

REPUBLIC OF TAJIKISTAN

**STRENGTHENING RESILIENCE OF THE AGRICULTURE
SECTOR PROJECT IN TAJIKISTAN**



**Environmental Management Plan for Pesticide
Application**

Dushanbe – 2022

Content

1. General information about the project and the place of its implementation.

- 1.1 General overview of Tajikistan and its agricultural activities.
- 1.2 National policy framework for registration and control of pesticides.
- 1.3 Authorities responsible for registering pesticides, the role of the various ministries.
- 1.4 International chemical conventions and agreements concerning pesticides.

2. Information on ensuring security measures.

- 2.1 List of pesticides registered at the national level.
- 2.2 List of HHPs (highly hazardous pesticides) among the list of nationally registered pesticides.

3. Mitigation measures.

- 3.1 Impacts on human health, environment or human rights due to HHPs in Tajikistan.
- 3.2 National provisions for phasing out the use of HHPs.

4. Monitoring plan.

- 4.1 Parameters to be monitored.
- 4.2 Technical information for pesticides

1.1. In accordance with the Bank's Operational Policy 4.01, basic typical approaches are provided for agricultural, construction and operational activities in the implementation of projects for the use of pesticides with small and medium localized impacts. The objective of the Environmental Management Plan for Pesticide Management is to prevent potential impacts and improve the environmental aspects of the project by minimizing and mitigating negative impacts resulting from its implementation.

The Plan on the Use of Pesticides and Highly Hazardous Pesticides (HHPs) in Tajikistan contains the names of chemicals and biological preparations from the current document - "List of chemical and biological preparations permitted for use in the Republic of Tajikistan" (approved by the decision of the Commission on Chemical Safety of the Republic of Tajikistan No. 4, June 11, 2004).

The Plan provides data on the existing approaches to the development of organic farming in Tajikistan, offers recommendations on methods for improving soil fertility, biological methods of plant protection, landscape ecology, etc. Methods of organic farming, an integrated plant protection system, and integrated plant pest control will help to use agroecological approaches that will help reduce dependence on the use of highly hazardous pesticides in the agricultural sector of Tajikistan.

The Republic of Tajikistan is located in the southeast of Central Asia. The area of the republic is 143.1 thousand km. The territory of the republic stretches from west to east for 700 km and from north to south for 350 km. The length of the state borders is 3000 km. The administrative

structure includes: Gorno-Badakhshan Autonomous Oblast, Khatlon Oblast, Sughd Oblast, Districts of Republican Subordination and Dushanbe.

Tajikistan is a mountainous country. About 93% of its territory is occupied by mountains, while about half of the territory lies at an altitude of over 3000 meters and 7% of the plain. Absolute altitude marks range from 300 to 7495 meters above sea level. Geographically, in the west, desert and semi-desert areas, foothills are wedged, in the east - high mountain ranges and plateaus of Central Asia - Tibet and Tien Shan. This geographical position causes a wide variety of natural and climatic conditions that affect the methods of agricultural production.

The area of the territory of Tajikistan is 142.55 thousand square meters. km, the population as of December 16, 2021 is 9574.235 thousand people, including 4706.136 thousand - the male population (49.2%), 4868.097 - the female population (50.8%). The population growth is 2.24% annually. The capital of Tajikistan is the city of Dushanbe, the state language is Tajik, the language of interethnic communication is Russian.

Tajikistan is an agro-industrial republic, the total land area (excluding inland waters) is 138.79 square meters. km, the total area of agricultural land - 34.1% of the total land area, sown area - 5.3%, forests - 3% of the total land area of the country. Agriculture is an important sector of the Tajik economy, accounting for 19.8% of GDP (2019). 66.3% of the population is employed in agriculture in Tajikistan.

