p><b>8.3. FAO supported plan</b>  No</p>
<p><b>8.4. Amount and type of empty containers/packaging materials?</b>  <i>(e.g. materials recycling in types, amounts)</i>  There is no reliable information. Only incidental information has been collected in the NIP in 2003:  From Section II, part 1.4: Empty container of 42.5 tones – empty small and middle size of containers in warehouses and population of the Republic of Tajikistan</p>
<p><b>8.5. Collection Centres for empty containers?</b>  <i>(e.g. Quantity of centres, responsibility, compliant with FAO guidelines)</i>  There are no such centres in Tajikistan</p>
<p><b>Other information:</b></p>



**Section II: General overview of POPs and other hazardous waste data**

Info from Ministry of Commerce or Ministry of Industry or Ministry of Environment/Natural Resources and Ecology)

Category	Explanation to figures	Annually produced waste	Legacy waste	References/ Annex
		Volume, tonnes/year	Volume, tonnes	
Summary for all waste streams				
A. Agricultural chemical waste: (see also parts already been filled in in the benchmarking section)	Based on the data of the Ministry of Agriculture, State Agency “Plant protection and chemicalization of agriculture, there is no control over chemical wastes in the agricultural sector”. 1,100 tons of pesticides were imported in 2013 but this figure does not show the contrabanda, smuggling that exceeds several times the official data! Control on imported pesticides is weak (there is no accounting on group or name of pesticides etc.). Based on the informal information the level of agricultural pesticide waste is very low. The major reason for that is the cost and price of pesticides and aspiration of customers to buy a minimum quantity of pesticides	No official information available	No official information available	[7]
1. Obsolete pesticide waste				[7]
2. POPs pesticide waste: <i>aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene (HCB*), mirex, toxaphen, chlordane, alpha hexachlorocyclohexane (a-HCH<sup>1</sup>)*, beta hexachlorocyclohexane (b-HCH)*, lindane, pentachlorobenzene*</i>	It is impossible to quantify the volumes of POPs pesticides waste. There are large quantities of DDT in the two main landfills Vakhsh and Kanibadam and the mini-sites that are directly related to teh pesticides stores. It has only been possible to make a very rough estimate of the <b>obsolete pesticide waste and related quantities of contaminated soils</b> , as indicated under 1. During the NIP update in 2014, a number of sites have been inspected and about 24.0 tons of DDT and 5.5 tons of <b>tiodan (endosulfan)</b> were found, but these amounts are not presentative for any total quantities		Not possible	[7], Annex 2-6

<sup>1</sup> HCH is often used in Russian as HCCH.

<b>3. New pesticides waste (incl. fake (counterfeit) pesticides)</b>	There is no information	No info		
<b>4. Empty containers waste</b>	Empty containers – empty small and middle size of containers in warehouses and with population of the Republic of Tajikistan: Contaminated materials – 24 tones DDT are not listed here under 2, but are not presentative for any total quantities		42.5	[7] Annex 2-6
<b>5. Contaminated sites</b>				
<b>a. Burial sites (polygons)</b>	There are 3 main burial sites; 1. <i>Vakhsh landfill</i> : 1a. Waste 1b. Contaminated soils 2. <i>Kanibadam landfill</i> a. Waste approximately: Swiss financed Tox Care project with Milieukontakt and IHPA estimate 4,000 tons (2013) Based on the latest information obtained in the Tox Care project for this report a quantity of 4,000 tons has been used here		4,000  199,500  4,0000	[4], [9] Annex 2-6  [4], [7], [9], [11]
<b>b. Storage sites</b>	The issue of the storage sites cannot be considered on as a stand-alone issue. As a lot of the stores have been illegally emptied over the years, they are closely related to so-called mini-landfills, where most of the materials from the stores have been disposed.  Total for Tauw and FAO investigations Stocks in Stores, OPs Stocks: Liquids Stocks in Stores, OPs +Mixed rubble/soil Stocks in Stores, Cont soils Stocks in Stores Empty packaging OPs Burials Burials Contaminated soil		28.8  249.9 100.8 6.8 5,613.5 12,226.5	[4], [9] Annex 2-6  Listed totals are taken from Annex 6 that summarizes all quantities from the implemented projects
<b>c. Usage sites</b> (airfields, formulation plants etc.)	There is no information			

