Working Document

Management of Obsolete Pesticides

Belarus

Food and Agriculture Organization of the United Nations

IHPA
International HCH & Pesticides Association

Content

Part I: The assessment of the legal framework on the pesticides waste management in Belarus

Section I – Background information (International treaties participation)
The Rotterdam Convention on Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade - The Rotterdam Convention is neither signed nor ratified by the Republic of Belarus
The Stockholm Convention on Persistent Organic Pollutants (general information regarding statute of adaptation, signing and ratification, Focal Point Institute) Pursuant to Edict of the President of the Republic of Belarus №594[1] of 26 December 2003, Belarus joined the Stockholm Convention on Persistent Organic Pollutants. The provisions of the Convention have thus gained the legal force of the Presidential Edict
The Basel Convention on Trans-boundary Movement of Hazardous Wastes and Their Disposal (general information regarding statute of adaptation, signing and ratification, Focal Point Institute) The Basel Convention on the Control of Trans-boundary Movement of Hazardous Waste and their Disposal is endorsed by the Edict of the President of the Republic of Belarus of 16 September 1999
International cooperation *Any Bilateral, Multilateral or Regional Agreements signed in the field of pesticides waste management?* *Does your country cooperate with other states in monitoring the effects of the management of pesticides waste on human health and environment? (legal or political documents)* *Any guidelines or codes of practice developed in cooperation with other countries?* There are no special agreements of Belarus with other countries. Whereas Belarus is a member of the Customs Union of Belarus, Russia and Kazakhstan in the framework of which the movement of pesticide wastes is regulated. Neither guidelines, nor codes of practice have been developed in cooperation with other countries. Available publications do not have any references to the cooperation of Belarus with other countries on monitoring of pesticides waste on people's health and environment. Whereas in 2012 in the framework of the GEF/World Bank project "**Persistent Organic Pollutants (POPs) Stockpiles Management and Technical/Institutional Capacity Upgrading**" an activity on mutual sampling and analysis of POPs pesticides in soil and ground water by Belarusian leading laboratories and Lithuanian laboratory of the National Environment Protection Agency was successfully implemented. There are neither guidelines nor codes of practice developed in cooperation with other countries. In the framework of the Customs Union there have been adopted legal acts establishing requirements for the movement of hazardous wastes.

[1] On Joining the Stockholm Convention of Persistent Organic Pollutants. Decree of the President of the Republic of Belarus No.594 of 26 December 2003. The National

Section II – Regulatory framework on waste management	
Chapter I Political & legal framework	**General overview** **National Laws and regulations that govern hazardous waste (especially OP) management** Law of the Republic of Belarus of July 20, 2007 No, 271-3 «On Waste Management» establishes general requirements to the wastes management. The Resolution of the Ministry of Natural Resources and Environment Protection of the Republic of Belarus "On approval of the Classifier of Wastes Generated in the Republic of Belarus" No .85 of November 11, 2007 establishes the system of wastes classification including the system of classification of pesticides waste. Rules of Obsolete Pesticides Management approved by Resolution of the Ministry of Natural Resources and Environment Protection of the Republic of Belarus and the Ministry of Agriculture and Food of the Republic of Belarus No. 5/6, of February 3, 2005 defines the requirements to collection, packaging, storage, account, etc, of pesticides waste. Resolution of the Council of Ministers of the Republic of Belarus No. 1391of 23 October 2009 "On Approval of the List of Hazardous Wastes the Contracts on Transition of which to another Legal or Physical Person including an individual entrepreneur implementing wastes management are subject to registration" defines the list of pesticide waste for which the contracts on alienation (transition for storage) are subject to obligatory registration at territorial divisions of the Ministry of Natural Resources and Environment Protection. The contracts registration procedure is defined by the *Provisions on the Procedure for Registration of deals on Transition of Hazardous Wastes for an indefinite period of time (excluding the contract of movement) and on alienation of hazardous wastes to another legal or physical person, including to an individual entrepreneur implementing wastes management* approved by Resolution of the Council of Ministers of the Republic of Belarus No. 61 of 17 January 2008. Resolution of the Ministry of Natural Resources and Environment Protection of the Republic of Belarus No. 112 of 9 December 2008 "On Approval of the Form of Accompanying Passport of the Transport of Production Wastes and Instruction on the Procedure for its Issuance" establishes the form of a special document that is mandatory for the movement of hazardous wastes on the territory of Belarus. *Any policies or strategies at the national level (federal level) aimed at prevention of pesticides waste generation and minimization of risks associated with pesticides waste?* There is no special plan or strategy on prevention of pesticides waste generation in Belarus. The whole amount of stockpiled pesticides waste in Belarus was generated in the times of the Soviet Union. There is a provision on the need for preventing the generation of pesticides waste and minimizing the risks associated with pesticides waste in the plans on pesticides waste disposal, minimization or liquidation of their harmful impact in the areas of waste burials or storages. In 2004, the Ministry of Natural Resources and Environment Protection and the Ministry of Agriculture and Food approved the Plan on organization of safe storage of pesticides waste generated in Belarus. In the framework of this plan implementation, by 2012, the pesticides waste had been repackaged and taken away from agricultural enterprises to specialized storage facilities and Communal Unitary Enterprise "Facility for Processing and Burial of Toxic Industrial Waste of Gomel Region".

There is no special plan for the reduction of risks associated with pesticides waste in Belarus. Whereas in the framework of the implementation of provisions of the Stockholm Convention, the National Plan for the Implementation of Obligations assumed by the Republic of Belarus under the provisions of Stockholm Convention on Persistent Organic Pollutants for 2011-2015 was approved in Belarus through the Decree of the President of the Republic of Belarus No .271of 27 June 2011. . This document includes activities related to pesticides wastes (POPs pesticides waste as well).

Is there a Hazardous Waste Classification System in the country? Are the pesticides waste included in such classification?

The Resolution of the Ministry of Natural Resources and Environment Protection of the Republic of Belarus "On Approval of the Classifier of Waste Generated in the Republic of Belarus" No. 85 of 8 November 2007 establishes the system of wastes classification, including the system of pesticides waste classification.

The Waste Classifier contains the following classes of pesticides waste:

- Banned pesticides related to persistent organic pollutants (codes of pesticide waste beginning from 5310101 to 5310139);
- Obsolete pesticides (excluding POPs wastes) (codes of the pesticides wastes beginning from 5310301 to 5319900).

Any other national legislation and regulatory measures adopted by Government in order to implement and enforce the provisions of the Basel Convention?

The Instruction on the procedure for defining the toxicity class of production wastes and the toxicity class of hazardous production wastes, approved by Resolution of the Ministry of Natural Resources and Environment Protection of the Republic of Belarus, Ministry of Health of the Republic of Belarus, Ministry of Emergencies of the Republic of Belarus No. 3/13/2 of 17 January 2008.

	Sector	***EU legislation***	***Country legislation***
Chapter II Specific laws and regulations governing waste management	*General waste management*	Directive 2008/98/EC of the European Parliament and Council of 19 November 2008 on waste and repealing certain Directives (Text with EEA relevance), *OJ L 312, 22.11.2008, p. 3–30.*	Law of the Republic of Belarus "On Waste Management" NO. 271-3 of 20 July 2007
	Import / Export	Regulation (EC) of the European Parliament and of the Council No 689/2008 of 17 June 2008 concerning the export and import of dangerous chemicals, *OJ L 204, 31.7.2008, p. 1–35* Regulation (EU) of the European Parliament and of the Council No 649/2012 of 4 July 2012 on export and import of hazardous chemicals Text with EEA relevance, *OJ L 201, 27.7.2012, p. 60–106.*	1. Law of the Republic of Belarus "On Wastes Management", NO. 271-3 of 20 July 2007, Article 27 2. Provisions of the Procedure and Conditions for the issuance of permitting documents for import and/or export of hazardous wastes limited for the movement through the State border of the Republic of Belarus due to non-economic grounds, approved by Resolution of the Council of Ministers of the Republic of

			Belarus "On several questions of the procedure of the movement of definite kinds of goods through the State border of the Republic of Belarus", No. 1397 of 23 September 2008. This document establishes the procedure for issuance of permitting documents for the import and export of hazardous wastes limited for the movement through the State border of the Republic of Belarus. It is used for the export of wastes to countries of the Customs Union and for the transit of wastes from countries of the Customs Union. 3. Resolution of the Ministry of Natural Resources and Environment Protection of the Republic of Belarus "On several measures for the implementation of Resolution of the Council of Ministers of the Republic of Belarus of 23 September 2008 NO. 1397", No. 89 of 24 October 2008. The document defines: - The form of notification document for trans-boundary movement of wastes and the procedure for its filling in; - The form of the register of issued permits for the trans-boundary movement of hazardous wastes. 4. The Provisions of the Procedure for calculating the amount of security deposit which has to be made by the owner of wastes or by the appointed person to the republican budget when importing wastes to the Republic of Belarus and /or their transit through the territory of the Republic of Belarus, as well as the procedure for making a security deposit to the republican budget and its revocation, approved by Resolution of the Council of Ministers of the Republic of Belarus NO. 231 of 20 February 2008. It establishes the conditions of levying, procedure for calculation and depositing to the budget, revocation from the budget of the security deposit amount. The security deposit, if made when the wastes are imported or transited.

			The Republic of Belarus has been a member of the Customs Union since January 1, 2010. The legal documents that regulate the import, export, and transit of wastes are as follows: Agreement on the rules of licensing in the sphere of foreign trade of June 9, 2009 (adopted based on the Agreement on Unified Measures of Nontariff Regulation in Relation to Third Countries of 25 January 2008). The agreement defines the procedure for the issuance of licenses and permits for the import, export of goods including wastes which can be banned or limited for import of export by the countries – members of the Customs Union in the framework of Eurasian Economic Community on trade with third countries (for example, EU countries). It is applied when the wastes are exported from Belarus to third countries. Decision of the Collegium of Eurasian Economic commission "On Normative Acts on Nontariff Regulation" No. 134 of 16 August 2012. It defines: The provisions for applying limitations; The unified list of goods, to which bans or limitations for import or export by the countries – members of the Customs Union in the framework of the Eurasian Economic Community in trade with third countries are applied. In particular: List 1.2 contains hazardous wastes which are banned for import (including transit) on the territory of Customs Union; List 2.3 contains hazardous wastes limited for movement thought the customs border of the Customs Union when imported and/or exported.
	Waste disposal	Council Directive 1999/31/EC on Waste Disposal of 26 April 1999, *OJ L 182, 16.7.1999, p. 1–19*	Law of the Republic of Belarus "On Waste Management", NO. 271-3 of 20 July 2007, Articles 25, 30, 31. Technical Code of Established Practice No. 17.11-02-2009 (02120/02030) «Landfills of solid household waste. Rule of designing and operation».

	Incineration	Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste, *OJ L 332, 28.12.2000, p. 91–111.*	Law of the Republic of Belarus "On Wastes Management", NO. 271-3 of 20 July 2007, par. 2, Article 28, par. 2, Article 29. There is no separate document establishing the requirements for hazardous wastes incineration (only requirements to incineration of hydrocarbon containing wastes are established; there are also requirements to setting the limits for the emission of pollutants into the air during the wastes incineration processes). The general requirements to incineration of household wastes are established by the following documents: Resolution of the Ministry of Natural Resources and Environment Protection of the Republic of Belarus, Ministry of Housing and Utilities of the Republic of Belarus No. 38/37 of December 20, 2004 "On environmental requirements to development and operation of installations for sorting and recycling household wastes"; Technical Code of the Established Practice No. 17.11-03-2009 (02120/02030) «Rules of Operation of Installations for Household Wastes Disposal»
	Shipment of waste	Regulation (EC) No 1013/2006 of the European Parliament and of the Council of 14 June 2006 on Shipment of Waste, *OJ L 190, 12.7.2006, p. 1–98.*	Law of the Republic of Belarus of 20 July 2007 NO. 271-3 "On Wastes Management", Article 26. The Form of a special document strictly required in case of wastes movement is established by Resolution of the Ministry of Natural Resources and Environment Protection of the Republic of Belarus No. 112of 9 December 2008 "On Approval of the form of accompanying passport for movement of production wastes and of the Instruction for its filling in".
Chapter III Institution(s) involved in waste management (focus on pesticides)	*Name/s of the responsible institution/s in this respect? What normative act provides this?* There is no special organization responsible for the coordination of pesticide wastes management in Belarus. The Ministry of Natural Resources and Environment Protection is the National Coordination Body and competent authority for the implementation of Basel Convention and Stockholm Convention on POPs. The Belarusian Research Center "Ecology" of the Ministry of Natural Resources and Environment Protection is the		

center for practical implementation of these conventions.
The documents establishing the above mentioned are: Resolution of the Council of Ministers of the Republic of Belarus, No. 237 of March 5, 2004 «On the Implementation of Provisions of the Stockholm Convention on Persistent Organic Pollutants» and Resolution of the Council of Ministers of the Republic of Belarus No. 1590 of 15 October 1999 "On the Implementation of Basel Convention on Control of Trans-boundary Movements of Hazardous Wastes and their Disposal".

When did it begin to work/function? Indicate the financial assistance in this respect (foreign or strictly national/internal)?
The Belarusian Research Center "Ecology" started its activity in 2000. Its financing is strictly national. Whereas the Ministry of Natural Resources and BRC "Ecology" develop and implement projects related to hazardous wastes management in cooperation with various international organizations (including donor organizations – World Bank, UNDP, EU, FAO Swedish EPA etc.)

Who is responsible for identifying whether a waste is hazardous or not?
The producer or the owner of wastes is responsible for identifying the hazard character of wastes (par. 2, Article 16 of Law of the Republic of Belarus No. 271-3 of 20 July 2007 "On Wastes Management")

Pesticides waste management planning
Who is responsible for developing and implementing pesticides waste management plans?
There is no direct responsibility set out in the regulatory documents on development and implementation of pesticides waste management plans.