The development of agriculture, and, above all, cotton growing, in Tajikistan is closely related to the widespread use of pesticides to control agricultural pests, plant diseases and weeds. The agro-climatic conditions of the republic are favorable for the rapid reproduction and development of many agricultural pests. Along with this, there is a high degree of damage to plants by various diseases. Crops of agricultural crops also suffer from weeds, especially in irrigated zones, where their seeds are brought in large quantities to fields with irrigation water.

Great attention was paid to the development of agriculture in the USSR. There were significant areas of agricultural land in the republic for growing crops, especially cotton, millions of rubles were spent on building infrastructure, providing the industry with agrochemicals and pesticides.

Today, independent Tajikistan is facing the legacy of a number of past unresolved issues. Among them are former warehouses of pesticides polluting large areas of territories with pesticides, illegal sale and use of especially hazardous pesticides.

As for the potential land resources of the "non-cotton" zones, which are presented as a huge reserve for the development of horticulture and viticulture, they include more than 400,000 hectares of land with sharp slopes (due to geographical location), as well as 100,000 hectares of land representing coarse skeletal soils.

The State Committee for Land Management and Geodesy of the Republic of Tatarstan presents the structure of the land fund of the republic by land users.

1.2. The Republic of Tajikistan has signed a number of international agreements regarding waste management. Among such agreements signed by the Republic of Tajikistan, it should be noted:

Agreement "on the control of transboundary transportation of hazardous and other wastes", signed between the member countries of the Commonwealth of Independent States on April 12, 1996 in Moscow. According to this Agreement, the parties agreed to take measures to:

- management and control of import (export) or transit of hazardous and other wastes;
- ensuring the environmental safety of the transboundary movement of hazardous and other wastes, as well as facilitating interaction between the authorities responsible for their transportation;
- taking timely measures to respond to situations that may arise during the transportation of hazardous and other wastes;
- exchange of information on the development and implementation of low-waste technologies and minimization of such waste;

- assessing the effectiveness for the environment of agreements and contracts on the transport of hazardous and other wastes;
- monitoring compliance with the rules and regulations on the transboundary movement of hazardous wastes and their disposal;
- creation of appropriate checkpoints equipped with the necessary technical means.

Agreement on the procedure for interaction in the hygienic assessment of potentially hazardous products imported into states that are members of the Commonwealth of Independent States. The agreement was ratified on November 25, 2004 by the House of Representatives of the Supreme Assembly of the Republic of Tajikistan.

According to this Agreement, the Parties develop and agree on the procedure for the hygienic assessment of potentially hazardous imported products manufactured in the territories of the States of the Parties, carry out agreed organizational, preventive, sanitary and epidemiological measures aimed at ensuring their hygienic safety, develop and agree on the procedure for hygienic assessment (certification, examination, registration) of products manufactured in the territories of the states of the Parties, mutually recognize the hygienic conclusions (if there is a test report carried out in accredited testing centers and laboratories) issued by the bodies and institutions of the state sanitary and epidemiological service of the Parties in the territories of the states of which the products were manufactured, if this does not contradict the national legislation and the requirements of the state sanitary-epidemiological and hygienic regulatory documents of the Parties. The parties exchange samples of hygienic conclusions. The Parties monitor and form a single database of potentially hazardous products, exchange information on officially registered cases of diseases and poisonings among the population of the States Parties associated with exposure to potentially hazardous products. The Parties shall, considering existing international norms and rules, jointly develop and review sanitary-epidemiological and hygienic regulatory documents on potentially hazardous products within the framework of the Interstate Commission on Sanitary-Epidemiological Rationing of the CIS Member States. The Parties jointly develop and agree on the requirements for accredited testing centers and laboratories, carry out their accreditation in accordance with the legislation of the States Parties, and mutually recognize the results of their tests. When exercising state sanitary and epidemiological supervision over imported products, the bodies and institutions of the state sanitary and epidemiological service of the Parties proceed from the priority of the sanitary legislation of the state of the importing Party. In the field of hygienic safety, the manufacturer and supplier of imported products are responsible for its quality and safety for the life and health of the consumer, his environment in accordance with the legislation of the state of the importing Party and the state of the exporting Party. A prerequisite for the import of imported products is the presence of a positive hygienic conclusion of the exporting Party. In the absence of such a conclusion, the import of products into the territory of the state of the importing Party is not allowed, unless otherwise provided by its national legislation. In cases where products are found that do not meet the established sanitary and epidemiological and hygienic requirements, the bodies and institutions of the state sanitary and epidemiological service that have established this fact take measures to prevent the further promotion of such products, their withdrawal from circulation and inform the bodies of the Parties that carry out the state sanitary and epidemiological epidemiological surveillance, on the supply of such products.