B. Industrial chemicals:				
<b>1. POPs</b> a. PCBs, HCB*, hexabromobiphenyl (HBB), hexabromodiphenyl ether and heptabromodiphenyl ether, pentachlorobenzene*, perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride, tetrabromodiphenyl ether and pentabromodiphenyl ether (penta-BDE) b. brominated industrial chemicals c. Fluorinated industrial chemicals perfluorooctane sulfonyl fluoride (PFOS) and its salts and perfluorooctane sulfonyl fluoride (PFOSF)	a. PCBs – 144,904 kg Perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride – 33,410 kg Tetrabromodiphenyl – 1,222.78 kg Pentabromodiphenyl – 2,149.13 kg Hexabromodiphenyl – 18.53 kg Heptabromodiphenyl – 296.43 kg PBDE in electric and technical equipment – 2,494.74 kg Total a. = 184,495.61 kg b. No info c. No info		184,495.61 kg No info No info	[7]
<b>2. Contaminated sites</b> e.g. Contaminated containers, transformers and equipment	24 transformers	3,206 condensers		[7]
<b>3. Oily wastes</b> e.g. non-POPs production waste, lagoons of sediments and sludges, solvents, waste lubricating oils				
<b>4. Inorganic wastes</b> Solid, Liquid and sludge inorganic waste (often in many country with mining activities and metal industries)				
C. By-products				
<b>1. Unintentional POPs</b> Dioxins: Polychlorinated dibenzo-p-dioxins (PCDD) and Polychlorinated dibenzofurans (PCDF) and PCBs. <u>Indicate sources like</u> Pulp and paper production, Chlorinated inorganic chemicals, Chlorinated aliphatic chemicals, Chlorinated aromatic chemicals, Other chlorinated and non-chlorinated chemicals, Petroleum industry, Textile production, Leather refining <u>Contaminated Sites and Hotspots:</u> e.g. Sites used for the production of chlorine, Production sites of chlorinated organics, Application sites of PCDD/PCDF containing pesticides and chemicals, Use of PCB, Use of chlorine for production of metals and inorganic chemicals, Waste incinerators, Metal industries, Fire accidents, Dredging of sediments and contaminated flood plains, Dumps of wastes/residues from source	Unintentional POPs – 300 g TEQ/year (out of which category “generation of heat and electric energy” – 279 g TEQ/year High temperature burning of wastes – 0.008 g TEQ/year production of ferrous and nonferrous metal – 1.944 g TEQ/year <u>generation of thermal and electric energy – 279.407 g TEQ/year</u> production of products from mineral raw materials – 0.621 g TEQ/year transport – 0.530 g TEQ/year uncontrolled burning processes – 8.755 g TEQ/year production of chemical and			[7]

<i>groups, Kaolin or ball clay sites</i>	consumer goods – 0.210 g TEQ/year miscellaneous – 6.150 g TEQ/year removal – 2.753 g TEQ/year identification of potential hot spots – 0.000 g TEQ/year			
<b>2. a-HCH*, b-HCH*</b> ( <i>being generated from the Lindane production</i> ) and <b>pentachlorobenzene*</b>	There is no information			
<b>3. HCB*</b> generated from PVC production and rubber tyres production				
<b>D. Petroleum wastes</b> Tarry and bituminous wastes, still bottom waste (from Distillation plants)	No information			
<b>E. Inorganic wastes</b> Liquid and sludge inorganic waste Solid inorganic waste	No information			
<b>F. Health Care Risk Waste</b>	No information			
<b>Summary volumes</b>				
<b>Estimate of total hazardous waste market (watch need tonnes/year)</b>	There is no summarized official information			
<b>POPs waste volume</b>	There is no official information			
<b>Other information added to this table:</b> <ul style="list-style-type: none"> <li>- Data are insecure and originally based on the original NIP and NIP update, which is however not yet public.</li> <li>- Further are data of Vakhsh burial sites, stores and several mini landfills based on the World Bank Project implemented in 2009/10 by the Tauw Consortium. See under 8. Details on the quantities have been listed in Annex 2-4. It is also important to consider the change of the situation due to frequent activities of waste mining at the Vakhsh site.</li> <li>- Data on the quantities in the storages in the other part of the country are based on the national inventory from 2013, Taken from FAO Project: Inventory of Obsolete Pesticides in Tajikistan Initiative for Pesticides and Pest Management in Central Asia, Azerbaijan and Turkey, GCP/RER/035/TUR, 2012, which is compiled in the FAO PSMS database. Information can be obtained at the POPs Centre. In Annex 5 the list of sites and volumes are listed.</li> <li>- The data for the Kanibadam burial site have not been verified by detailed investigations. The first data have been collected based on historical information during the NIP. However afterwards based on activities of the Swiss ToxCare project these data have been adapted accordingly. See under 11</li> </ul>				
<i>*HCB, a-HCH, b-HCH and pentachlorobenzene an occur as pesticide, by –product and industrial chemical Please note that nuclear/radioactive waste will not be considered for this overview!</i>				