The general requirements to development, adoption and implementation of program documents on waste management are set out in Article 14 of the Law of the Republic of Belarus "On Waste Management", No. 271-3 of 20 July 2007

Are there certain programs or activities of involving the owners in the collection and transportation of pesticides wastes?
Within the period 2004-2012 there was implemented an action plan of the Ministry of Natural Resources and Environment Protection and of the Ministry of Agriculture and Food of the Republic of Belarus on organization of environmentally sound storage of obsolete pesticides stockpiles in Belarus. Agricultural enterprises (owners of pesticides waste) did the repackaging of pesticides and moved the waste to the specialized storage facility CUE "Facility for Recycling and Landfilling of Toxic Industrial Wastes of the Gomel region". The action plan was financed from the budget of Environmental Fund, local budgets and international technical assistance.

Section III - Analysis of existing national waste management legislation	
Theme 1 **Scope**	*What is covered by the national law in relation to waste management, regarding pesticides waste?* There are no direct norms related to pesticide wastes management in the Law of the Republic of Belarus "On Wastes Management", No. 271-3 of 20 July 2007. There are general requirements to hazardous wastes management, import, export and transit of hazardous wastes. *or* *What is covered by the national law in relation to chemical management, regarding pesticides waste?* General norms in the Law of the Republic of Belarus "On Wastes Management", No. 271-3 of 20 July 2007 are sufficient for organization of environmentally sound management of pesticides waste.
Theme 2 **Definitions**	*Is there a **definition** of hazardous waste, especially of pesticides waste in the national legislation?* Hazardous waste – waste containing substances with some hazardous property or a number of properties in the amount that makes such waste by itself or in contact with other substances directly or potentially capable of doing harm to the environment, people's health, property due to their hazardous impact (par. 18, Article 1 of the Law of the Republic of Belarus "On Wastes Management", No. 271-3 of 20 July 2007). Obsolete pesticides – hazardous waste in form of expired pesticides or which became obsolete in other circumstances, banned for use or not having quality certificates (par. 2 of the Rules of Obsolete Pesticides Management, approved by Resolution of the Ministry of Natural Resources and Environment Protection and the Ministry of Agriculture and Food of the Republic of Belarus, No. 5/6) of 3 February 2005. *Does the legislation provide any criteria / procedure when pesticides become waste pesticides?* The above mentioned definition contains criteria and circumstances in which pesticides become pesticide wastes.
Theme 3 **Administrative and institutional structure**	*Is there an institutional infrastructure on the national level on pesticides wastes?* *Name the responsible institution/s in this respect?* *When did it begin to work/function? Indicate the financial assistance in this respect (foreign or strictly national/internal)?* There is sufficient institutional infrastructure for pesticides waste, whereas the national policy in the area of waste (including pesticides waste) management is formed by the Ministry of Natural Resources and Environment. There is a dedicated department in the Ministry – **Department of Waste Management**. The issues related to implementation of policies intended to ensure that application of chemicals, crop protectants, inputs, materials and technological processes are safe for human health; issuing permits for the application of chemicals and pesticides in the country; hygienic regulations and registration of chemical and biological substances and articles thereof, inputs, material, food products and crop protectants are within the competence of the **Ministry of Health**. The government bodies dealing with the assessment of new pesticides or new chemicals are listed below.

	Ministry of Health is responsible for: - hygienic registration and regulation of chemical and biological substances and articles thereof, inputs, materials, food products and crop protectants meaning that their use in the country is permitted; - justification of the criteria of chemicals' safety for the health of people and workers; - assessment of the degree of hazard of chemicals, pesticides and waste for human health. **Ministry of Agriculture and Food** is responsible for: - registration of crop protectants and fertilizers; - testing and monitoring of food products for the presence of pesticides and fertilizers. **The Council on Pesticides and Fertilizers of the State Inspection on Seed-Growing, Quarantine and Crop Protection** is responsible for: - organization of testing of pesticides and fertilizers for registration purposes; - registration and re-registration of pesticides, crop growth regulators and fertilizers; - issuing of registration certificates; - establishment of the Register of current pesticides and fertilizers; - cancellation of registration of non-effective and environmentally hazardous pesticides and fertilizers; - compilation and publication of the list of pesticides and fertilizers the use of which is banned or restricted; - publication of the Catalogue of pesticides and fertilizers permitted for application in Belarus; - scientific and technical cooperation with the respective authorities of other countries.
Theme 4 **Licensing**	*Are there permits / licensing for waste (pesticides waste) management activities required?* *Does the legislation provide explanations what is mean the pesticides activities?* Organizations develop and send for approval to the territorial branches of the Ministry of Natural Resources and Environment Protection a special document – Instructions for production waste management. This document is made in accordance with the Guidance on the procedure of development and approval of the instruction on production wastes management, approved by Resolution of the Ministry of Natural Resources and Environment Protection of the Republic of Belarus No. 45 of 22 October 2010. *Do the permits / licensing include activities as using, stocking, disposal of pesticides?* There are two licenses and permits (the Belarusian regulation has definite distinctions for these two documents): - permit for wastes storage – the owner of wastes receives it to legally store the pesticides wastes; - license for wastes disposal activity on – this document is received when an organization performs disposal of pesticides waste (for example, incinerates them). *Which authority/authorities are responsible for issuing the license for the disposal of pesticides wastes?* Ministry of Natural Resources and Environment Protection of the Republic of Belarus is responsible for the issuance of license for pesticides waste disposal. Regional committees of natural resources and environment protection (territorial branches of the Ministry of Natural Resources and Environment Protection) are responsible for the issuance of wastes storage permits. *Are there provisions for disposal facility licensing? Are there any specific requirements?* There are definite provisions for disposal facility licensing. A license for wastes disposal shall be obtained from the Ministry of Natural Resources and Environment Protection. The requirements for obtaining such license are set

	out in Edict of the President of the Republic of Belarus "On Licensing of Some Activities", No. 450 of 1 September 2010. A disposal installation shall be included in the register of facilities for waste disposal. Such registration is done by the BRC "Ecology". The requirements to registration are set out in the Provisions on the procedure for registration of the commissioned installations for the use of waste in the register of facilities for the use of waste and the commissioned facilities for storage, landfilling and disposal of wastes, approved by Resolution of the Council of Ministers of the Republic of Belarus No. 1104 of 23 July 2010.
Theme 5 **Trans-boundary movement, import / export**	*What are the Transboundary Movement Reduction Measures taken at the national level so far?* Belarus is a party to Basel Convention, thus the national legislation obliges the owners of hazardous waste to notify the country of the import, and transit of any trans-boundary movement of such wastes. *What is the procedure of notification for the Trans-boundary Movement?* The provisions of the Procedure and Conditions for issuance of permitting documents for import and/or export of hazardous wastes limited for the movement through the State border of the Republic of Belarus due to non-economic grounds, approved by Resolution of the Council of Ministers of the Republic of Belarus No. 1397 of 23 September 2008 "On several issues of the procedure for movement of specific kinds of goods through the State border of the Republic of Belarus". *Name the international standards (ISO) adopted at national level.* The following list of standards represents hyperlinks to website of the Belarusian Gosstandard with more detailed description of the documents. - СТБ ISO/TS 16949-2010; - СТБ ИСО 9000-2006 - СТБ ISO 9001-2009 - СТБ ISO 9004-2010 - СТБ ИСО 10006-2005 - СТБ ИСО 10007-2006 - СТБ ИСО 10002-2005 - СТБ ИСО 10012-2004 - СТБ ИСО 19011-2003 http://www.belgiss.org.by/russian/quality/9.php *Who is responsible for notifying the trans-boundary shipment of hazardous (pesticides) waste destined for disposal?* The owner of wastes is responsible for notification of the competent authorities of the countries of transit and import. *Are there any restrictions on import, export and transit of hazardous (pesticides) wastes?* The restrictions on import, export and transit of hazardous (pesticides) wastes in the national legislation are similar to the ones established by the Basel Convention. *In what cases is the authorization refused? How is this reflected in the national legislation?* The authorization may be refused for the same reasons as the ones envisioned in the Basel Convention (improper

	notification of the quantity and the composition of wastes; violation of insurance requirements; non-payment of due fees; etc.) *Any specific national legal provisions clearly prohibiting export of pesticides wastes?* The pesticide wastes which are exported with the purpose other than environmentally sound disposal at a certified specialized installation are strictly prohibited for export from Belarus. **Transboundary transport under Basel Convention** The Republic of Belarus is a party of the Basel Convention and has its national legislation in compliance with the requirements of this convention. Resolution of the Council of Ministers of the Republic of Belarus of 23 September 2008 No. 1397 "On several questions of the procedure of the movement of definite kinds of goods through the State border of the Republic of Belarus" defines the procedures of obtaining the permit for the transboundary movement of hazardous wastes. It is worth mentioning that while the Ministry of Environment remains the focal point of the Basel Convention and competent authority, the practical issuance of the permitting document for the transboundary movement of the wastes is implemented by the Ministry of Trade of the Republic of Belarus. There is also some discrepancy between the Belarusian regulation of transboundary movement of hazardous wastes (in particular, PCBs) and the relevant regulation of the Customs Union. Annex 1 to the Decision of Collegium of Eurasia Economic Commission of 16 August 2012 No. 134 presents the Unified List of goods to which bans or limitations on import of export by the states – member of the Customs Union are applied in the framework of the Eurasia Economic Union in trade with the third countries. According to this list such wastes as PCB and PCB containing materials cannot be imported on the territory of the Customs Union. Such provision makes national Basel regulation rather ambiguous in situations when wastes go as transit from east to some Western European country.
Theme 6 **Economic initiatives**	*Does the legislation on waste management and chemicals provide the following principles: "polluter pay", Waste Prevention Principle, Substitution Principle and Elimination of Toxic Substances, Principle of Internalizing Costs?* The principle "the polluter pays" is partially included in the national legislation on waste management (the principle of "imposition of charges for waste disposal", Article 4 of the Law of the Republic of Belarus "On Waste Management", No. 271-3 of July 20, 2007) Waste Prevention Principle, Substitution Principle and Elimination of Toxic Substances, and Principle of Internalizing Costs are not introduced in the national legislation. *Does the legislation provide any economic facilities / requests for the minimization of hazardous waste, especially the pesticides waste?* There are no specific economic facilities / requests for minimization of hazardous waste, especially pesticides waste.
Theme 7 **Transportation**	*Do there exist regulations regarding the transportation of hazardous (pesticides) wastes (transportation time, place, route, transported quantity, etc.)?* Yes, there is a special regulation for the transport of hazardous cargo (including pesticides waste). For example, the following aspects of pesticides waste transportation are regulated: The authorizations required for trans-boundary transfer of hazardous waste (an authorization for the export of

obsolete pesticides as hazardous waste from the Republic of Belarus shall be obtained by waste owners, as per Resolution # 1397 of the Council of Ministers of the Republic of Belarus dated September 23, 2008).

Carriage of hazardous cargo by road in the Republic of Belarus is subject to licensing and requires a special industrial safety permit (license) allowing the transport of obsolete pesticides as hazardous cargo.

Licenses are issued in accordance with the procedure set out in the legislation of the Republic of Belarus.

Under Belarusian legislation, to be able to transport (import, export, and transit) obsolete pesticides as hazardous cargo restricted for movement across the customs border of the Republic of Belarus, a consigner (consignee, carrier company, freight forwarder or any other authorized entity) shall obtain permits from the relevant national authorities.

In case of international carriage of obsolete pesticides as hazardous cargo restricted for movement, a carrier company shall first obtain a permit from the respective authorities of the destination or transit countries if such procedure is set out in an intergovernmental agreement on international road transport services between the country concerned and the Republic of Belarus or in the Belarusian legislation. The owner of pesticides waste shall be responsible for requesting and obtaining the international permits on carriage of hazardous cargo from Belarus through the territory of other countries and to do so on behalf of sub-contractors, where applicable.

International carriage of obsolete pesticides treated as hazardous cargos shall comply with the requirements set out in the national legislation of transit and destination countries, and the requirements laid down in the Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal adopted on 22 March 1989.

A designated transport route is required for movement of hazardous cargo. A carrier company shall be responsible for elaboration and approval of the route for carriage of obsolete pesticides as hazardous cargo by road.

The route for carriage of obsolete pesticides as hazardous cargo by a convoy (more than 3 vehicles) shall be agreed upon with the respective territorial units of State Traffic Inspectorate of the Ministry of Internal Affairs of the Republic of Belarus (hereinafter referred to as STI of MIA).

The procedure for obtaining approval of the obsolete pesticide transport route is set out in the Rules of Provision of Safe Carriage of Hazardous Cargo by Road in the Republic of Belarus approved by Resolution of the Ministry of Emergency Situations of the Republic of Belarus No. 61 of 8 December 2010.

Incidents, accidents and the associated impacts which may occur during the transportation of obsolete pesticides as hazardous cargo shall be responded to and impacts eliminated by the departments and units of the Ministry of Emergency Situations of the Republic of Belarus and (or) emergency teams of the consignor (consignee) established in accordance with the Rules of Provision of Safe Carriage of Hazardous Cargo by Road in the Republic of Belarus approved by Resolution of the Ministry of Emergency Situations of the Republic of Belarus No. 61 of 8 December 2010.