Pesticide management includes the following: regulation and control, proper handling, import, transportation, storage, use and disposal of pesticide waste in order to minimize adverse effects on human health and the environment.

State regulation of production, import, circulation and use of pesticides is regulated by the Laws of the Republic of Tajikistan, a number of legal documents and the provisions of the Stockholm Convention.

Economic entities in Tajikistan that are engaged in the production of crop products, including fodder crops, must use those pesticides that are registered by the competent authority for chemicalization and plant protection, included in the State Register of Pesticides and Agrochemicals, permitted for use on the territory of the republic.

Tajikistan does not have industrial enterprises for the production of chemical plant protection products, and they are imported from outside its borders. Between 1965 and 1990 volumes of deliveries of pesticides to the republic were annually from 7 to 14 thousand tons (in terms of 100% d.v.), table. 1.

In the past, the development of agriculture, and especially the cotton industry, was associated with the widespread use of pesticides to control agricultural pests, plant diseases and weeds. Before the collapse of the USSR, the Tajik Republic belonged to the regions of intensive use of various means of chemicalization of agriculture.

Table 1.

**Supply of pesticides to agriculture
Republic of Tajikistan (tonnes in 100% a.i.)***

Pesticides	Years					
	1965	1970	1975	1981	1985	1990
Total including:	13963	7144	11355	10462	13681	11850
insectoacaricides	11147	2448	1785	2011	2190	1680
fungicides	980	-	2424	2367	6137	4515
protectants	49	33	37	90	420	250
herbicides	105	665	2554	1913	2205	1805
defoliant and desiccants	995	3140	3490	3982	2667	3450
other	687	858	1125	101	62	150

*Data provided by the State Institution for Plant Protection and Chemicalization of Agriculture economy under the Ministry of Agriculture of the Republic of Tatarstan.

Until the end of the 90s, the import of chemical plant protection products was carried out in a centralized manner through the network of state organizations "Tajikselkhozhiymiya" (at present, the institution has not been disbanded, but it does not fully function in accordance with its powers).

In recent years, the use of pesticides has decreased by more than 10 times compared to 1990. In general, the use of pesticides is noted in the protection of fruit crops and vineyards (to protect crops from pests and herbivorous mites, to protect against diseases, less - herbicides in weed control). Also, a significant part of pesticides is used to protect crops from pests and diseases. Most of the applied pesticides on crops are seed treaters.

It is noted that the use of pesticides on cotton crops has significantly decreased in recent years. In other crops, pesticides were used in smaller quantities, with the exception of pastures, where locust control operations are underway.

Unfortunately, in the current conditions of agriculture, the state system for recording the use of agrochemicals does not allow tracking the actual use of pesticides, and the available funds do not allow obtaining complete information on the use of pesticides in the country.

According to international organizations, official statistics reflect only about 20% of mineral fertilizers and pesticides used in the republic's agriculture.

In Tajikistan, studies on the composition, active substance in pesticides, as well as the content of pesticides in soil or plants have not been carried out over the past 30 years. Under such conditions, there is no information on the real pesticide load on public health, animals and the environment.