Section III: Existing and planned treatment options for POPs pesticides, obsolete pesticides and related hazardous wastes, contaminated land				
Type of plant or technology	Address/location	Contact person (name/contact details)	Brief summary of technical data (treatment capacity, <u>permit for treatment of types hazardous waste, permit info, date permit</u> )	No. of reference /annex
<b>1. Existing plants</b> <i>e.g. existing and functioning hazardous waste landfills (polygons) or soil treatment plants</i>				
1. Private owned				
2. Government owned				
<b>2. Potential plants</b> <i>e.g. existing modern cement kilns and collect all data, photos, schemes, interest of companies to deal with OPs and POPs waste and contaminated soil destruction) Details include in Annexes</i>				
1. Private owned	Open Joint Stock Company "Huaxin Gayur Cement"	Khatlon province, Yavan district Director – Gulumov A.A. Deputy director – Sheraliev Mirzo e-mail: <a href="mailto:mirzo65sement@mail.ru">mirzo65sement@mail.ru</a> Tel. 93-888-81-11	Horizontal rotating kiln production capacity is 1,000,000 ton (actual performance 50%-60%). Impulse filter, cyclone battery	[8]
	Isfara Cement Plant (projected)	Sogd province, Isfara	Shaft furnace Horizontal kiln/capacity 1,200,000 ton impulse filters cyclone battery	
2. Government owned	Dushanbe cement plant "Tajikcement"		Horizontal kiln/capacity 1,200,000 tones	
<b>3. Planned facilities</b> <i>Government and or privately planned new hazardous waste facilities e.g. for treatment of oil waste in oil and gas industry</i>				
1. Private owned				
2. Government owned				
<b>4. Planned and/or implemented pilot plants</b> <i>e.g. as part of research programmes in cooperation with donors/universities/research institutes pilot plants that are being tested for hazardous waste and soil</i>				
1. Private owned				
2. Government owned				

<b>5. Existing and/or planned empty container (plastic and or steel) recycling facilities/initiatives</b> Steel recycling e.g. at existing steel industry and plastic at existing plastic industry				
<b>1. Private owned</b>				
<b>2. Government owned</b>				
<b>6. Any other information related to important market players in this field</b> <i>List names of the major market players with address and main address/location, Contact person (name/contact details) and indicate their main interest</i>				

Section IV: Transportation logistics				
1. Assessment of various transport alternatives from main stockpile locations (indicate large locations/or regions with more than 500 t separately to the existing/planned treatment facilities incl. cost estimate)				
Treatment facility in country and/or in foreign countries	Stockpile region/location	Transport method/alternatives – distances Rail-Road-waterway or combination of them Indicate main ports/railway stations etc. and supply maps where possible	Cost indications Problems to be expected	No. of reference /annex if needed
1. In country 2. In foreign country				
1. In country 2. In foreign country				
2. Assessment of possible storage networks: waste transfer stations e.g. at main railway stations or at existing landfills (polygons) or Waste handling stations <i>List and describe existing stations with required details</i> No				
3. Assessment of transport capacity <i>Private owned and government owned specialized and licensed transport companies for hazardous waste transport (e.g. ADR/IMDG/RID/DOT compliant, route planning, scheme, vehicle inspection scheme, certified local contractors) Describe here, if not already covered under I. Benchmarking under 6. Storage and transport and 7. Disposal</i> No. License for transportation is issued by Licensing department of Committee of Environmental Protection. Currently such licenses have not been issued.				
4. Reference to the requirements of the Basel Convention (+ previous) experiences made with international export Implications of custom facilities <i>Describe Cases/experiences that country have been made with international exports, not already covered under I. Benchmarking under 7.2</i> <i>International experience Indicate year and location (country) where transported from and where to and authorities involved and kind of waste. Briefly describe cases</i>				
Case 1:				
Case 2:				

## Summary sheets on findings

### - Identify the gaps in information

Currently, assessment of Obsolete pesticides has been carried out in the Republic of Tajikistan by taking into account quantity and the site location. The country needs to develop National Clean-up Plan for sites contaminated with pesticides and for the destruction of Obsolete pesticides that will be detailed and answer to the following questions:

- which state agency would be responsible and manage the whole process of POPs utilization;
- development of measures to prevent the creation of new obsolete pesticides;
- identification of new standards related to storage, transportation, repackaging and utilization that would be in line with opportunities of state agencies and private companies in the Republic of Tajikistan;
- taking practical actions and campaigns on destruction of obsolete pesticides in the Republic of Tajikistan.

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 intersectoral coordination (Committee for Environmental Protection, Ministry of Agriculture, Ministry of Health and Social Protection, Emergency Committee and Civil Defense).

In spite of the fact that there is a law, additional documents (bylaws, 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 warehouses for temporary storage, prepare special transport, train specialists and develop destruction plans.

Destruction of POPs and obsolete pesticides, according to senior officials' ideas, is related to the transportation abroad because the Republic of Tajikistan does not have a real opportunity to construct a plant for the destruction of pesticides (economically it is not profitable and existing plants have no capacity to modify their production).