Does the legislation provide the minimum guidelines regarding transportation of waste pesticides?
The Rules of Provision for Safe Carriage of Hazardous Cargo by Road in the Republic of Belarus approved by

	Resolution of the Ministry of Emergency Situations of the Republic of Belarus No. 61 of 8 December 2010 provide for comprehensive guidelines for the transportation of pesticides waste. *Have there been approved any duties in respect of carriers?* Carriers of hazardous cargo (pesticides waste including) shall obtain licenses for the transportation of hazardous cargo. *Are there special units that take care of the transportation of the hazardous (pesticides) wastes or this task is fulfilled by simple legal persons that collects the solid wastes in villages/towns and have concluded contracts with local authorities?* Collection of wastes (including repackaging) is implemented either by the owner of pesticide waste or by specialized units of the Ministry for Emergencies. Transportation per se is implemented by licensed transport companies.
Theme 8 **Labelling requirements**	*Does the legislation provide requests for package and labelling of hazardous waste, including (pesticides waste)?* Yes. In case of repackaging for safe storage within the country at the facilities of the owner of pesticides waste packaging and labelling of pesticides waste is regulated by Rules of Obsolete Pesticides Management approved by Resolution of the Ministry of Natural Resources and Environment Protection and the Ministry of Agriculture and Food of the Republic of Belarus No. 5/6of 3 February, 2005. In case of international (trans-boundary) transportation, the requirements comply with the ADR regulation and the Basel Convention requirements. *If, yes does the requests for package and labelling of hazardous waste are according with -the international and European standards in force?* Yes, the requirements for packaging and labeling of pesticides waste were developed taking into account the international and European standards.
Theme 9 **Packaging and containers**	*Does legislation provide any requests regarding materials which can be used for packaging or re-packaging of pesticides waste?* Yes, such requirements are reflected in the Rules for Obsolete Pesticides Management approved by Resolution of the Ministry of Natural Resources and Environment Protection and the Ministry of Agriculture and Food of the Republic of Belarus No. 5/6 of 3 February 2005. *Is the requirement of proper management of containers that contain pesticides waste in order to minimize the potential for release, and to ensure that the wastes are packaged in a manner consistent with the requirements for transportation stipulated in the legislation?* Yes, it is stipulated by Rules of Provision of Safe Carriage of Hazardous Cargo by Road in the Republic of Belarus, approved by Resolution of the Ministry of Emergency Situations of the Republic of Belarus No. 61 of 8 December 2010
Theme 10 Emergency procedures	*Does the legislation provide any requests regarding the spill response and emergency procedures?* Yes, it is stipulated in Rules of Provision of Safe Carriage of Hazardous Cargo by Road in the Republic of Belarus, approved by Resolution of the Ministry of Emergency Situations of the Republic of Belarus No. 61 of 8 December 2010.

Theme 11 **Disposal obligations**	*Does the legislation provide any requests regarding specific obligations in relation to disposal?* There are general requirements to disposal of pesticides waste (the national legislation on waste management states that the pesticides waste shall be disposed of in a manner that prevents the formation of persistent organic pollutants. *Does the legislation provide any requests regarding the disposal procedure?* See above. *How does the disposal of pesticides waste take place? Is it a uniform procedure or does it depend on each case? What legal act provides for such request?* There are no special facilities for disposal (destruction of pesticides waste) in Belarus. Pesticides waste is mostly repackaged and taken for environmentally sound storage at a specialized storage facility or taken for disposal at specialized facilities abroad.
Theme 12 **Incineration**	*Is incineration allowed according to the national legislation? What are the categories of waste that can be incinerated?* According to current legislation, incineration of wastes followed by formation of releases of POPs is not allowed in Belarus. There are some small installations for incineration of medical wastes mostly used by hospitals – owners of such installations. The operation of an incineration installation is only possible in case Best Available Techniques are applied and all required permits and licenses are obtained. *Who is responsible for issuing a permit for incineration? Based on what requirements?* The Ministry of Natural Resources and Environment Protection (and its territorial representative branches) is responsible for issuing permits for installations for disposal (including incineration) of wastes. The requirements are stipulated in the the Law of the Republic of Belarus "On Wastes Management" (Articles 30, 31, 32); Edict of the President of the Republic of Belarus of November 17, 2011, No. 528 "On Environmental Integrated Permits" (http://www.pravo.by/main.aspx?guid=3871&p2=1/13083). *Is there detailed description of distribution and disposal of waste, including waste composition that helps determine the percentage of waste suitable for incineration?* There is no such description.
Theme 13 **Recording, monitoring, and reporting**	**Recording** *Are there requirements that on every site where tipping of pesticides waste take place that waste is recorded and identified? Who has the responsibility of access to Material Safety Data Sheets (MSDS)?* The pesticides waste is subject to inventory. Taking inventory of the pesticides waste is the responsibility of the owner. This obligation is stipulated in the Rules of Obsolete Pesticides Management, approved by Resolution of the Ministry of Natural Resources and Environment Protection and the Ministry of Agriculture and Food of the Republic of Belarus No. 5/6 of 3 February 2005. **Monitoring** *Provide general background of how the monitoring takes place for various hazardous wastes, according to the national legislation.* There is a National System of Environment Monitoring, which includes as a separate kind of monitoring,

the Local Environment Monitoring. The burials of obsolete pesticides are included in the system of Local Environment Monitoring. Local monitoring is undertaken by waste owners (burials of obsolete pesticides). The procedure for local monitoring is defined by the Provisions on the Procedure of Local Monitoring Implementation as part of NSEM and the Use of its Data approved by Resolution of the Council of Ministers of the Republic of Belarus No. 482 of 28 April 2004.

On basis of the BRC «Ecology», an informational-analytical center of local monitoring was organized. It provides for the collection, storage and processing of local monitoring data, preparation and provision of environmental information to stakeholders.

Who is responsible for Hazardous waste monitoring, including for pesticides waste?
The owners of pesticides waste are responsible for organizing and implementing local monitoring of obsolete pesticides burials. The Ministry of Natural Resources and Environment Protection is responsible for providing governmental control of monitoring implementation.

Does the national legislation provide for requests of periodical reports system on national level regarding the hazardous wastes, including pesticides waste? What are the responsible institutions in this respect?
State statistics report 1-wastes (MNREP) "Report on Production Wastes Management" established by Resolution of the National Statistics Committee of the Republic of Belarus No. 208 of 19 September 2013 requires that the waste owners should provide reports on wastes (pesticides waste included) annually.

Do the non-state actors have free access to the information on pesticides waste, which is held by relevant public authorities?
Yes, Belarus is party to Aarhus Convention, there is an Aarhus public centre affiliated at the Ministry of Natural Resources and Environment Protection. There is a web-site www.popsbelarus.by providing information on obsolete pesticides and POPs pesticides.

What is the situation with access to information to the general public in case if pesticides waste is managed by private entity?
The situation with access to information to the general public is equal regardless the ownership of waste.

Does the national legislation provide for requests regarding the monitoring of the construction and demolition of pesticides waste sites?

What is the legal request regarding the medical pesticides waste monitoring?
There is a system of Social- Hygienic Monitoring in the country under the aegis of the Ministry of Health. Resolution of the Ministry of Health of the Republic of Belarus No.105 of July17, 2012, "On Social-Hygienic Monitoring" establishes the procedure for this kind of monitoring. The monitoring of the content of pesticides (obsolete pesticides) in drinking water, and some food products is undertaken as part of social-hygienic monitoring; there have been also studies of breast milk for the content of chlorine organic pesticides in it.

Reporting
What kind of legal persons (enterprises) must report to the relevant authorities on hazardous waste (including pesticides waste) registered during their activities? Is this kind of report compulsory? What are the consequences in case of non-reporting?
All organizations which produce and /or manage hazardous wastes provide reports to the National Statistics

	Committee of Belarus. This is State statistics report 1-Waste (Ministry of Natural Resources and Environment Protection) "Report on Production Waste Management" established by Resolution of the National Statistics Committee of the Republic of Belarus No. 208 of 19.09.2013. The report is submitted once a year (until January 20). The report is compulsory. Non-submission of the report falls under administrative prosecution. The reports submitted by organizations are processed by BRC "Ecology". The report data are available to the public.
Theme 14 **Offences and penalties**	*Is there any legal framework set up regarding the liability (criminal/civil) of the carrier in case of non-fulfilment of the already established duties?* *Any legal (criminal, civil or administrative) measures to prevent and punish illegal import/export of pesticides waste?* *Are there national legal provisions regarding the illegal traffic of pesticides waste?* *Are there any specific articles in the national Criminal/Administrative Codes or Environment Protection Law regarding the punishment of illegal traffic?* There is no article in the Criminal Code of Belarus which establishes responsibility (punishment) for illegal export, import or transit of hazardous waste. But there is Article 278 "Violation of safety rules at handling genetic-engineered organisms, environmentally hazardous substances and waste". According to this article, violation of the safety rules for waste transportation committed during one year after the administrative punishment for a similar violation or threatening people's health or environment results in criminal punishment. Violation of the conditions of storage, transportation, disposal, landfilling, alienation or transfer for storage and etc. results in administrative punishment according to part 2 of Article 15.63 "Violation of regulation on waste management" of the Administrative Code of the Republic of Belarus.
Theme 15 **Official controls and inspections**	*Are there inspections made at accumulation areas to ensure that all spill contingency materials are maintained in working condition, to ensure that containers are not deteriorated and maintained in their integrity, and to identify spills or releases? If yes, what is their periodicity?* The need for inspections and regular control of the storage conditions of pesticides waste is indicated in the Instruction on Waste Management which any owner of the pesticides waste shall have. The territorial branches of the Ministry of Natural Resources and Environment Protection may check how the waste is stored. The periodicity of such checks is defined by plans of control checks. *Whether the inspections are documented on inspection logs and the logs are maintained as part of the facility operating record?* Every inspection visit on behalf of the territorial branch of the Ministry of Natural Resources and Environment Protection is duly documented and the records of checks are well maintained.
Theme 16 **Research and development**	*Whether Government, educational institutions, and private industry cooperate to support a broad range of research, development, training, and educational activities designed to create and diffuse knowledge and professional expertise on pesticides waste minimization?* Yes.

	Has your country developed pesticides waste prevention programmes? If any, please specify. There have not been any pesticides waste prevention programmes apart from the Programme of the Ministry of Agriculture and Food and the Ministry of Environment on repackaging of obsolete pesticides (it was mentioned above). *Has there been noticed an improvement after their implementation/ results achieved?* As for the repackaging programme – there have been definite improvements in the storage conditions of the obsolete pesticides waste, although the problem of their ultimate disposal remains. *Any statistics/national reports proving the reduction of pesticides waste generation?* There are no such reports (although the assessment of the dynamics of pesticides wastes generation is possible based on the statistics report on wastes mentioned in earlier sections of the current table). *Are there organized at the national level any special trainings for persons involved in the management of pesticides waste? In case of existence of such trainings what kind of method is mainly used – formal or on-the-job training? What do the training courses cover in this domain in your country (Ex: topic, categories of involved persons, sources used during the educational process, etc.)?* There are no special trainings at national level. There have been some training sessions in the framework of some international projects related to obsolete pesticides stockpiles management.

Section IV - Information supplementing legal analyses – from other experts
Topic 1 – Pesticides Manufacturing Industry *Are there pesticides manufacturers in the country?* *What measures are taken by agrochemicals industries in accordance with the national legislation in regard to hazardous waste, including pesticides waste?* For the answers, please see Section 6.1. of **Technical assessment of the management of obsolete pesticides and POPs waste and soil contamination in Belarus.** *Does the legislation provide for any measures taken by industries/waste generators in order to reduce or eliminate pesticides waste generation?* See Chapter 1, Themes 6 and 11 of **The assessment of the legal framework on the pesticides waste management in Belarus.**
Topic 2 – Management of Obsolete Pesticides Stocks *Does the legislation provide for, conditions / methods for carrying out inventory/storage/disposal activities regarding obsolete stocks?* Part 4.1. of **Technical assessment of the management of obsolete pesticides and POPs waste and soil contamination in Belarus.** *Who carried them out, and what are the results? Provide the list of activities in chronological order* See Part 2 Inventory and Part 6 Disposal of **Technical assessment of the management of obsolete pesticides and POPs waste and soil contamination in Belarus.**
Topic 3 – Methods used for treatment of pesticides waste *What are the methods used for the treatment of pesticides waste?* See Part Safeguarding, Part 6 Disposal of **Technical assessment of the management of obsolete pesticides and POPs waste and soil contamination in Belarus**

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? What kind of legislation provides for the activities of such facilities?
Are there created permanent facilities for the disposal of pesticides waste or ad-hoc methods and facilities are used in this respect?
See Themes 4, 11, 12 of the assessment of the legal framework on the pesticides waste management in Belarus.
See part 6 Disposal of Technical assessment of the management of obsolete pesticides and POPs waste and soil contamination in Belarus.

Topic 2 – Storage facilities

Are there any pesticides waste storage facilities in the country?
Yes, Communal Unitary Enterprise ""The Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial", see Part 2 Inventory of Technical assessment of the management of obsolete pesticides and POPs waste and soil contamination in Belarus
Are there any final pesticides waste storage facilities constructed and operated in accordance with the environment standards?
See the previous result.

Does the legislation establish different rules for the storage of hazardous waste? Please provide the differences.
See Chapter II Specific laws and regulations governing waste management

Topic 3 – Recycling facilities
Are there any recycling/re-use facilities in the country?
No. Not for pesticides.

Provide the national regulation regarding principles, conditions and methods of RRR waste.
Chapter I Political & legal framework, Theme 6 Economic Initiatives of The assessment of the legal framework on the pesticides waste management in Belarus

Topic 4 – Recovery facilities
Are there any disposal/destruction facilities for pesticides waste or recovery facilities (especially for liquid and high concentration toxic waste)? Please provide examples?
Not for pesticides.

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? Is there any foreign financial assistance provided? Are there any mutual/bilateral agreements with international organizations or states that offered their assistance in this respect?
The country is working on creating such facilities (not for pesticides yet). For example, in June 2015, according to the investment agreement between the Government of Belarus and private investors from Israel and Cyprus a facility for the recovery of used mineral oils will be launched in Krupki, Minsk oblast.