Providing agriculture of the republic with mineral and organic fertilizers for 1999-2019. are shown in tables 2 and 3.

Table 2.

Application of mineral fertilizers for crops per 1 hectare in agricultural enterprises and dekhkan farms*

Contributed mineral fertilizers	1999	2014	2015	2016	2017	2018	2019
Kilogram (in terms of 100% data. substances)	90	136.6	136.8	117.4	133.8	124.2	141.8

*Statistical collection. Agency on Statistics under the President of the Republic of Tajikistan, Agriculture of the Republic of Tajikistan. - Dushanbe, 2020, p. 353.

Table 3

Application of organic fertilizers for crops per 1 hectare in agricultural enterprises and dekhkan farms*

Contributed organic fertilizers	1999	2014	2015	2016	2017	2018	2019
Tons	3.5	2.7	3.9	4.2	2.4	2.3	4.1

*Statistical collection. Agency on Statistics under the President of the Republic of Tajikistan, Agriculture of the Republic of Tajikistan. - Dushanbe, 2020, p. 353.

The tasks of the state policy of Tajikistan include improving security, including environmental, through the adoption of national and sectoral programs, concepts and strategies, and in the implementation of provisions on environmental aspects of the land, water, and criminal codes.

Pesticide management includes procedures (registration, control, proper handling, import, turnover, supply, transport, storage, use and disposal of waste), while the legislative and technical-regulatory requirements that establish the national policy framework for the regulation of use are essential. pesticides.

In Tajikistan, in the field of pesticide regulation, including the registration and control of pesticides, there is a legislative framework, which defines the national policy framework.

The country has adopted relevant laws that relate to the use and regulation of pesticides: the Health Code of the Republic of Tajikistan (adopted by the Decree of the MN MORT dated March 15, 2017, No. 712, approved by the Decree of the MN MORT dated May 18, 2017, No. 374); Code of the Republic of Tajikistan on Administrative Offenses (July 22, 2013 No. 980) December 31, 2008 No. 455; Labor Code of the Republic of Tajikistan, July 23, 2016, No. 1329; Customs Code of the Republic of Tajikistan dated December 28, 2013, No. 1035; Laws of the Republic of Tajikistan: "On Quarantine and Protection of Plants" approved by the Decree of MM MORT dated December 25, 2018, No. 594, "On Grain", "On State Support for the Agro-Industrial Complex", "On Liability for Damage to Crops and Damage to Agricultural Crops, Mulberry Trees and Others plantations and thickets of bushes", "On seed production" 2008, "On the protection of plant varieties" dated November 3, 2010, "On food security" dated December 29, 2010, "On food safety" dated August 1, 2012 ., "On beekeeping" dated March

29, 2012, No. 294, "On pastures" dated March 19, 2013, "On environmental information" dated March 25, 2011 No. 705; "On Environmental Protection" dated August 2, 2011 No. 760; "On environmental monitoring" dated March 25, 2011 No. 707; "The concept of environmental protection in the Republic of Tajikistan", approved by the Government of the Republic of Tajikistan, December 31, 2008 No. 645.

Technical regulation in Tajikistan is formed thanks to the developed standards and laws of the Republic of Tajikistan: "On standardization", "On technical regulation", "On regulatory legal acts".

- Technical regulations of the Republic of Tajikistan on the safety of food and raw materials, developed by the Tajikstandart agency:

- "Technical regulations for juice products from fruits and (or) vegetables" dated October 14, 2014 No. 642.

- "On the Technical Regulations for the Safety of Feed and Feed Additives" dated December 31, 2014 No. 811.

- "On the Technical Regulations for the Safety of Products for Children and Adolescents" dated August 1, 2015 No. 498.

- TR "Food Safety" dated April 30, 2016, No. 190.

With the adoption of the Law of the Republic of Tajikistan "On Plant Quarantine", the Republic of Tajikistan joined the International Convention on Plant Protection and Quarantine.