The issue of control and conducting researches are the most urgent ones. In spite of the fact that state agencies (Committee for Environmental Protection, Ministry of Agriculture, Ministry of Health and Social Protection, Emergency Committee and Civil Defense) have laboratories to conduct analysis, the actual capacity however is very low (lack of qualified staff, equipment and financial resources)

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

Destruction of POPs and obsolete pesticides is possible in dedicated plants of other countries. Currently, it is more reasonable to clean contaminated areas, repackaging of POPs and obsolete pesticides and store temporary. Further destruction will be possible if in Kazakhstan a plant for the destruction of POPs will be constructed. There are no other options for the time being





## REFERENCES

References	
With normative legal acts of the Kyrgyz Republic in the field of environmental protection can be found here <a href="http://www.nature.kg/lawbase/index.htm">http://www.nature.kg/lawbase/index.htm</a>	
Refer. No.	Document name
[1]	A Letter from SAICM Secretariat to the Government of the Republic of Tajikistan on agreeing upon the candidacy of Mr. Mirzoev A.S. for the position of National Coordinator of the Republic of Tajikistan to SAICM
[2]	Annual report of GEF activities in the Republic of Tajikistan
[3]	Based on the Resolution of the Government of the Republic of Tajikistan, Reg No.132, a state agency "Centre for the Implementation of Stockholm Convention on POPs" has been established
[4]	National implementation plan of the Republic of Tajikistan on Stockholm Convention on Persistent Organic Pollutants See <a href="http://www.pops.int/%5C/documents/implementation/nips/submissions/NIP_Tajikistan.pdf">http://www.pops.int/%5C/documents/implementation/nips/submissions/NIP_Tajikistan.pdf</a>
[5]	Report of OSCE Office activities in the Republic of Tajikistan For example last OSCE annual Report 2013, you can find at <a href="http://www.osce.org/secretariat/116947?download=true">http://www.osce.org/secretariat/116947?download=true</a>
[6]	Resolution of the Government of the Republic of Tajikistan Reg No.189 "On Committee of environmental protection regulation under the Government of the Republic of Tajikistan"
[7]	Draft of Preliminary report on POPs inventory in the Republic of Tajikistan (2014) (Official version will be published in, 2016)
[8]	Roster of industrial enterprises of the Republic of Tajikistan, <a href="http://www.stat.tj/en/catalog/">http://www.stat.tj/en/catalog/</a>
[9]	Report of project "Obsolete pesticides technical study in the Republic of Tajikistan, World Bank, project 100020592, Tauw bv ". The project was implemented by the Consortium Tauw, 2010. A copy of the report is available for viewing at the POPS Centre. The inception report of 2009 of this Tajikistan mission however is available at: <a href="http://milieukontakt.net/en/wp-content/uploads/2009/08/r003-4640777bff-beb-v01.pdf">http://milieukontakt.net/en/wp-content/uploads/2009/08/r003-4640777bff-beb-v01.pdf</a>
[10]	Report of GEF/WB project "Elimination of pesticides with POPs characteristics, risk reduction and management of storage sites", 2010-2011
[11]	OBsolete PESTICIDES SITES IN TAJIKISTAN – FROM RISK ASSESSMENT AND INVENTORIES TO PARTIAL AND FINAL REMEDIATION: PROJECT RESULTS AND FUTURE PLANNING, <sup>1</sup> Jutz M.Th., <sup>2</sup> Pronk W., University of applied sciences, North Western Switzerland, Milieukontakt International, the Netherlands, 13th HCH & Pesticides Forum 2015 – Zaragoza, Spain. Print under preparation



## ANNEXES

**Annex 1: Terms of Reference for Consultant/PSA for Technical assessment of the management of obsolete pesticides and POPs waste and soil contamination in Belarus within the framework of a Disposal Study for Obsolete Pesticides in the Former Soviet Union**

**Annex 2: Summary of facts, (from Tauw Consortium, World Bank project 2010)**

**Annex 3: Kathlon storage sites: table with quantities of obsolete pesticides and contaminated soils (from Tauw Consortium, World Bank project 2010)**

**Annex 4: IHPA's interpretation of Kathlon storage sites: table with quantities of obsolete pesticides and contaminated soils (from Tauw Consortium, World Bank project 2010)**

**Annex 5: Taken from FAO Project: Inventory of Obsolete Pesticides in Tajikistan Initiative for Pesticides and Pest Management in Central Asia, Azerbaijan and Turkey, GCP/RER/035/TUR, 2012, Annex 1: Overview of sites with obsolete pesticides in Kurgantube zone**

**Annex 6: Overview of all OPs and related contaminated soils/rubble/empty packaging in Tajikistan, as used in Part II, Section II: General overview of POPs and other hazardous waste data**



Food and Agriculture  
Organization of the  
United Nations



**Annex 1: Terms of Reference for IHPA for Coordination of a Disposal Study for Obsolete Pesticides in the Former Soviet Union (only in English)**