Part II. Technical assessment of the management of obsolete pesticides and POPs waste and soil contamination in Belarus

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

1. Institutional arrangements
Responsibilities in the country

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	Reference Nr /Annex if needed
SAICM focal point	Presumably Ministry of Health but officially there is no national SAICM focal point		not applicable – (hereinafter – n/a)	
GEF Focal Point /Coordinating Unit	Ministry of Natural Resources and Environment Protection of the Republic of Belarus	(Usually this is the first deputy Minister; but at the time of the report the former first deputy Minister resigned and the new one is not officially appointed as a GEF Focal Point)	n/a	[x]
Stockholm Focal Point /POP Centre	Ministry of Natural Resources and Environment Protection of the Republic of Belarus	Head of Wastes Management Department (to be appointed); address – 10 Kollektornaya St., Minsk, 220048, Belarus; e-mail: Ph: +375 17 200 88 97 Email: 375296877122@tut.by	n/a	[xx]
Basel Focal Point	Ministry of Natural Resources and Environment Protection of the Republic of Belarus	Deputy Minister Mr. Igor Kachanovskiy, address: 10 Kollektornaya St., 220048, Minsk, Belarus Ph: +375 17 200 70 48 Email: minproos@mail.belpak.by	n/a	[xxx]

Rotterdam Focal Point	Belarus is not a party to the Rotterdam Convention		n/a	[xxxx]
FAO National Focal Point	Ministry of Agriculture and Food of the Republic of Belarus	National FAO Correspondent Ms. Irina Kazakevich; address – 103 Kazintsa ST., 2201086 Minsk, Belarus E-mail: NC-FAO-BLR@fao.org Ph: +375 17 212 11 03	n/a	
EU/other project implementation units for hazardous waste	EU Delegation to Belarus	EU Projects coordinator in Energy and Environment Protection Mr Philippe Bernhard ; Address: 34A/2 Engels Street, Minsk 220030, Belarus Ph: + 375 17 328 66 13 e-mail: Philippe.Bernhard@eeas.europa.eu	n/a	
Inter-departmental committees	n/a			
Other national coordinating body	n/a			
National waste focal point	Ministry of Natural Resources and Environment Protection of the Republic of Belarus	Deputy Minister Mr. Igor Kachanovskiy, address: 10 Kollektornaya St., 220048, Minsk, Belarus Ph: +375 17 200 70 48 Email: minproos@mail.belpak.by	n/a	
PRTR Protocol	Republican Research Unitary Enterprise "Belarusian Research Center " Ecology" – BelRC "Ecology"; address – 76 Yakubov St., 220095, Minsk, Belarus Ph. +375 17 248 6305 E-mail: promresource@tut.by	n/a	n/a	
Other information:				

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)

Data for 2013 on wastes according to the national statistical reporting and update of the unified POPs database (which includes OPs): Methodology is provided through the relevant regulatory documents: Rules of Obsolete Pesticides Management approved by Resolution of the Ministry of Natural Resources and Environment Protection and the Ministry of Agriculture and Food of the Republic of Belarus of 3 February, 2005 No. 5/6; Rules for Handling PCB Containing Equipment and Wastes approved by Resolution # 62 of the Ministry of Natural Resources dated June 24, 2008; State statistics report 1-wastes (MNREP) "Report on Production Wastes Management" established by Resolution of the National Statistics Committee of the Republic of Belarus of 19 September 2013 No. 208 is submitted annually by the wastes owners. The data of these reports are not publicly available. They can be requested at Republican Research Unitary Enterprise "BelRC "Ecology" or via Ministry of Natural Resources and Environment Protection.

2.2 Data sources and existing inventories (only Obsolete Pesticides)

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

According to State statistics report 1-wastes (MNREP) "Report on Production Wastes Management" established by Resolution of the National Statistics Committee of the Republic of Belarus of 19 September 2013 No. 208 the OPs owners are to report on the OP inventories annually. The data are accurate and valid as the local representatives of the Ministry of Natural Resources and Environment Protection may do inspections and check the validity of the reported data. The wastes owners are responsible for the accuracy and validity of the provided data.

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)

First National Implementation Plan of the Stockholm Convention (SC) was developed and submitted to the SC Secretariat in November 2006. In 2007 it was approved by Decree of the President of the Republic of Belarus No. 271 of 12 June 2007 and obtained the status of Governmental Programme.

According to this document, as of 1 January 2007, 6,558 tons of obsolete pesticides were stockpiled in storehouses and burial sites in Belarus including 718 tons of DDT, which is included in the list of persistent organic pollutants controlled by the Stockholm Convention. 3.37 tons of DDT were stored in storehouses, 714.53 tons - in burial sites. 2,079 tons of unidentified obsolete pesticides mixtures were stockpiled in the storehouses; 749.699 tons of obsolete pesticides mixtures have been buried. All in all there were about 143 storehouses for obsolete pesticides and 7 obsolete pesticides burials.

As of 1 January 2007, 380 power transformers filled with sovtol-10 (PCB-containing liquid) or similar foreign brand liquids, about 47 thousand PCB-filled power capacitors, 29 containers with PCB-containing dielectric liquids, about 40 thousand small-size capacitors were estimated to be in the Republic of Belarus. The total amount of the identified polychlorinated biphenyls in liquid form was estimated at 1,564 tons.

The releases of dioxins and furans were estimated to total 141.85 grams of Toxic Equivalent (gTEQ) per annum including releases to air – 36.6 gTEQ, releases to water – 0.5gTEQ, to land – 1.4 gTEQ, in products – 0.05 gTEQ and in combustion residues – 103.3 gTEQ. Releases occurred mainly to air (25.8%) and in residues of combustion processes such as ash and sludge (73%). (Ref. 4 http://popsbelarus.by/en/national_implementation_plan/natplan_en.html)

2.4 NIP update (specifically on new POPs)

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

In 2011 a new updated NIP was endorsed by Decree of the President of the Republic of Belarus (No 271 of 27 June, 2011) gives updated figures on the traditional POPs whereas the new POPs data were not available yet. The updated NIP stipulates taking inventory of new POPs (this is an activity of an Action Plan of the NIP).

The document gives the following inventory data – as of January 1, 2011, 7,149 tons, i.e., 95 per cent out of 7,281.5 tons of obsolete pesticides identified through the inventory, were repacked. In 2007 one OP burial site (Gershony in the Brest region) was eliminated, the repackaged pesticide wastes were taken for secure storage in the Communal Unitary Enterprise "The Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial" – the only specialized storage facility for hazardous wastes. The works on elimination of the Petrikov OP burial site (one of the initially 7 OP burial sites organized on the territory of Belarus in the times of the Soviet Union) in the Gomel region had started by then. As of January 1, 2011, 452.1 tons (380 special metal containers) of obsolete pesticides were recovered and transported to the above mentioned facility.

The implementation of the 2007-2010 National Plan activities on updating the polychlorinated biphenyls database and inventory has helped to adjust and augment data on the number of electric equipment and waste containing polychlorinated biphenyls. 54,600 power capacitors, 308 power transformers and 30 tanks with polychlorinated biphenyls have been found in the country by the beginning of 2009. The total amount of liquid polychlorinated biphenyls in electric equipment and tanks is estimated at 1,562 tons.

2.5 UNITAR Chemicals Profile

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

N/a for Belarus

2.6 National Pesticides/POPs inventory

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

There are no inventories of obsolete pesticides in Belarus independent from the Convention frameworks

2.7 FAO PSMS inventory

No nationwide FAO PSMS inventory has been taken.

Inventory Implementation:

- inventory training
- inventory work plan
- inventory field visits and data collection
- inventory data entry into PSMS
- inventory data validation – stocks and contaminated sites

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
The Law of the Republic of Belarus of November 9, 2009 No. 54-3 «On State Environmental Review» demands that the development of facilities for disposal, storage, landfilling of production wastes as well as the facilities for the use of production wastes of toxicity classes 1-3 are subject to state environmental review. This procedure includes preparation and submittal of the Environment Impact Assessment (EIA) report. Resolution of the Council of Ministers of the Republic of Belarus No. 755 of May 19, 2010 "On Some Measures for Implementation of the Law of the Republic of Belarus of November 9, 2009 "On State Environmental Review" defines the procedure of environment impact assessment. Any other facilities and/ or processes related to hazardous wastes management are not subject for EIA, for example, repackaging of OPs does not need an EIA.

3.2 International experience
non-FAO – WB, UNDP CESA etc
The full-size GEF financed project "Integrated Solid Waste Management Project - Component C: (Persistent Organic Pollutant Stockpile Management)" was given category A according to the social and environmental safeguards policy of the World Bank (an international implementation agency for this project). At the preparatory stage (PDF-B) an EIA for the activities of the project was made. In particular, the elimination of the OP burial site near Slonim was preceded by the development of an EIA report, which included analysis of the situation before the start of the project; assessment of the impact of the planned activity; assessment of the situation if no activity is undertaken; development of the Environment impact mitigation plan and Environment Monitoring Plan. The EIA also included two rounds of public hearings (the minutes of the hearings, as well as relevant modifications to the developed documents were attached to the final report).
http://wwwwds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2010/02/22/000333038_20100222232938/Rendered/PDF/E22900v50P11451port1POPs1ENGL0final.pdf

3.3 Capacity government and private to develop
Are there consultants or government trained people?
The Ministry of Natural Resources and Environment Protection has a special dedicated Department of State Environment Impact Assessment with highly professional and well trained staff. While this body performs supervision and control functions rather than developing EIA reports, such organizations as Republican Research Unitary Enterprise "BelRC "Ecology", Research and Production Republican Unitary Enterprise "NILOGAZ", Planning and Surveying Republican Unitary Enterprise "Belgiprovodkhoz" and other research and practical organizations provide services of EIA.

3.4 FAO stages in Environmental Assessment (EA) and Environmental Management Plans (EMP) experience from EMTK v 3
(Environmental Management Tool Kit for Obsolete Pesticides)
So far there has been no experience of practical application of the FAO Environmental Management Tool Kit for Obsolete Pesticides in Belarus.

Other information: n/a

4. Inventory and Environmental Assessment Management
If references needed please provide in the concerned Annex

4.1 Responsible Organisation for Inventory and Assessment in place and operational - Yes
There is no specially dedicated organization for Inventory and Assessment – according to the national legislation – owners of the wastes (pesticides wastes, PCBs, other hazardous wastes) are responsible for taking inventory, filing the inventory reports and providing them for inspection of the territorial branches of the Ministry of Environment, organizing secure storage of the wastes, their disposal, as well as undertaking environment monitoring in the places of the hazardous wastes storage. There are some specially dedicated regulatory documents specifying management of definite type of wastes: for example, Rules of Obsolete Pesticides Management approved by Resolution of the Ministry of Natural Resources and Environment Protection and the Ministry of Agriculture and Food of the Republic of Belarus of 3 February, 2005 No. 5/6 (Gives the details of the procedures on obsolete pesticides handling – inventory, repackaging, storage, transport); Resolution of the Ministry of Health of the Republic of Belarus of November 22, 2002 No. 81 «On Approval of the Instructions on the Rules and Methods of Disposal of Medical Wastes, Medical products and Appliances» (obliges the owners of the wastes take regular inventory, provide secure storage and disposal in accordance with the detailed procedure described therein); Provision of the Ministry for Emergencies of the Republic of Belarus of August 3, 1998, Ministry of Natural Resources and Environment Protection of the Republic of Belarus of August 4, 1998, Ministry of Economy of the Republic of Belarus of July 31, 1998, Ministry of Health of the Republic of Belarus of August 31, 1998 No. 263 "On the Procedure of Inventory, Storage and Collection of Mercury, Mercury-containing Wastes".

4.2 All managers/coordinators/Field people in place and operational - Yes
The heads of organizations – owners of hazardous wastes are responsible for the proper management of these wastes. There is always a dedicated person in an organization that is responsible for practical activities on inventory, assessment, storage etc, of the wastes. In case some field activity (like repackaging, or environment monitoring, assessment) is organized by specialists from the Ministry for Emergencies, or environmental institutions can be contracted by the owner.

4.3 All Field teams established and operational – Yes
As it was mentioned above, there are no field teams specially dedicated for hazardous wastes inventory and assessment. Whereas in case the owner of the wastes cannot take inventory themselves (for example, it is not feasible to define the type of electrical equipment, which presumably can be PCB containing, in this situation the owner may contract specialists from the National Academy of Sciences of Belarus, BelRC "Ecology". For repackaging and transport of hazardous wastes the specialized unit of the Ministry for Emergencies may be hired.

4.4 All Inventory data management people in place and operational - Yes
The inventory data for wastes (including POPs and obsolete pesticides) are collected and maintained in databases managed by BelRC "Ecology" under the aegis of the Ministry of Natural Resources and Environment Protection.

4.5 National/Regional Inventory updated – Yes
National/ Regional inventory is updated annually

4.6 National Pesticides/POPs Inventory Established - Yes
There is a unified POPs database maintained by BelRC "Ecology". There are plans to have this database accessible through Internet,

the Ministry of Natural Resources and Environment Protection should finalize the regulatory framework for this. At present if an individual or organization needs data from the DB they have to address the Ministry of Environment to obtain them.
4.7 Contaminated Sites Register – Yes As for POPs and obsolete pesticides the register of contaminated sites makes part of the unified POPs database, hosted by BelRC "Ecology". The access – see above explanation.
Other information: n/a

5. Safeguarding

If references needed please provide in the concerned Annex

5.1 National projects

If we consider safeguarding as collection and securing the hazardous wastes (OPs mostly) then there has been a nationwide programme financed from the budget (republican and local budgets) (2005-2010 – most active part of the programme) on repackaging and securing the OPs stockpiles at the premises of the agricultural enterprises- owning these wastes. Due to the implementation of this programme almost all obsolete pesticides stored at the enterprises have been repackaged and secured. Presence of relevant regulatory framework for this encouraged this process greatly. There are also burial sites of the obsolete pesticides. In the framework of the Implementation of the NIP of the Stockholm Convention some measures on securing the buried stockpiles have been also taken – in particular, all the sites have new fences, surrounding pits, danger notices.

If we consider safeguarding as verification of the safety measure taken then there have been no special projects or safeguarding missions related to hazardous wastes handling (packaging, transportation, disposal) except some control missions of the Committee of Governmental Control of the Republic of Belarus, the purpose of which is to check the activity of an organization, its compliance with the national legislation.