Currently, the use of pesticides in Tajikistan is regulated by the Law of the Republic of Tajikistan "On Quarantine and Plant Protection" (adopted by the Decree of the MN MORT dated November 28, 2018, No. 1233, approved by the Decree of the MM MORT dated December 25, 2018, No. 594). The law was introduced on January 2, 2019, replacing the following legislative acts of the Republic of Tajikistan that have become invalid:

- Law of the Republic of Tajikistan dated April 22, 2003 "On the production and safe handling of pesticides and agrochemicals" (Akhbori Majlisi Oli of the Republic of Tajikistan, 2003, No. 4, art. 131; 2007, No. 5, art. 368; 2012 city, No. 7, art. 723);

- Law of the Republic of Tajikistan dated March 26, 2009 "On Plant Quarantine" (Akhbori Majlisi Oli of the Republic of Tajikistan, 2009, No. 3, Art. 91; 2011, No. 12, Art. 851);

- Law of the Republic of Tajikistan "On Plant Protection" (Akhbori Majlisi Oli of the Republic of Tajikistan, 2012, No. 4, Art. 267).

The law defines the legal, organizational and economic basis for quarantine and plant protection, quarantine phytosanitary measures, handling of plant protection products and is aimed at preserving agricultural products, protecting human health, animals and the environment.

The law provides definitions for such terms as: agrochemicals, neutralization of pesticides, plant protection products, etc. The powers of the authorized state body in the field of quarantine and plant protection are defined (Article 8): organization of registered tests of pesticides and agrochemicals, their state registration, accounting of existing means plant protection and maintenance of the State Register; organization of work on the neutralization of quarantine material and pesticides, the use of which is prohibited, expired and (or) unsuitable for use, as well as containers from them; organization of public procurement of pesticides and agrochemicals, services for their storage, transportation, distribution and use in the Republic of Tajikistan. Pesticides and agrochemicals on the basis of registered checks (their impact on human health and the environment) undergo state registration. A certificate of state registration is issued. To refuse state registration of pesticides and agrochemicals are: non-compliance of the chemical composition specified in the instructions with the indicators presented in the application for registered inspections. Establishes a process for conducting inspections of registered pesticides and agrochemicals: identifying ways to use them effectively and safely; assessment of the risk of negative impact on human health, animals and the environment (Article 20).

An analysis of the legislation of the Republic of Tajikistan shows that the existing legislative and regulatory framework, in general, provides only legal regulation of the use of pesticides in Tajikistan, at the legislative level, the procedure for conducting state tests, state registration and re-registration, and performing state control over the use of pesticides is determined.

Decree of the Government of the Republic of Tajikistan dated March 03, 2003, No. 92 was developed in accordance with the document - "On the formation of the Commission on Chemical Safety of the Republic of Tajikistan" Regulations on the Commission on Chemical Safety. The content of this Regulation establishes that the Commission directs its activities towards the implementation of the laws of the Republic of Tajikistan "On Nature Protection", "On Ecological Expertise", "On State Sanitary Supervision", etc., regulating relations in the field of handling chemicals.

According to the Regulations, the Commission, as a supra-departmental body of state power, must coordinate the activities of ministries and departments in ensuring chemical safety. The main tasks of the Commission's work include, among others: regulation in the field of handling chemicals and biological preparations; establishment of a unified system for registration, testing and control of chemicals and biological preparations first produced in the Republic of Tajikistan or imported into the republic; approval of the "List of Chemical Substances and Biological Preparations Permitted for Use in the Republic of Tajikistan", making amendments and additions to it; consideration of proposals for testing and registration of chemicals, biological preparations and making decisions on them.

The Regulation of the Commission provides the following: chemicals, biological preparations, plant growth stimulants, mineral fertilizers must pass state testing in laboratory and production (field) conditions for biological, toxicological, environmental assessment and are subject to registration. Decisions on inclusion in the "List of Chemical Substances and Biological Preparations Permitted for Use in the Republic of Tajikistan" of chemicals and preparations are made by the Commission in the presence of a positive conclusion of the State Ecological Expertise.