**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS**  
**Terms of Reference for Consultant/PSA**

<b>Job Title</b>	Coordination and implementation of a Disposal Study for Obsolete Pesticides in the Former Soviet Union		
<b>Division/Department</b>	AGPM		
<b>Programme/Project Number</b>	GCP/RER/040/EC		
<b>Location</b>	Regional		
<b>Expected Start Date of Assignment</b>	1 June 2012	<b>Duration</b>	1 year
<b>Reports to</b>	Kevin Helps	<b>Title:</b>	Coordinator, Senior Officer, Obsolete Pesticides

**GENERAL DESCRIPTION OF TASK(S) AND OBJECTIVES TO BE ACHIEVED**

The EC/FAO project GCP/RER/040/EC looks to develop capacity for management of hazardous wastes through the example of obsolete pesticides and POPs. There is an estimated 200,000 tonnes of these materials known to be affecting the Russian Federation, countries of the Eastern Neighbourhood (Armenia, Azerbaijan, Belarus, Georgia, Moldova and Ukraine) and the Central Asian Countries [CACs] (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan). Much of the previous work on disposal of waste from these countries has looked to export thousands of tones 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 CACs to facilities in Europe makes the option of finding a local solution appealing based on risk management and cost considerations. Under the project a study of capacity to treat this material is to be commissioned. The Coordinator for the Disposal Study will for the 12 project countries:

- i. Review of existing policy framework for the management and elimination (including inventory, assessment, and transport) of POPs and obsolete pesticides in line with the requirements of the respective EU Directives/Stockholm Convention;
- ii. 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 per country
- iii. Review of existing agricultural policy framework on the linkage to fulfillment of environmental obligations such as requirements for the management of contaminated empty containers/packaging
- iv. Review of existing and planned treatment options for POPs pesticides, obsolete pesticides and related hazardous wastes, contaminated empty containers and contaminated land;
- v. 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.

- vi. 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. To be completed with due reference to the requirements of the Basel Convention.
- vii. 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;
- viii. Review existing country POPs data (Obsolete Pesticides 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 will be collated per 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 obsolete pesticides, distribution and quantities of contaminated land and contaminated containers;
- ix. Assess status of recycling options for empty containers or already planned or ongoing programs and initiatives;
- x. Prepare country summary sheets on findings and identify the gaps in information;
- xi. Compile report of study findings, including recommendations for filling the information gaps.

The study will be undertaken in countries and through desk research as appropriate and will be implemented with the support of thematic international experts and national experts to be recruited as sub-contractors to the Coordinator of the Disposal Study. The coordinator will prepare draft terms of reference for all consultants within 2 months of the start of the study which will be approved by the Regional Coordinator of project GCP/RER/040/EC at FAO before final recruitment is made. All information collected and assessments conducted will (if possible) be verified by competent national authorities in order to seek ownership and support for further project activities.

The working language is English and some interpretation and document translation is foreseen.

#### KEY PERFORMANCE INDICATORS

##### Expected Outputs:

- i. Summary report of existing policy framework for the elimination and management of POPs and obsolete pesticides (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 September 2013, finalization of the report incorporating eventual comments

##### Required Completion Date:

All by end of June 2013

September 2013

## REQUIRED COMPETENCIES

### Academic Qualification

1. First degree in chemistry, engineering, environmental science or similar subject area related to chemicals management;
2. Higher degree (PhD) in a waste management related area, chemistry or engineering discipline linked to chemicals management;
3. Research or (university) lecturing experience related to waste and POPs management.

### Technical Competencies and Experience Requirements

1. Minimum 20 years experience in the waste management and soil remediation industry/research sector;
2. Experience in development of risk-based strategies for POPs treatment using a combination of in-situ and ex-situ technologies;
3. Experience in development of POPs remediation plans in developing countries, experience in Asia region desirable;
4. Minimum 10 years experience in development of cost-based budgets for project implementation;
5. Excellent understanding of FAO guidelines and training systems for POPs/pesticide management and contaminated site assessment;
6. Excellent computer skills;
7. Excellent report and proposal writing skills;
8. Fluency in English.



**Annex 2: Summary of facts, (from Tauw Consortium, World Bank project 2010)**

**Facts and figures in a Kathlon Perspective**

At the Vakhsh burial site 4,000 tons (8,000 m<sup>3</sup>) of OPs are still present and former activities resulted in soil pollution with a total volume of 133,000 m<sup>3</sup>. Storage sites in the Kathlon oblast identified during this study contain 4,000 tons (8,000 m<sup>3</sup>) and OPs 12,600 tons (7,000 m<sup>3</sup>) heavily contaminated soil.

The presence of the OPs at the burial and storage sites pose an acute risk to humans and the surrounding environment. According to the Stockholm Convention, OPs have to be destroyed, or in case irreversible transformation is not possible, have to be contained in an Environmentally Sound Manner (ESM).