5.2 International projects

Safeguarding as securing:

It happened that OP repackaging work and securing in Belarus started from an international project of technical assistance, which had a great impact on obsolete pesticides handling in the country. The first practical activity on hazardous wastes management in the framework of an international project was undertaken in 1997-2003 as part of the Danish-Belarusian project on repackaging of obsolete pesticides that was implemented by the Ministry of Natural Resources and Environmental Protection, the Ministry of Agriculture and Food and the International Consortium COWI with support from the Danish Environmental Assistance to Eastern Europe (DANCEE). The output of this project is that by 1 June 2005, 98 per cent of the obsolete pesticides stockpiled in the Grodno region had been repackaged into the containers meeting the UN approved packages. The practical experience of that first international initiative was also reflected in new regulatory documents related to obsolete pesticides management.

Safeguarding as verification:

In the framework of the GEF/World Bank project “Integrated Solid Waste Management Project - Component C: (Persistent Organic Pollutant Stockpile Management)” the activity on the cleanup of the Slonim OP landfill and transportation of OP wastes and PCB wastes to Europe for ultimate disposal was verified by independent international consultants. All the documented evidence of the activities fell under due diligence process; the consultants verified all the inventory, transport, laboratory control and monitoring documents both in Belarus and at the enterprises where the wastes were ultimately disposed of.

5.3 FAO projects

Safeguarding as securing:

International experience of proper obsolete pesticides handling is really diverse.

In the framework of the FAO project "Capacity Building on Obsolete and POPs Pesticides in Eastern European Caucasus and Central Asian (EECCA) countries."

One of the project’s activities was repackaging training that took place in Belarus. It comprised one week of class room training and field work on repackaging obsolete pesticide wastes in stores in the Vitebsk Region of Belarus. Training took place in June 2011. The participants included a mixture of personnel involved with the safe guarding of pesticides; national waste management experts,

representatives of ministries of agriculture, environment, and emergency and associated institutes/laboratories.
The following tasks were performed during the training: national waste management experts were trained in the FAO procedure and standards for repackaging obsolete pesticides as set out in EMTK 4; the health risks associated with repacking and the associated safety measures to follow were explained; awareness of the limits of national repacking teams and the circumstances when an external, professional contractor should be hired was created; the countries were stimulated to repack unsafe POPs stockpiles and eliminate related risks and initiate work of available state and public institutions in this direction; and the last but not least - approximately 45t of OPs were repacked and put for secure temporary storage.

Other information:

6. Storage and transport

Packaging/Containerization/Storage/Transportation

6.1 Transport regulations

In-country transportation planning competences available?

(e.g. ADR/IMDG/RID/DOT compliant, route planning, scheme, vehicle inspection scheme, certified local contractors)

Yes. The national regulation on transport of hazardous wastes including transboundary transport is in line with the relevant international regulations (in particular, ADR, Basel Convention and similar).

6.2 Driver regulations

Driver registration

Article 26 of Law of the Republic of Belarus of June 6, 2001 No. 32-3 "On Transport of Hazardous Cargo" stipulates the requirements to the drivers of mechanical vehicles transporting hazardous cargo (qualification and medical requirements). More detailed requirements are reflected in the document "Rules of Ensuring Secure Transport of Hazardous Cargo by Vehicles in the Republic of Belarus" approved by Resolution of the Ministry for Emergencies of the Republic of Belarus No. 61 of 8 December, 2010. In particular, it stipulates specific training for the drivers. For example, educational establishment "International Private Training and Proficiency Raising Center of personnel of BelTUV" offers specialized training courses for the drivers of vehicles carrying hazardous cargo.

6.3 Storage regulations

(Seveso – off and on site emergency planning)

The Law of the Republic of Belarus of January 10, 2000 No. 363-3 "On Industrial Safety of Hazardous Industrial Facility" obliges any organization operating a hazardous industrial facility to control industrial safety compliance in accordance with the requirements of the national legislation.

Storage of obsolete pesticides wastes and PCB wastes is additionally regulated by secondary legislation - Rules of Obsolete Pesticides Management approved by Resolution of the Ministry of Natural Resources and Environment Protection and the Ministry of Agriculture and Food of the Republic of Belarus of 3 February, 2005 No. 5/6 and Resolution of the Ministry of Natural Resources and Environment Protection of the Republic of Belarus of 24 June 2008 No. 62 "On Approval of the Rules of Handling Equipment and Wastes Containing Polychlorinated Biphenyls".

6.4 Storage capacity

Private or government, collection centers available, (e.g. responsible, no of suitable collection centers identified)

According to the national regulation on wastes management if the wastes cannot be taken for recycling or proper disposal they can be stored at the premises of the owner of such wastes (for example, PCB containing wastes). There is only one specialized facility for environmentally sound long-term storage of wastes (collection center) - the Communal Unitary Enterprise "The Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial". There are no private collection centers for hazardous wastes in the country.

6.5 Incident reporting and accidents

Article 20 of the Law of the Republic of Belarus of January 10, 2000 No. 363-3 "On Industrial Safety of Hazardous Industrial Facility" obliges any organization operating a hazardous industrial facility to hold a record of all accidents and incidents happening at the facility and report them to the relevant governmental bodies as prescribed by national regulation.

Other information:

7. Disposal

7.1 National experience

Technology selection

The issue of ultimate disposal of hazardous wastes (primarily obsolete pesticides wastes, PCBs, some medical wastes) has been always taken seriously at the highest governmental level in Belarus. In 2006 the Council of Ministers of the Republic of Belarus made a decision to make an analysis of the existing technology capacity for the ultimate disposal of hazardous wastes and prepare the Specifications for the potential tender for a hazardous wastes disposal facility. This led to the inclusion of an activity in the current NIP Action Plan on installation of a facility with the capacity of 1,000-1,500 ton of wastes per year based on high temperature incineration technology. The activity also presupposed the participation of the Communal Unitary Enterprise "The Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial" as a partner (as it has the basic required infrastructure for the development of such a facility as well as the stockpiles of wastes dedicated for ultimate disposal). Due to limited financing of this activity so far no equipment has been procured and no works on the development of such a facility have been started.

Transboundary transport under Basel Convention

The Republic of Belarus is a party of the Basel Convention and has its national legislation in compliance with the requirements of this convention. Resolution of the Council of Ministers of the Republic of Belarus of 23 September 2008 No. 1397 "On several questions of the procedure of the movement of definite kinds of goods through the State border of the Republic of Belarus" defines the procedures of obtaining the permit for the transboundary movement of hazardous wastes. It is worth mentioning that while the Ministry of Environment remains the focal point of the Basel Convention and competent authority, the practical issuance of the permitting document for the transboundary movement of the wastes is implemented by the Ministry of Trade of the Republic of Belarus. There is also some discrepancy between the Belarusian regulation of transboundary movement of hazardous wastes (in particular, PCBs) and the relevant regulation of the Customs Union. Annex 1 to the Decision of Collegium of Eurasia Economic Commission of 16 August 2012 No. 134 presents the Unified List of goods to which bans or limitations on import of export by the states – member of the Customs Union are applied in the framework of the Eurasia Economic Union in trade with the third countries. According to this list such wastes as PCB and PCB containing materials cannot be imported on the territory of the Customs Union. Such provision makes national Basel regulation rather ambiguous in situations when wastes go as transit from east to some Western European country.

National transport

Belarus has well-developed regulation on internal transport of hazardous cargo – well tuned with the international relevant legislation (for example, ADR). For example, Rules of Provision of Safe Carriage of Hazardous Cargo by Road in the Republic of Belarus approved by Resolution of the Ministry of Emergency Situations of the Republic of Belarus of 8 December 2010 No. 61 define all the requirements (packaging, requirements to vehicles, drivers, route, safety measures, information, documentation) towards transportation of hazardous cargo (wastes included). The logistics services are well developed in Belarus, too. Such companies as WestTransLine (http://westtransline.com); Belgruzavtotrans TEP LLC (http://www.belgruz.by) have not only the required licenses and insurances for internal and international transportation but also practical experience of carrying POPs wastes (pesticides and PCBs of different form) from Belarus to Western Europe.

Disposal capacities in Country

(e.g. type and no of disposal facilities,(landfill/destruction) permits

Currently the only disposal facility provides long-term environmentally secure storage (not destruction). This is the Communal Unitary Enterprise "The Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial". Detailed analysis of the capacity of this facility is given in the attached narrative report. Annex nr 14.

Quality and standards applied (national/international), ownership
N/A

(Public/private), contact details)
N/A

Project examples
(e.g. name project, tons, year, landfill or destruction facility, responsible authority (if possible, contact details))
There has been one pilot project on ultimate destruction of obsolete pesticides:
A project under UNDP/GEF Small Grants Programme. In the course of the project implementation in 2012-2013 the company "Blavar" (Latvia) imported and installed a microwave technology equipment at the Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial (Chechersk complex). This equipment allows destruction of the hazardous wastes using the microwaves which reduces the emissions of hazardous substances. As a result, 20 tons of obsolete pesticides were destroyed. Additionally samples of ashes and air were taken to define the content of dioxin emissions. The samples were taken and analyzed by Federal State Budget Establishment «Research and Production association «Typhoon» (the town of Obninsk). As there is no standard for the content of dioxins in air or in ashes in Belarus, the international norm of 100 pg/m^3 was used for comparison. The maximum concentration in air samples made 99.6 pg/m^3; the samples of ashes did not contain dioxins. Both the destruction and analytical equipment was placed only for the time of the pilot project after which it was removed.

7.2 International experience
Almost all bigger donor and project implementing organizations, which are present in Belarus, have addressed the topic of hazardous wastes management. The first practical activity on hazardous wastes management in the framework of an international project was undertaken in 1997-2003 as part of the Danish-Belarusian project on repackaging of obsolete pesticides that was implemented by the Ministry of Natural Resources and Environmental Protection, the Ministry of Agriculture and Food and the Danish Consultant COWI with support from the Danish Environmental Assistance to Eastern Europe (DANCEE). The output of this project is that by 1 June 2005, 98 per cent of the obsolete pesticides stockpiled in the Grodno region had been repackaged into the containers meeting the UN requirements for obsolete pesticides repackaging, mainly all in all about 2,000 tons – 500 tons in the Slutsk district and about 1,500 tons in the Grodno region. The repackaged pesticides were put for temporary storage in the storehouses where they had been stored. The practical experience of that first international initiative was also reflected in new regulatory documents related to obsolete pesticides management.

An important step in the development of international cooperation in the area of hazardous wastes management (mainly POPs management) is the implementation of projects related to the Stockholm Convention on POPs. In 2004-2006 a GEF/ World Bank project "Enabling activities related to the implementation of the Stockholm Convention on Persistent Organic Pollutants (POPs) in the Republic of Belarus" was implemented. As a result of is a National Implementation Plan of the Stockholm Convention was developed and endorsed; an inventory of POPs as taken; assessment of POPs impact on health and environment was undertaken followed by the development and endorsement of POPs monitoring programs. Regulatory and institutional capacity was assessed and proposals for further improvements were made.

The follow-up project was a full-size GEF financed project "Integrated Solid Waste Management Project - Component C: (Persistent Organic Pollutant Stockpile Management)". It was implemented in two stages – preparatory – 2009-2010 and implementation stage – 2010-2013. Based on the results of the project concrete and tangible reduction of environment and health risks is observed – about 2,677 tons of POPs containing wastes (pesticides and PCBs) were ultimately destructed by high temperature incineration at the specialized facilities in Germany and France. In particular, the second biggest OP landfill in the country – the Slonim OP landfill – was eliminated; 14 PCB storage "hot spots" were liquidated. Valuable practical experience of the compliance with the international

transportation requirements was acquired by the Belarusian enterprises and other stakeholders. POPs monitoring capacity was enhanced.

Technology selection
As for the mentioned WB project, the criteria for the technology selection were commercially proved, environmentally sound and economically efficient; thus, in the course of the tender the company with high temperature incineration technology (SAVA, Germany) won.

Transboundary transport under Basel Convention
The report gives details on the transboundary transport under the Basel Convention, the procedure is the same for any kind of project with transboundary movement of wastes; more details are also given in the narrative report attached to this table.

National transport
The report gives details on the requirements of to the national transport of hazardous wastes

7.3 Experience with FAO
There has been no practical experience of implementation a FAO project on hazardous wastes disposal in Belarus, but FAO has let a tender to dispose of 315 tonnes from Belarus - this should be included. Safeguarding and disposal expected by early 2016.

Other information:

8. Containers

8.1 National experience

Before the nation-wide programme on pesticides wastes repackaging obsolete pesticides were mostly stored in their initial containers (paper and plastic bags, metal drums). Very often this type of packaging was damaged and could not provide secure storage. For the recent tem years almost all obsolete pesticides have been repackaged in new containers – HDPE drums (120 l, 220l, 60 l). Not all of these drums are valid for international transboundary transport (because of the absence of UN certificate). At the Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial (Chechersk complex) according to the design documents special metal containers were used for packaging and long-term secure storage of obsolete pesticides wastes. Currently due to their high cost and difficulties with delivery the facility uses the HDPE drums for packaging the obsolete pesticides that come to the facility.

8.2 International experience

e.g. Priorities on containers in NIP Action Plan

There has been no special project or prior international experience related to containers disposal.

8.3 FAO supported plan

N/A

8.4 Amount and type of empty containers/packaging materials?

(e.g. materials recycling in types, amounts)

8.5 Collection Centres for empty containers?

(e.g. no of centres, responsibility, compliant with FAO guidelines?)

There are no special collection centers for empty containers. Some type of packaging is stored at the premises of the agricultural enterprises that have used the pesticides or the packaging is to be sent to the pesticides producer (e.g. Enterprise producing pesticides “Avgust-Bel” has an installation for the ultimate destruction of pesticides wastes (packaging including) deriving only from pesticides that have been produced by them). Some packaging is buried at the landfills.