"The list of chemicals and biological preparations permitted for use in the Republic of Tajikistan" was approved by the decision of the Commission on Chemical Safety of the Republic of Tajikistan on June 11, 2004, No. 4.

State registration of pesticides and agrochemicals in essence is the basis for the implementation of state control through the implementation of measures in the relevant institutions for the procedures of examination, inspection, determination of the content of active substances in preparations, decision-making, identification of residual quantities of pesticides and agrochemicals in food raw materials and food products entering the trade network of Tajikistan. All of these procedures form the policy of the state in the field of public protection.

The Law of the Republic of Tajikistan "On beekeeping" dated March 29, 2012, No. 294 establishes the regulation and procedure for relations on breeding, use, and protection of bees in the case of the use of plant protection products in agriculture. This law was adopted to replace the invalid law of the Republic of Tajikistan "On beekeeping" dated October 8, 2003, No. 921. The law establishes procedures for preventing poisoning of honey bees by pesticides and other chemicals (Article 21) and for notifying individuals and legal entities of situations that pose a danger to honey bees (Article 26). Individuals and legal entities using pesticides and other chemicals for the treatment of agricultural and forest plants are obliged not later than three days before the start of such treatment, personally in writing or through the media, to warn individuals and legal entities that have apiaries located at a distance less than five kilometers from cultivated agricultural and forest plants. At the same time, the date of processing of agricultural and forest plants, the method of their processing, the level of toxicity of the pesticides and (or) chemicals used are indicated.

Decree of the Government of the Republic of Tajikistan "On approval of the List of especially dangerous harmful organisms" No. 477 dated August 31, 2012. List of especially

dangerous harmful organisms: locusts; mulberry fire; field rodents; harmful turtle; potato late blight; yellow rust; brown rust.

According to the requirements of the current legal documents, rules and procedures for the production, storage, transportation and use of mineral fertilizers, as well as guidelines for fertilizers for processing, for individuals and legal entities of the Republic of Tajikistan, requirements for the use of pesticides (toxic chemicals) include: availability of special equipment and pesticide application equipment that ensures the safety and quality of chemical treatments; availability of special warehouses for agrochemicals and pesticides; implementation of sanitary and epidemiological rules and norms; availability of personal protective equipment; trained and qualified personnel with special education and practical experience in the application of pesticides. However, most of the existing documents were adopted during the USSR.

The following instructions, rules and other documents are used in Tajikistan to regulate the handling of pesticides and hazardous chemicals:

- Sanitary rules for the storage, transportation and use of pesticides (toxic chemicals) in agriculture (1974);
- GUIDELINES for the Control of Pesticide Residues in Food (1972);
- INSTRUCTIONS on safety precautions for storage, transportation and use of pesticides in agriculture (1985);
- Temporary instruction on preparation for disposal of banned and unsuitable for use in agriculture pesticides and containers from under them (1990);
- INSTRUCTIONS for environmental protection during transportation, storage, application and neutralization of pesticides and mineral fertilizers (Dushanbe, 1997);
- GOST 14189-81 "Pesticides: rules for acceptance, sampling, packaging, labeling, transportation and storage";
- GOST 30333-2010 "Safety data sheet of chemical products. General requirements".

In Tajikistan, special landfills are used for the storage and disposal of expired or banned pesticides. A special authorized body of the CEP is responsible for issuing permits for the construction of landfills and the neutralization of pesticides. The Ministry of Agriculture and the local state body are responsible for the neutralization of pesticides purchased at the expense of the state budget.

Tajikistan has two landfills for storage or disposal of unused pesticides (Vakhsh and Kanibodam).