Destruction costs for OPs per ton range from EUR 500 to EUR 2,000. Total destruction costs for the 8,000 tons of OPs as identified in the Kathlon oblast range from EUR 4 to 17 million. In the Kathlon oblast (stores and burial site), 29,000 m<sup>3</sup> severely contaminated, 11,000 m<sup>3</sup> contaminated and 100,000 m<sup>3</sup> of slightly contaminated soil have been identified. Given average remediation cost per m<sup>3</sup> of respectively EUR 175, 90 and 25 for the three categories, the total cost for soil treatment in the oblast can be estimated at approximately EUR 8.5 million. The total costs for the complete cleanup campaign of the storage sites and Vakhsh ranges between EUR 12 and 24 million.

Although a locally operated and managed destruction facility can be implemented in the framework of a national waste management plan, it has to be realized that such a facility requires fast investment funds and the input of high-tech expertise. It is questionable if the current presence of hazardous waste in the country and the limited reduction of operational costs (due to the local management) can justify such a large investment in funding and resources.

Given the limited funds available, USD 4 million (EUR 3 million), the TC has chosen to address the acute risks in the short term by containment of the OPs, which fits into the integrated approach. This approach also provides optimal conditions for future OPs destruction when additional funds become available.

The total cost of the containment phase of the integrated approach, as described in this section, is estimated at USD 3 million. It can be concluded that the proposed containment phase fits into the available budget.

The remaining USD 1 million plus additional funding should be used for a demonstration of an on-site and/or in-situ OPs and soil treatment as soon as possible.

The Tajik government should apply for additional funding to destroy all OPs and contaminated soil at the Vakhsh burial site because destruction is the only viable and sustainable option.



**Annex 3: Kathlon storage sites: table with quantities of obsolete pesticides and contaminated soils (from Tauw Consortium, World Bank project 2010)**

**Table 2.1 Prioritization of site cleanup**

Site Nr.	OPs (in m <sup>3</sup> /l), considered for site cleanup		Contaminated topsoil (m <sup>3</sup> ), considered for topsoil remediation		Costs (EUR)
	Stock	Buried	Inside	Outside	
1	Timber and empty packaging, 1,5 m <sup>3</sup> , contaminated rubble 20 m <sup>3</sup>	Yes, 54 m <sup>3</sup>	1	1,5	20,000
2	No stocks	Yes, 2,000 m <sup>3</sup>	N.a.	1,000	125,000
3	Pesticides 16 m <sup>3</sup> , empty packaging 3 m <sup>3</sup> , liquids 100 liter	No	No	Unknown	5,000
4	Burned pesticides and empty packaging 1,5 m <sup>3</sup> , contaminated rubble 150 m <sup>3</sup>	No	15	15	12,000
5	Pesticides, mixed with soil 10 m <sup>3</sup>	Yes, 40 m <sup>3</sup>	10	100	15,000
6	No stocks	Yes, 378 m <sup>3</sup>	N.a.	120	44,000
7	Empty packaging 1,0 m <sup>3</sup> and liquids 6,400 l	Yes, 865 m <sup>3</sup>	N.a.	200	46,000
8	Liquids 400 l	No	N.a.	Unknown	1,000
9	Empty packaging 1,5 m <sup>3</sup> and liquids 400 l	No	N.a.	No	1,000
10	No stocks	No	N.a.	No	0
11	No stocks	Unknown	N.a.	1,300	60,000
12	No stocks	Yes, 1,400 m <sup>3</sup>	N.a.	2,100	100,000
13	No stocks	No	N.a.	No	0
14	Pesticides mixed with soil 10 m <sup>3</sup>	Unknown	N.a.	10	10,000
15	Pesticides mixed with soil 20 m <sup>3</sup>	Unknown	20	Unknown	4,000
16	Pesticides 5 m <sup>3</sup>	Yes, 3,000 m <sup>3</sup>	No	1,700	200,000
17	Empty packaging 5 m <sup>3</sup> and liquids 8,000 l	Yes, 200 m <sup>3</sup>	No	200	30,000
Handling of OPs and contaminated soil from stores at Vakhsh					350,000
<b>Subtotal</b>					<b>1,023,000</b>
<b>Total exclusive VAT and future destruction, including 10% management and 15% unforeseen contingencies</b>					<b>1,278,750</b>

N.a. not applicable



Food and Agriculture  
Organization of the  
United Nations



**Annex 4: IHPA's interpretation of Kathlon storage sites: table with quantities of obsolete pesticides and contaminated soils (from Tauw Consortium, World Bank project 2010)**