Other information:

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	**Volume (legacies)**		**Tonnes**	**References / Annex**
	Annually produced waste	**Tonnes/year**		
I. Summary for all waste streams	Annually about tons of hazardous wastes of hazard classes 1-4 are generated in Belarus. 97 % of these wastes are hazard class 4.	33.260 million		
A. Agricultural chemical waste: *(see also parts already been filled in in the benchmarking section)*				
1. Obsolete pesticide waste	Total amount accumulated as of now		6,907.232	
2. POPs pesticide waste: aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene (HCB*), mirex, toxaphen, chlordecone, alpha hexachlorocyclohexane (a-HCH[2]) *, beta hexachlorocyclohexane (b-HCH)*, lindane, pentachlorobenzene*	Total amount accumulated as of now Note: Most of obsolete pesticides stored in burials or in storehouses are unidentified mixtures which are likely to contain POPs (such a conclusion is made based on the analytical study undertaken at some storehouses in the framework of the World Bank project on NIP of the Stockholm Convention development in 2005-2006 as well as based on the historical evidence of use of POPs pesticides in agriculture in the Soviet times)		59.93	
3. New pesticides waste *(incl. fake (counterfeit) pesticides)*	No such data are available in official statistics and wastes databases (strict regulation on pesticides registering and sale implies no or very little amount of fake pesticides on Belarusian market)		No or very little amount	
4. Empty containers waste	There are no separate statistical data on generation of empty pesticide containers whereas the total amount of pesticides use in the country is about 12,500 thousand tons annually, thus the amount of empty packaging may vary between: (Part of empty packaging goes to the producer for disposal, part of it is stored at the premises of the agricultural enterprises)		650-1,000	

[2] HCH is often used in Russian as HCCH

5. Contaminated sites	Burial sites are considered to be the territories contaminated with OPs. As all of them are included in the system of local environment monitoring the available figures for contamination of the area with pesticides show that currently the wastes are more or less well contained and no leakages above the maximum allowable levels (MAC) have not occurred. Whereas the Petrikov OP landfill that is being liquidated at present will have contamination spread beyond the boundaries of the trenches where the chemicals had been buried. So far no analytical works have been undertaken there to prove this. As the analytical works undertaken in 2005-2006 at some of the bigger storage sites of OPs revealed contamination with OPs including POPs in the close proximity with the storage houses. Whereas the contamination levels were not high in most cases – from 5 to 40 ug/kg and only in one case at the Grodno agriservice storage site the concentration of dieldrin made almost 3 g/kg. Thus, all the storage sites for agricultural chemicals (obsolete pesticides) are considered as potential contaminated sites.		No numbers can be given	
a. Burial sites (polygons)	As of now there are four burial sites of obsolete pesticides in the country. Three of them are situated in the Vitesbk Oblast (Verkhnedvinsk, Postavy and Gorodok), one (Dribin OP burial) is situated in the Mogilev oblast. The total amount of buried pesticides in these burials makes: One more OP burial is still being liquidated (Petrikov OP burial) the pesticide wastes are being taken to the Chechersk Complex for long term storage. The Chechersk capacity - total about 216, 000 tons; of them Facility 1 - about 101, 881 tons; Facility 2 – 114, 119 tons. The capacity can be enhanced due to the existing design works plans and projects as well as the area dedicated to expansion of the storage space at the facility.		1,496	

b. Storage sites	In total		5,411	
c. Usage sites *(airfields, formulation plants etc.)*	Usage sites have not been analyzed for contamination and no such sites are included in the databases of OPs.		Not included	
B. Industrial chemicals:				
1. POPs a. PCBs, HCB*, hexabromobipheny (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)	As for industrial chemicals mentioned in this chapter only PCBs have been inventoried so far. The total amount of PCBs (equipment in-use and phased out) makes as follows: Items of PCB containing transformers; items of PCB containing capacitors	290 pcs	41,120 pcs	
2. Contaminated sites *e.g. Contaminated containers, transformers and equipment*	At present there are 15 PCB contaminated sites identified and assessed, whereas the potential number of such sites if bigger. They are mostly the places where the phased out equipment is stored by the enterprises-owners of such equipment. These places are characterized by localization of the contamination within the boundaries of several square meters.		No data, but only sites 15 PCB contaminated sites	
3. Oily wastes *e.g. non-POPs production waste, lagoons of sediments and sludges, solvents, waste lubricating oils*	Waste lubricant oils: Solvents: tar containing wastes: TOTAL:	20,000 62,000 1,600 83,600		
4. Inorganic wastes *Solid, liquid and sludge inorganic waste*	Halite wastes and halite clay-salt sludges make the maximum of the wastes in Belarus. About 30 million tons have been			

(often in many country with mining activities and metal industries)	accumulated as of now: Other mineral wastes make per year:	 9.3 Million	30 Million	
C. By-products				
1. Unintentional POPs 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 groups, Kaolin or ball clay sites	Major sources of unintentional POPs releases (dioxins) Wastes incineration - 15 major sources producing annually: Ferrous and non-ferrous metals – 10 major sources producing annually: Production of Mineral products – 8 major sources producing annually: So far no sites contaminated with unintentional releases of POPs have been identified and inventoried.	52,343 TEQ 33,608 TEQ 1.586 TEQ No data		

2. a-HCH*, b-HCH* (being generated from the Lindane production) **and pentachlorobenzene***	There are no such types of wastes inventoried in Belarus		0	
3. HCB* (generated from PVC production and rubber tyres production)	There are no such types of wastes inventoried in Belarus		0	
D. Petroleum wastes Tarry and bituminous wastes, still bottom waste (from Distillation plants)	Hydrocarbon containing wastes in the form of mineral oils wastes, emulsion wastes, oil containing sludge per year:	30,000		
E. Inorganic wastes Liquid and sludge inorganic waste Solid inorganic waste	Mineral wastes; 52.9 % of the total amount of wastes):	9.3 million		
F. Health Care Risk Waste	0.1 % of the total amount about:	5,000		
Summary volumes				
Estimate of total hazardous waste market (tonnes/year)	Hazardous wastes of hazard classes 1-4 are generated in Belarus. 97 % of these wastes are hazard class 4., annually about:	33.260 Million		
POPs waste volume	Tonnes of POPs pesticides: PCB containing transformers: pcs PCB containing capacitors: pcs		59.93 290 pcs 41,120 pcs	
Other information added to this table:				
*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!				

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, permit for treatment of types hazardous waste, permit info, date permit**	**Reference Nr /Annex if needed**
Existing plants N/A e.g. existing and functioning hazardous waste landfills (polygons) or soil treatment plants				
1 Private owned				[x]
2 Government owned				[xx]
Potential plants N/A 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				
1 Private owned			N/A	[xxxx]
2 government owned			According to Activity No 31 of the Action Plan of the NIP of the Stockholm Convention it was planned to procure equipment for the wastes incineration installation of capacity 1,000-1,500 tons per year during 2012-2013. About 6 million USD equivalent of budget funds was dedicated to this activity. So far the tender has not been successful.	[xxx]
Planned facilities Government and or privately planned new hazardous waste facilities e.g for treatment of oil waste in oil and gas industry				
1 Private owned			N/A	
2 government owned			See previous comment	
Planned and/or implemented pilot plants 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				
1 Microwave technology equipment at the Gomel Oblast	Juridical address: Belarus 246050, Gomel, 31 Krestyanskaya St.,	Director – Alexander Trestyan	This equipment allows destruction of the hazardous wastes using the microwaves which reduces the	

Complex for Toxic Industrial Waste Recycling and Burial (Chechersk complex)	Ph./Fax +375(232) 70-05-58 E-mail: cpdhiwgr@mail.gomel.by		emissions of hazardous substances. As a result, 20 tons of obsolete pesticides were destroyed. Additionally samples of ashes and air were taken to define the content of dioxin emissions. The samples were taken and analyzed by Federal State Budget Establishment «Research and Production association «Typhoon» (the town of Obninsk). As there is no standard for the content of dioxins in air or in ashes in Belarus, the international norm of 100 pg/m^3 was used for comparison. The maximum concentration in air samples made 99.6 pg/m^3; the samples of ashes did not contain dioxins.	
2				
Existing and/or planned empty container (plastic and or steel) recycling facilities/initiatives N/A Steel recycling e.g at existing steel industry and plastic at existing plastic industry				
1 Private owned				
2 government owned				
Any other information related to important market players in this field N/A List names of the major market players with address and main address/location, Contact person (name/contact details) and indicate their main interest				
1				
2				

Section IV: Transportation logistics

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

Note: There are no disposal facilities for hazardous wastes in the country (except for the Chechersk complex, which provides secure storage and has rather limited storage capacity at present). As the experience of exporting POPs wastes to Western Europe in the framework of the World Bank project proved the most efficient means of transport of hazardous wastes is road transport (the stockpiles are scattered throughout the country, the amount of wastes in these stockpiles varies from hundreds of kilograms to hundreds of tons; there is no collection points for hazardous wastes in the country – Chechersk complex cannot be used as an interim logistics point without additional minor construction works). The closest distance from a storage to the state border with European Union (point of crossing is about 50 km; the farthest – is about 600 km). The previous tendering experience proved that the average cost of automobile transportation of hazardous wastes to such countries as Germany and France made 300 Euro per ton (this included such transportation materials as wooden pallets, packaging straps and film and did not include the wastes packaging per se (from example HDPE drums)). Thus the below table cannot be filled in for every wastes stockpile (there will be more than 200 locations depending on the type of wastes included), but the above mentioned information gives a clear picture of transportation possibilities and capacity in Belarus at present.

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**	**Reference Nr /Annex if needed**
1 In country 2 In foreign country				
1 In country 2 In foreign country				
1 In country 2 In foreign country				

Assessment of possible storage networks: waste transfer stations e.g. at main railway stations or at existing landfills (polygons) or waste handling stations

List and describe existing stations with required details

As mentioned above there are no dedicated wastes storage networks in the country, whereas such a network or a transfer station could be arranged for the purposes of a definite project (for example, in case of PCB wastes expert to France in the framework of the WB project, the Belarusian railways (BRW) arranged their own temporary storage site for PCB wastes collected from several enterprises of BRW).

Assessment of transport capacity

*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*

Already covered above.

Reference to the requirements of the Basel Convention (+ previous) experiences made with international export Implications of custom facilities

Describe Cases/ experiences that country have been made with international exports, not already covered under I. Benchmarking under 7.2 International experience Indicate year and location (country) where transported from and where to and authorities involved and kind of waste. Briefly describe cases

Case 1

Transportation of POPs pesticides from the Slonim OP burial to Germany for ultimate destruction.
The works were implemented in the framework of the WB project on POPs management during 2011-2013.
According to specifications of the Disposal contract the responsibility for the notification process prescribed by Article 6 of the Basel Convention and Chapter A *Imports of waste for disposal* of Title V *Imports of waste into the Community* of Council Regulation (EEC) No 259/93 of 1 February 1993 on the supervision and control of shipments of waste within, into and out of the European Community is imposed on the Contractor. The Contractor prepared and submitted (or in cases when it was not possible by procedure – instructed on submission) the necessary documents to receive the consent of all competent authorities of export (Belarus), transit (Poland, Lithuania) and import (Germany). In a couple of times the process was delayed due to the inquiry of additional documents (in fact, translation into Polish) by the Polish competent authority – the Disposal contractor also took on this responsibility.

In the framework of contract 36 shipments were actually made.
The following transport documents were prepared:

- **Loading (packing) list**;
- **CMR**;
- **Proforma invoice**;
- **Movement documents for transboundary movement/shipment of waste** – different notification documents for different type of packaging and different aggregate state pesticide wastes (solids, liquids) No. 030BY12120001152 for solid pesticides packaged in PE drums (Shipments;
- **German Customs Office Declaration**.

No problems with following the Basel convention regulations or regulations of the countries of export, transit and import occurred. The total amount of shipped wastes makes 1,843.615 tons.

Case 2

Export of 823.1 tons of PCB wastes from 14 Belarusian enterprises to France for ultimate disposal. The Notification process was very similar to the above mentioned while the number of notifiers was 14 (only the owner of the wastes can apply for the notification document). The transport documents were the same. There were no major problems with following the Basel convention procedure (apart from the Polish requirement to provide Polish translations of all the documents).

Summary sheets on findings
Identify the gaps in information (for all 5 sections) The major gaps concern difference of classification of the types of wastes on Belarus and in European practice. Not all wastes types are recorded in the governmental statistics of available databases. The main example is the pesticides packaging wastes.
Analysis of barriers (technical, economic) to the development of national and regional waste management capacity There are no major barriers to the development of national and regional wastes management capacity, vice versa there is political will to develop such capacity and even definite steps on allocation of budget financing to that (though evidently insufficient). There is also a well developed infrastructure of the Chechersk complex that could be used as an installation site for the disposal equipment (see narrative report attached for more detail). See Annex nr. 1
Analysis of opportunities (technical, economic) to the development of national and regional waste management capacity There are favorable conditions for the development of a hazardous wastes disposal facility (both national and regional). As for the national, it was already described that the Government supports it both politically and financially. As for the regional facility – it should be considered from the point of view of the Customs Union regulations (Belarus, Kazakhstan and Russia have similar regulations on the movement of hazardous wastes, thus the movement of wastes between the members of the Union may be less problematic comparing to other neighboring countries). At that current wastes movement regulation of the Customs Union has some limitations on the movement of some definite types of wastes (including POPs wastes) thus in case of a regional installation in any of the countries-members of the Customs Union the relevant amendments to regulations should be introduced.
Other findings that need to be addressed See narrative report attached in Annex 1.

References

(No detailed information has been included in the main text. Only Annex 14 is appended. Other reference materials can be found in the respective websites or can be obtained at the listed organizations)

1. Rules of Obsolete Pesticides Management approved by Resolution of the Ministry of Natural Resources and Environment Protection and the Ministry of Agriculture and Food of the Republic of Belarus of 3 February, 2005 No. 5/6;
2. Rules for Handling PCB Containing Equipment and Wastes approved by Resolution # 62 of the Ministry of Natural Resources dated June 24, 2008;
3. Resolution of the National Statistics Committee of the Republic of Belarus of 19 September 2013 No. 208 "On Approval of the Form of the State Statistical Reporting 1-Waste (Ministry of Nature) "Report on the Management of Production Wastes"(http://www.pravo.by/main.aspx?guid=1681&p0=27.09.2013&p1=27.09.2013)
4. Decree of the President of the Republic of Belarus No. 271 of 12 June 2007 «On Approval of the National Plan of the Republic of Belarus for the Implementation of its Obligations under the Stockholm Convention on Persistent Organic Pollutants for the period of 2007–2010 and until 2028» http://popsbelarus.by/en/national_implementation_plan/natplan_en.html
5. Decree of the President of the Republic of Belarus No 271 of 27 June, 2011 «On Approval of the National Plan of Implementation of the Obligations Assumed by the Republic of Belarus on Implementation of the Provisions of the Stockholm Convention on Persistent Organic Pollutants in the years of 2011-2015» http://popsbelarus.by/en/national_implementation_plan/natplan_en.html
6. The Law of the Republic of Belarus of November 9, 2009 No. 54-3 «On State Environmental Review» http://www.pravo.by/main.aspx?guid=3871&p0=H10900054&p2=%7BNRPA%7D
7. Resolution of the Council of Ministers of the Republic of Belarus No. 755 of May 19, 2010 "On Some Measures for Implementation of the Law of the Republic of Belarus of November 9, 2009 "On State Environmental Review" http://www.pravo.by/main.aspx?guid=3871&p0=C21000755&p2=%7BNRPA%7D
8. Resolution of the Ministry of Health of the Republic of Belarus of November 22, 2002 No. 81 «On Approval of the Instructions on the Rules and Methods of Disposal of Medical Wastes, Medical products and Appliances» http://med.by/Normativ/post81_2002.php
9. Provision of the Ministry for Emergencies of the Republic of Belarus of August 3, 1998, Ministry of Natural Resources and Environment Protection of the Republic of Belarus of August 4, 1998, Ministry of Economy of the Republic of Belarus of July 31, 1998, Ministry of Health of the Republic of Belarus of August 31, 1998 No. 263 "On the Procedure of Inventory, Storage and Collection of Mercury, Mercury-containing Wastes"
10. Law of the Republic of Belarus of June 6, 2001 No. 32-3 "On Transport of Hazardous Cargo" http://pravo.by/main.aspx?guid=3871&p0=h10100032&p2=%7BNRPA%7D
11. "Rules of Ensuring Secure Transport of Hazardous Cargo by Vehicles in the Republic of Belarus" approved by Resolution of the Ministry for Emergencies of the Republic of Belarus No. 61 of 8 December, 2010
12. Law of the Republic of Belarus of January 10, 2000 No. 363-3 "On Industrial Safety of Hazardous Industrial Facility" http://pravo.by/main.aspx?guid=3871&p0=h10000363&p2=%7BNRPA%7D
13. Resolution of the Council of Ministers of the Republic of Belarus of 23 September 2008 No. 1397 "On several questions of the procedure of the movement of definite kinds of goods through the State border of the Republic of Belarus" http://www.pravo.by/main.aspx?guid=3871&p0=C20801397&p2=%7BNRPA%7D
14. Narrative report Disposal Study Assessment of Capacity for Environmentally Sound Disposal of POPs and Obsolete Pesticide Wastes (Republic of Belarus)- See Annex 1

ANNEXES

Annex 1: Review of the current state of the Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial MUE, and the possibility of environmentally sound storage of waste referred to as persistent organic pollutants (POPs) at the complex in conformity with international requirements.

Annex 2: Terms of Reference for IHPA for coordination of a Disposal Study for Obsolete Pesticides in the Former Soviet Union

Annex 1. Review of the current state of the Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial MUE, and the possibility of environmentally sound storage of waste referred to as persistent organic pollutants (POPs) at the complex in conformity with international requirements.

In 1991, pursuant to Resolution No. 292 of 26.07.1991 of the Council of Ministers of the Belarusian SSR "On Establishing Facilities for Recycling and Burial of Toxic Industrial Waste from Enterprises and Organizations on the Territory of the Belarusian SSR", the Government instructed the executive committees of the oblasts and Minsk city, in cooperation with ministries and agencies concerned, to provide for selecting land plots, develop allotment and layout plans for construction of facilities for recycling and burial of toxic industrial waste and expired pesticides throughout the Republic. To this end, the then-existing Ministry of Construction and Belselstroy agency were instructed to provide for construction of such facilities in 12, and Gosekonomplan was instructed to provide for allotment of capital investments into the complex construction.

The only national complex that was built in fulfillment of that instruction was the Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial.

Therefore, in fulfillment of the above-mentioned BSSR Council of Ministers Resolution 292 of 26.07.1991 and the subsequent Executive Order No. 414-R of 20.05.1993 of the Council of Ministers of the Republic of Belarus, the construction of the Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial was begun in 1995 at the Dubrovka settlement of the Chechersk Region of the Gomel Oblast.

Institutional framework

The State-Owned Enterprise "Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial" (hereinafter referred to as the complex, enterprise, unitary enterprise, organization) was established by Resolution No. 550 of 03.08.1998 the Gomel Oblast Executive Committee. The enterprise was registered by Resolution No. 712 of 14.10.1998 of the Gomel Oblast Executive Committee, and it was entered into the National Registry under number 26-1143.

In execution of Decree No. 11 of 16.03.1999 of the President of the Republic of Belarus, the organization was re-named to Municipal Unitary Enterprise "Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial". It should be mentioned that the directorate of the complex under construction was established immediately upon enactment of the above regulations by Resolution No. 39 of 05.02.1992 of the Gomel Oblast Executive Committee.

The unitary enterprise assets are owned by the Gomel Oblast. According to the legislation in effect, the organization assets are managed by the Oblast Council of Deputies, and the economic management authority is vested directly in the unitary enterprise. The public administrative body of the unitary enterprise is the State Establishment "Gomel Oblast Construction Sector Authority" of the Gomel Oblast Executive Committee.

The complex comprising a number of environmental structures serves for consolidated collection, destruction and burial of toxic wastes from the Oblast industrial enterprises, organizations and establishments. The complex is also designed for recovering valuable components from industrial waste for industrial and construction use, reducing the hazard class as well as the volume of industrial waste in storage. The enterprise has its main activity on preventing the harmful impact of toxic waste on the environment and human health, and maximizing the economic use of recycled waste.

Pursuant to Resolution No. of 10.12.2017 of the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus "On Issues of Registration of Commissioned Waste Management, Storage, Burial and Destruction Facilities", the complex was registered in the Waste Storage, Burial and Destruction Complex Registry, thus, the enterprise is entitled to conclude commercial contracts for long-time storage of obsolete pesticides.

In accordance with Decree No. 17 of 14.06.2003 of the President of the Republic of Belarus "On Licensing Certain Types of Activity", the Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial MUE has the following licenses:

a license for activities associated with the use of natural resources and environmental impacts,

a license for design and construction of buildings and structures of the first and second criticality levels, and for conduct of engineering surveys for these purposes.

According to statistics, in 2008 the enterprise had on average 16 employees.

The enterprise has a considerable loan-raising capacity.

The financial and business performance indicators of show that the organization has sufficient current assets for its business operations and that it can promptly repay its short-term obligations.

A review of the forecited indicators infers that the assets and liabilities of the Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial MUE is properly structured and the enterprise is solvent.

Current status of the complex construction project

The design specifications and estimates for the first phase of construction of the Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial was developed in 1993 by Giprokhimtekhnolog Limited Liability Company (Saint Petersburg, Russian Federation). After completion in 1994-1995, the design was updated several times, and it was officially reviewed, as supported by opinion reports of Glavexpertiza (Main Public Expert Board) No. 210-7/94 of 31.08.1994 and No. 50-7/95 of 17.03.1995. In accordance with the Public Environmental Expert Board opinion report No. 142 of 21.08.1995, the complex first phase construction design was recommended for approval within the construction cost estimate of BYR 54,120,740 in prices of the year 1991.

In 2004, it was decided to detach startup complexes, and the complex construction documentation was reconsidered by experts for that purpose.

Pursuant to Resolution No. 1019 of 08.12.2006 of the Gomel Oblast Executive Committee, the contracting functions for construction of the Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial at Dubrovka settlement of the Chechersk Region were assigned to the Municipal Unitary Enterprise "Gomel Oblast Capital Construction Authority".

In accordance with the most recent version of the approved design specifications and estimates, the toxic industrial waste recycling and burial complex under construction is characterized by the following technical and economic indicators:

- annual volume of waste received: 18,000 tons
- number of employees: 87
- total estimated cost: BYR 43,308,346 in 1991 prices

According to the approved design specifications and estimates, the complex has the following annual requirements:

- electricity: 2,043,000 kWh
- water: 7,578 m^3
- heating water: 4,364 Gcal
- gas: 576,000 m^3
- lime: 451.8 tons
- calcium hypochlorite: 76.6 kg
- nitrogen: 500 nm^3.

The design provides for 3 startup complexes in the first phase.

The first startup complex of phase 1 was put in operation in 1998. After commissioning, the complex began to accumulate rubber-containing and toxic industrial waste of the 1st and 2nd hazard classes in sealed metal containers.

Pursuant to opinion report 07-01/1105 of 31.03.2004 of the Ministry of Architecture and Construction of the Republic of Belarus, the first startup complex comprised the following:

- industrial waste storage cell 1
- a used tire storage facility
- a tent for road vehicles
- fire water tanks
- the tank water supply pipeline

- access to the first startup complex site
- fencing of the first startup complex site
- power supply of the first startup complex facilities
- power supply of the first startup complex facilities from the contractor's temporary lines

The second startup complex comprised the following fixed assets:

- storage facility 1 with industrial waste cells 2, 4, 3/1, 6/1
- storage facility 2 with industrial waste cells 3/2, 6/2
- industrial waste cell 1A
- a boiler house
- a container washing facility with a water treatment plant
- an administrative building
- a 30-ton weighing bridge
- a guard post
- a 2-engine fire station
- monitoring/observation wells
- drainage pumping stations
- a ring levee
- water supply and sanitation, heating, gas and power supply lines and structures

Two storage facilities (## 1 and 2) were built for BYR 3,355,600 and BYR 3,268,500, accordingly.

Two tanks (## 2 and 3) for storing halogenated solvents and fuel oil were installed.

A container washing facility was built. Civil works at the second phase of drainage treatment plant were accomplished.

Installation of internal heating, gas and material supply lines was completed

Cell 1A commissioning was completed.

The administrative building was built. The administrative building construction comprised civil works, water supply and sewage installation. The building lighting and heating systems were also installed.

The complex construction comprised installation of internal lighting cables and building of internal roads. Roads and access sites were built in the boiler house area; a road was built with precast concrete slabs on the bottom of storage facility 1, a road to the used tire storage facility was also build. A road to the boiler house production area was built as well.

General and special civil works were accomplished in the fire station designed for two engines; civil works were also accomplished in the road vehicle decontamination hub. The hub construction comprised both the architectural/construction part and installation of precast concrete and metal structures.

The complex construction comprised installation of drainage pumping stations, drainage accumulation tank and construction of a system of monitoring/observation wells.

The water treatment plant construction was completed. The construction comprised civil works in the main building and the clarified wastewater pumping station, as well as erection of sand traps and control tanks.

The construction of the fire water pumping station and tanks comprised construction of drinking water tanks and a pumping station, installation of lighting and ventilation systems, power equipment, fixtures and pipelines. A utility and drinking water supply line, sewage and lighting systems were also installed.

A residential wastewater pumping station, a flammable liquid waste reception and treatment plant were built; civil works for construction of the boiler house were also accomplished. The boiler house construction comprised the foundation work, installation of above-ground structures, chimney and boiler equipment. The chimney warning lights were also installed.

The construction of the fuel oil and decomposed rubber pumping station was completed.

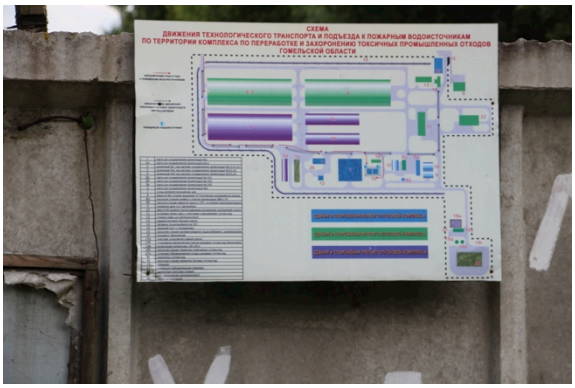
Internal water supply lines were installed, including utility drinking water supply, fire water supply, stabilized wastewater, clarified wastewater, residential sewage, rainwater and stabilized residential wastewater lines. Utility and

drinking water supply, stabilized wastewater, residential wastewater and rainwater lines were built in the boiler house area.

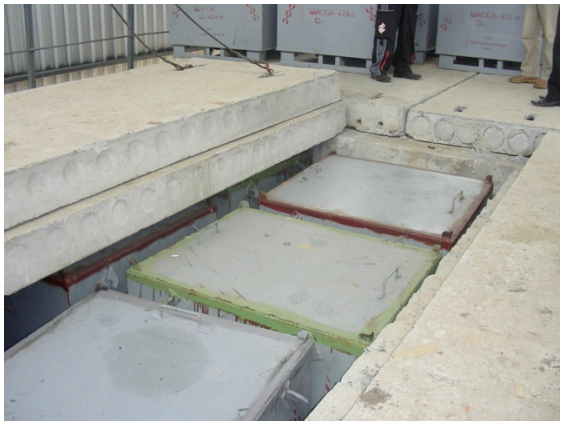
The internal water supply construction comprised installation of round precast concrete digestion tanks and distribution chambers.

The complex site was graded, leveled and fenced. It is planned to install security lights around the enterprise perimeter fencing. Guard posts were also built.

Picture 1. Chechersk complex – entrance and Building 1 for storage of the wastes



Picture 2. Building 2 for the storage of OP wastes; cells with metal boxes with OP wastes



Key assets of the complex

Storage facility 1 consists of a group of cells: ## 2, 4, 3/1 and 6/1 located under a 202.5 meters long and 60 meters wide hangar-style covering. It should be noted that cards 3/1 and 6/1 are made in dug-outs, and cells 2 and 4 are made in the form of pads. All cells are separated by partition embankments.