	Stocks in Stores				Kathlon Storage sites Tauw study 2010, page 25			
	OPs Stocks: Liquids	OPs + Mixed rubble/soil	Contam. soils	Empty packaging	OPs Burials		Cont soil	
	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>	m <sup>3</sup>		m <sup>3</sup>	
Priority	0	0	0	0	2000		1000	
Priority	0	150	0	1,5	0		30	
Priority	0	0	0	0	378		120	
Priority	6,4	0	0	1	865		200	
Priority	0	0	0	0	1400		2100	
Priority	0	0	10	0	0		10	
Priority	0	5	0	0	3000		1700	
Priority	8	0	0	5	200		200	
<b>Total priority</b>	<b>14,4</b>	<b>155</b>	<b>10</b>	<b>7,5</b>	<b>7843</b>		<b>5360</b>	
non priority	0	20	0	1,5	54		2,5	
non priority	0,1	16		3	0			Unknown
non priority	0	10	0	0	40		110	
non priority	0,4	0	0	0				Contam. topsoil unknown + na
non priority	0,4	0	0	1,5				Contam. topsoil no + na
non priority	0	0	0	0	0		1300	
non priority	0	20	0	0			20	OP burials unknown + outside soil contam. unknown
<b>Total non priority</b>	<b>0,9</b>	<b>66</b>	<b>0</b>	<b>6</b>	<b>94</b>		<b>1432,5</b>	
<b>Total Priority + non priority</b>	<b>15,3</b>	<b>221</b>	<b>10</b>	<b>13,5</b>	<b>7937</b>		<b>6792,5</b>	
Tons	15,3	221	18	6,75				
Tauw calculations for:								
Empty pack + powders OPs	0,5							
Liquid OPs	1							
Heavily cont soils in hotspots	1,8							
OPs +Mixed rubble/soil	1							



**Annex 5: Taken from FAO Project: Inventory of Obsolete Pesticides in Tajikistan Initiative for Pesticides and Pest Management in Central Asia, Azerbaijan and Turkey, GCP/RER/035/TUR, 2012, Annex 1: Overview of sites with obsolete pesticides in Kurgantube zone**

Summary of quantities of the stores and related burials:

Different type of solid OP –	28,904 kg
Different type of liquid OP –	13,509 l
Contaminated soil –	546 m <sup>3</sup>
Buried Obsolete Pesticides –	3,290 m <sup>3</sup>

Region	Name of site	Name	Amount	Unit	Observations
1. Kurgan Tube Pianj	Mashrabov Imom	Contaminated soil	1000	kg	Yellow spots on contaminated soil
2.Kurgan Tube Pianj	OZODAGON	Unknown pesticides	1000	kg	Yellow powder
3.Kurgan Tube Pianj	Karl Marx (Urta blok)	No OP	0	kg	Building private
4.Kurgan Tube Kumsangir	Makhmedov	No OP	0	kg	Building private
5.Kurgan Tube Djilikul – Gardigulmurod	NAMUNA	Unknown pesticides mix with dust	38	M <sup>3</sup>	Contaminated dust in storage
6.Kurgan Tube Djilikul	BESHARIK	No OP	0	kg	Building without roof in wheat field
7.Kurgan Tube Vakhsh Rayon; Zamini Nab. Str. Pripadnaia	Zamini	Unknown mix pesticides with dirt	2000	kg	Mix pesticides with packaging materials in Basin
8.Kurgan Tube Vakhsh	Vakhsh Polygon	Empty packaging materials	7.5 mln	kg	Mixed buried pesticides in central polygon
9.Kurgan Tube Vbakhsh – selkhoz “Leningrad”	Rudaki	No OP	–		Petrol station
10.Kurgan Tube Vakhsh; Jamaat 20 letia Istiklol	Peshkadam	Different type unknown pesticides	10450	kg	7 m <sup>3</sup> contaminated cotton seeds
11.Kurgan Tube Vakhsh- vin zavod	OK-GAZA	Mix pesticides	100	kg	5 empty metal drums of Nitrofen
12.Kurgan Tube Vakhsh Sel/Khoz Kirovo – 2 Otdelenia	Kirovo	Contaminated land	0		No building no pesticides. Buried
13.Kurgan Tube Vakhsh, sogdion	sogdion	Contaminated site			Local community building Mosque
14.Kurgan Tube Bokhtar, village Kuibishev	Kuibishev	No OP			2 big storages; on the airport was built houses
15.Kurgan Tube Bokhtar Zargar; vill.	Khalim Kalandar	Contaminated pallets	4000	kg	Different type of pesticides with burnt materials
16.Kurgan Tube Bokhtar “Uchatka Lenin”	Sarvati Istiklou	No remnants from OP and no building.			Cotton field
17.Kurgan Tube Jomi, Central storage “Kalinin” new name OOO Bokhtar – Jami Village Gulistan	Gulistan	No OP			The site was privatized and cleaned. There is no OP
18.Kurgan Tube Jomi, Selkhoz khimia	Kuibishev	No OP			Well organized storage – privatized
19.Kurgan Tube Iavan; Jamaat Dahana Posiolok “Iavan”	Dahana	No OP			Building is not in good condition