Cells 2 and 4 are in particular designed for storing waste in sealed containers.

Thus, cell 2 may store toxic barreled waste of household chemical products and electroplating industrial waste. The cell can potentially hold a total 928.5 tons of waste a year.

Cell 4 may store packaged waste of paints and varnishes and organic dyes. The cell can potentially hold a total of 1,009.7 tons waste a year. It should be mentioned that the capacity of cells 2 and 4 allows for receiving waste of household chemicals, electroplating industry, paints, varnishes and organic dyes for 12 years.

Cell 3/1 is designed to store pasty nonorganic wastes. Its annual capacity is 9,141.34 tons. In its turn, cell 6/1 is designed to store mixed pasty and solid organic wastes in the amount of 7,084 tons a year. Cells 3/1 and 6/1 allow for storing mixed pasty and solid organic wastes for 4.8 years. It should be mentioned that, in order to preclude groundwater contamination, these cells provide for installation of a filtration screen.

Storage facility 2 consists of two cells: cell 3/2 with the following dimensions: length: 110 m, width: 60 m, depth: 7 m; and cell 6/2 with the following dimensions: length: 95 m, width: 60 m, depth: 7 m. The facility provides for storing mixed solid and pasty industrial wastes.

Cell 1A is designed for burying toxic industrial wastes delivered to the complex in special sealed containers. Structurally the cell is made in the form of a recessed concrete bunker covered with concrete slabs divided into 24 separate 6.3 m deep sections. The sections are 4.6 m long and 4 and 3 m wide.

A permanent tent over the bunker, an access and offload ramps, and a perimeter wall are provided for all cells.

Storage facilities 3 and 4 have the same functionality and dimensions are storage facilities 1 and 2. However, tanks 2 and 3 may be used for storing liquid organic wastes, decomposed rubber and fuel oil.

Drainage pumping stations are designed for pumping drainage from the storage cells. It should be mentioned that the complex area groundwater is monitored through the system of monitoring/observation wells.

Container and tank trailer washing posts include special units for washing returnable packaging/containers and tank trailers. It also accommodates a detergent solution-making unit, a clean and contaminated container storage facility, as well as a local treatment plant. The road vehicle decontamination hub is designed for treatment of various types of arriving road vehicles, and for removal of their radioactive contamination.

The complex boiler house is custom designed and comprises a boiler hall (42 m long and 18 m wide) with a chemical water treatment section, and two-storey annexes.

The complex accommodates a 2-engine fire station. The station was built according to standard design 416-38.90. The administrative building is a building with two 4.2 m high floors, its area is 432 m^2.

The weighing bridge is made in the form of a 108 m^2 tent consisting of a 36 m^2 storekeeper's room and a weighing platform with an underground area of 62 m2 and 2.1 m recess. The weighing bridge capacity is 30 tons.

The complex compound is fenced with 2 m high concrete slabs and 0.5 high barbed wire on top. The enterprise also has a guard post with an area of 10 m^2.

A ring levee is provided to preclude surface water penetration to the complex compound from the adjacent areas; it is 1.5 high and its top part is 3 m wide, and it is made of local soils.

As mentioned above, the complex area is designed to include utility and drinking water supply, fire water supply, residential sewage, rain and industrial wastewater and washing unit drainage systems.

The utility and drinking water supply system includes two 150 mm inlets and water ring mains. The fire-fighting system comprises two 500 m^3 water tanks, a pumping station with two (main and backup) K150-125-315 pumps, as well as dry-pipe water ring mains.

Residential wastewater is delivered through free-flow lines via the sewage pumping station to the treatment unit in the main building of the water treatment plant. The sewage pumping station is built according to standard design 902-133.88. Residential wastewater is treated in the compact KU-12 unit refitted with plastic modules for securing biological film of activated sludge. After purification wastewater is delivered for further treatment along with rain and industrial wastewater.

The rain and industrial wastewater treatment plant comprises two (main and backup) RMU-2B mechanized screens, a horizontal-flow circular trap, an accumulating tank, two electroflotation units, a clarified water pumping station, two 100 m^3 control tanks, a sludge dryer and filtration beds.

The water treatment plant of the organic waste container washing unit comprise a horizontal settling tank with a fine settling unit, a pumping unit, a purified wastewater heating unit and a organic pollutant collection unit. In its turn, the water treatment plant of the nonorganic waste container washing unit comprise a filtering transporter, a horizontal settling tank with a fine settling unit, a pumping unit, a purified wastewater tank and an oil product collection unit. It should be mentioned that purified wastewater is reused for container washing.

The boiler house with two DE-6,5-1,4GM boilers can supply heating to the complex with. The heating media are superheated water and steam of various temperatures depending on the use. In particular, 150-70° C water is used for heating and ventilation, 70-65°C water is used for hot water supply. Stream with a temperature 160°C and at a pressure of 6 kgf/cm^2 is used for technical needs.

The boiler house is designed for use of two fuels. The main fuel is natural gas, the backup fuel is fuel oil. It should be mentioned that the gas is supplied to the boiler house from an external gas line with an average pressure of 3 kgf/cm^2.

The boiler house building also accommodates a compressor providing the complex with compressed air, and a 2KTP-1000/10 kV package two-transformer substation providing the complex with electrical power. In order to provide for reliable power supply, the main electrical load receiving equipment is classified as category 2. The transformer substation accommodates two 0.38 kV package capacitor units of the UKM-0,4-200-37,5-UZ type with a capacity of 200 kVA each. The feeding lines are laid with 3x95 mm2 AAShvU-10 cables. The internal 380/220V cable lines are laid in channels along process racks, building walls and in underground trenches.

The complex has provisions for administrative/business communications, radio communication, fire alarm systems and automation of heating supply, ventilation, water supply and sewage systems.

In previous periods the complex constructed was financed by national environmental funds.

By January 1, 2009, the complex has accumulated 1,312 tons of toxic industrial wastes of the 1st and 2nd hazard classes, 60% of which are toxic wastes delivered from the other oblasts. The complex area is also used to store 3,619 tons of rubber-containing waste pending thermal destruction.

It should be mentioned that the complex construction was co-financed by executive committees of the other oblasts.

The construction of the third startup complex of the first phase is a crucial stage in the development of the complex. An option under consideration provides for excluding a number of elements /adjusting the third startup complex of the first phase that have been included into the approved design specification and estimates, in order to prioritize the objectives set forth in the Belarus National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants. It is also planned to build a PCB waste storage facility and install equipment for thermal destruction of toxic waste

However, it should be acknowledged a number of the ongoing project tasks have not been completed by 01.01.2009.

In particular, process equipment and pipelines should be installed with construction of tanks 2 and 3 for storing halogenated solvents and fuel oil, tank 2 requires thermal insulation.

The container washing units is missing ventilation, heating, process equipment, mains, water supply, sewage, contaminated water treatment plant, power equipment, lighting fixtures, contaminated water treatment mains and fixtures. Also, process and contaminated wastewater treatment mains require rust-proofing; water supply, sewage and wastewater treatment mains require thermal insulation.

Internal heating, gas and material supply lines are missing gas supply and heating pipes; material and steam supply lines require thermal insulation.

Process, power, communication and alarm equipment should be installed in the administrative building; rust-proofing is required for process equipment, pipes and fixtures of the water supply and heating lines.

The 2-enging fire station is missing ventilation, heating system, internal water supply and sewage system, process equipment, lighting, power equipment, communication and alarm systems.

The road vehicle decontamination hub is missing heating, ventilation, water supply, sewage, air supply, power equipment, communication, alarm, lighting systems, special and process equipment, pipelines and thermal insulation.

The treatment plant requires installation of water supply, sewage, ventilation, utility/drinking water supply, residential sewage, lighting systems, power equipment, rainwater dewatering unit, water supply and sewage process

equipment, pipes and fixtures. There is also a need in chemical protection of the treatment plant and installation of a sand trap bed drainage.

The clarified wastewater pumping station is missing pipes and equipment, including power equipment.

The fire water pumping station is missing communication, alarm systems and installation of fire-fighting equipment.

The residential wastewater pumping station requires rust-proofing and installation of pipes and power equipment.

The flammable liquid waste reception and treatment station requires thermal insulation (BYR 6.8 thousand), installation of ventilation (BYR 21.5 thousand), heating (BYR 3.9 thousand), water supply (BYR 4.6 thousand), sewage (BYR 1.1 thousand), lighting (BYR 9.9 thousand) systems, power equipment (BYR 40.6 thousand), fire and general alarm systems (BYR 5.4 thousand), as well as process equipment (BYR 128.9 thousand), pipelines (BYR 61.5 thousand), and water supply and sewage networks (BYR 5.3 thousand).

The boiler house needs installation of water supply, sewage, heating, ventilation, fuel oil supply and gas supply systems, compressor equipment and mains, boiler and chemical water treatment mains and fixtures, alarm system, lighting, water supply and sewage process networks and chimney warning lights. Also, the fuel oil supply, compressor mains, boiler equipment, boiler mains require thermal insulation; boiler equipment and chemical treatment mains require rust-proofing; pipes and equipment require lining.

The fuel oil and decomposed rubber pumping station with a foam fire extinguishing unit requires installation of ventilation, heating, water supply, sewage, lighting systems, power equipment, fire and general alarm systems, as well as water supply and sewage process lines; equipment and pipes for the foam fire extinguishing unit. The pumping station also requires thermal insulation.

The internal water supply and sewage networks require a foam fire extinguishing system, as well as a surplus sludge, mechanically polluted and sludge-containing wastewater networks

The complex guard posts are missing equipment, communication and alarm systems. The complex area also needs grading and landscaping.

The Ministry of Natural Resources and Environmental Protection plans to allot funding for the following activities under the project for construction of the Gomel Oblast Complex for Toxic Industrial Waste Recycling and Burial:

- development of the current complex infrastructure providing for environmentally sound waste disposal
- disposal of persistent organic pollutant wastes at appropriate facilities of the complex as they become technically operable
- conduct of surveys to assess further development of the complex in terms of environmentally sound storage of PCBs
- development of proposals concerning the advisability of designing a separate PCB facility at the complex
- design, re-fitting and construction of POP waste storage facilities in the complex area.
- carry out a package of operations to monitor the environment in the complex area for making an assessment of the efficiency of the proposed activities and ensuring control over the safety of POPs waste transportation and disposal operations.

The situation at the landfill is characterized by inefficient use of the storage facilities built there. Therefore, according to the expert opinion, the available facilities may be used for storing POP wastes, at the same time adding funds for re-fitting the cells and storage facilities and the required water-proofing; the cost of these works is estimated at BYR 1 billion.

Hence, the total expected financial savings over the forecast may amount to BYR 9,968 million. The above released funds may be directly re-allotted to toxic waste destruction equipment.

The above-mentioned equipment, when put in operation along with operation of the available fixed assets will provide for complex operation in near future and, therefore to cost recovery of this project.

It is worth mentioning that the share of the total cost of the toxic waste destruction equipment to be procured amounts to 59% of the cost of the project decision under consideration. For that reason, the correct choice of technical options is of the highest importance. It should also be noted that the initial estimated cost of the hazardous waste destruction equipment did not include operating cost, therefore, the required funds should be reconsidered in draft

bidding documents taking into account the start-of-the-art hazardous waste destruction technology. It appears advisable to consider the following technical and operating parameters, as well as direct requirements to the equipment supplier during the bidding process for procurement of that equipment:

- hazardous toxic waste should be destructed by the above equipment by a thermal method - the method of high-temperature incineration with shock cooling in order to mitigate/avoid dioxin production
- the equipment should provide for destruction of both obsolete pesticides, their mixes, wastes containing polychlorinated biphenyls (PCBs), hazardous organic and nonorganic industrial wastes with highly toxic properties, including wastes in various states of matter (solid, free-flowing, liquid);
- persistent toxic waste destruction should provide for recycling of heat generated by thermal destruction for power generation.
- the waste destruction equipment capacity should amount to at least 1,000 tons a year
- the equipment delivery period should not exceed 90 working days after execution of a contract with the equipment supplier
- payment of the equipment procured will be made after the equipment delivery, installation and adjustment
- warranty servicing should be provided for two years after the equipment is put in operation. Also, the supplier shall provide post-warranty servicing of the equipment procured throughout the estimated equipment lifetime. Also, in the event of a failure, the equipment should be returned to operation no later than in one week upon a notice of failure or damage from the equipment operator
- taking into account that it is expected that the procurement may be financed from the nature protection fund, which is a public budget fund, and that the equipment procurement cost will exceed 200 thousand base units, the equipment procurement procedure should be carried out in line with the requirements set forth to such procurement actions in Edict No. 529 of 25.08.2006 of the President of the Republic of Belarus
- the equipment supplier's bid should be inclusive of all costs associated with the delivery, payment of duties, taxes and other obligatory charges, as well as costs associated with installation supervision, launching and adjustments, personnel training, certification, design drafting, non-standard equipment manufacturing, insurance, equipment industrial testing costs, driving up the rated capacity and pilot operation at least within a three months period
- payment for the equipment procured will be made in the Belarusian Rubles. For this purpose, the equipment cost will be converted into a foreign currency and the exchange rate set by the National Bank of the Republic of Belarus as of the time of bid consideration
- technical documents for the equipment procured should be written in Russian or officially translated into the Russian language
- it is an essential requirement that the equipment should include a continuous environmental monitoring system capable for environmental data transfer to the Ministry of Natural Resources and Environmental Protection of the Republic of Belarus
- the equipment should include an effluent gas treatment system meeting the requirements of the European Union and the Republic of Belarus
- the producer should have at least 5 years of hands-on experience in manufacturing toxic waste destruction equipment, as well as experience in supplying similar equipment to countries of the European Union.

Annex 2: Terms of Reference for IHPA for Coordination of a Disposal Study for Obsolete Pesticides in the Former Soviet Union

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

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

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

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

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.

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

KEY PERFORMANCE INDICATORS

Expected Outputs:	Required Completion Date:
i. Summary report of existing policy framework for the elimination and management of POPs and obsolete pesticides (12);	All by end of June 2013.
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	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.