Region	Name of site	Name	Amount	Unit	Observations
20.Kurgan Tube lavan jamaat Setoray Sukh former sov/khoz "lavan"	Setoray Sukh	No OP			Storage for sale
21.Kurgan Tube Khurasan; Jamaat Galaabad kishlak Pravda	Galaabad	No OP			Private
22.Kurgan Tube Khurasan; Jamaat Khiloli Khishlak "Achi"; station Oikamar	Oikamar	Buried mix pesticides	3 000 000	kg	High risk site
23.DDR Tursunzade-Shodkazak- Novabad	Novabad	Sulphur mix with soil	1000	kg	Low risk
24.DDR Farkhar-Archa	Archa	Heavily contaminated area	8	M <sup>3</sup>	Strong smell and visible contamination of soil
25.DDR Vose-Khulbuk	Khulbuk	No OP	0		
26. Kuliab zone – Khamadoni	Khamadoni (Zirak)	Tiodan-2000 kg Kataran – 700 kg Arsenat Kalii – 25 kg DDT – 1200 kg Contaminated corn – 300 kg	3925	kg	Storage belongs to former Selkhoz khimia and managed well. There is a guard and doors of storage are closed
27.Kuliab Khatlon (Jdanov) – Zarbdor	Khatlon ZARBDOR	TMTD (80%)-30 kg Amit – 104 l Butil Kantaks – 10 l PUNEN– 400 kg	430 114	Kg l	Storage belongs to former Selkhoz khimia and managed well there is guard and doors of storage are closed
28. Kuliab – private house –	Private	PREP	260	L	13 plastic Drums 20l each
29.SOGD Oblast – Asht (Kolkhoz Kalinin)	Asht – Kalinin	Contaminated building materials	400	M <sup>3</sup>	Weak smell
30. SOGD Oblast – Asht "Dusti" former Kolkhoz "Nazarov"	Asht – "Dusti"	Buried pesticide	240	M <sup>3</sup>	difficult to calculate there is only dimensions 6X20 m <sup>2</sup>
31.SOGD – Asht Vill. Orion	Asht – Orion	Soil mixed with OP	100	M <sup>3</sup>	Former specialist of sel khoz khimia explained there were different pesticides stored in the store – like Butifos, chlormagnii, Kumarin, DDT. Building does not exist any more. It was used for preparation of chemicals for spraying by helicopter
32.SOGD – Mostchokh	Mostchokh	Buried pesticide	50	M <sup>3</sup>	difficult to calculate there are only dimensions 5X5m <sup>2</sup>
33.SOGD- Rayon Gafurov	Gafurov	There are two stores: 1.store - Chistar (herbicide) – 1bag – 15 kg - Punin 25 l each X 270 – 6750 l - Punin 1,1 l bottles, in each boxes there are 20 and amount of boxes are 280 – 6160 l Unknown 58 bags X20kg each= 1160 kg	5585 12 910	Kg l	Former selkhoz khimia – rented by company which cannot use the building for the different purposes and it is guarded

Region	Name of site	Name	Amount	Unit	Observations
		2 Stores Fentiuran 245 bags X 18 kg each = 4 410 kg			
34.SOGD – Kanibadam – Enajon Boimatova No.7 Brigad	Kanibadam- Enajon Boimatova No.7	There are 2 stores of OP I store: DDT – 360kg Bitoxibacilin 9 bagsX30=270 kg Tobaco – 270 kg Dendrobacilin 25 bags =750kg Chistar 105 bags, 2100 kg II store: Neoran 40 small drums– 200 l Bodofit 8 bags – 160kg Grow regulator1 drum – 25 l Nisoran 4 packages – 4kg	3914 225	Kg l	Storage is well organized and guarded 24 hours.

**Annex 6: Overview of all OPs and related contaminated soils/rubble/empty packaging in Tajikistan, as used in Part II, Section II: General overview of POPs and other hazardous waste data**

	Stocks in Stores				OPs Burials	Burials Cont soil
	OPs Stocks: Liquids	OPs + mixed rubble/soil	Contaminated soils	Empty packaging		
Tauw 2009/2010 assessed 16 stores and related burials						
m <sup>3</sup>	15,3	221	10	13,5	7937	6792,5
tons	15,3	221	18	6,75	3968,5	12226,5
FAO: 2012, assessed 34 sites/stores						
m <sup>3</sup>	13,509	28,904	546		3 290	
tons	13,5	28, 9	982,8		1645	
The numbers in the below green coloured part of the table have been used in Part II, Section II: General overview of POPs and other hazardous waste data						
Total for Tauw and FAO investigations	28,8	249,9	100,8	6,8	5613,5	12226,5
Tauw 2009/2010 assessed Vakshk burial site					4000 tons	199500 tons
Swiss Project (See Ref.11) assessed Kanibadam burial site 2012 – 2015					4000 tons	

Tauw calculations for conversion m <sup>3</sup> in tons	
Empty pack + powders OPs	0,5
Liquid OPs	1
Heavily contaminated soils in hotspots	1,8
OPs + Mixed rubble/soil	1