It should be noted that until now in the Republic of Tajikistan the use of pesticides and their mixtures is carried out in accordance with the document "List of chemical and biological preparations permitted for use in the Republic of Tajikistan", approved by the Commission on Chemical Safety of the Republic of Tajikistan No. 4 dated June 11, 2004.

According to the current legislation, those pesticides and agrochemicals that have passed state registration and are included in the List are allowed for circulation. The unified system of state registration of pesticides and agrochemicals is carried out by the Commission. Registration and re-registration of pesticides is carried out on the basis of a decision of the Commission. Pesticides for which there are necessary documents on their biological effectiveness, toxicological, hygienic and environmental properties are submitted for consideration.

The Law of the Republic of Tajikistan "On Quarantine and Plant Protection" (2019) establishes that the competence of the Government of the Republic of Tajikistan in the field of plant quarantine and protection includes the determination of the authorized state body in the field of plant quarantine and protection (Article 7).

The law provides for: approval of the procedure for state registration of pesticides and agrochemicals, maintenance of the State Register of Pesticides.

Pesticides and agrochemicals undergo state registration on the basis of positive results of registered inspections, the procedure for which is determined by the authorized state body (Article 20).

Registration of pesticides is carried out for a period of five years (from the date of the meeting of the Commission, at which the decision on registration was made). Upon expiration of the registration period, at the request of the applicant and in the absence of a documented negative opinion of the Ministry of Health and Social Protection of the Republic of Tajikistan and the Committee for Environmental Protection under the Government of the Republic of Tajikistan, the pesticide can be re-registered for another period. When extending the scope of application, the period of validity of the registration for the extension extends only to the period of the main registration of the pesticide.

For the registration and re-registration of the pesticide, as well as the expansion of the scope of application, the registrant pays according to the price list approved by the Committee for Environmental Protection under the Government of the Republic of Tajikistan.

The activity of the chemical commission is extremely low in relation to the registration and regulation of chemicals, and in particular with the handling of pesticides.

At the same time, specialists of the Ministry of Agriculture note that there are repeated attempts to amend the legislation on the regulation of the use of pesticides, as well as the development and adoption of Instructions for the safe use of pesticides, Rules for their handling. Previously, the Government of the Republic of Tajikistan applied to FAO for technical support in the field of improving the system of registration and control of pesticides (2016). The developed documents (Updated List of Chemical Substances and Biological Preparations Allowed for Use in the Republic of Tajikistan, as well as the Regulation on Registration Tests and State Registration of Pesticides in the Republic of Tajikistan) were submitted to the Government of the Republic of Tajikistan in 2018. There is still no decision on these documents.

On January 2, 2019, the new Law of the Republic of Tajikistan “On Quarantine and Plant Protection” came into force. Probably, with the adoption of this law, a long period is associated with the adoption of a decision on the Regulation on registration tests and state registration of pesticides in the Republic of Tajikistan, developed on the basis of the requirement of Article 8 of the Law of the Republic of Tajikistan “On the production and safe handling of pesticides and agrochemicals” (dated April 22, 2003, 1), which has become invalid.

This document provides for the establishment of the procedure for submitting an application for registration testing and registration of pesticides in the Republic of Tajikistan, which includes: determination of biological effectiveness and establishment of regulations for the use of a pesticide; toxicological and hygienic assessment of the pesticide, establishment of hygienic standards in environmental objects and food products; environmental assessment of the drug, the establishment of environmental standards and rules for handling it; preparation of an opinion on the results of registration tests of the pesticide; state registration of the drug.

The Regulation contains the following Appendices: Basic information; Physico-chemical properties a) active substance, b) preparative form; Toxicological and hygienic characteristics of a) active substance, b) preparative form; Microbiological preparations, Properties of the strain-producer; Toxicological assessment of the microorganism; Ecological and toxicological characteristics of the drug; Pesticide use regulations.

The procedure for preparing documentation is to submit an application (in the state or Russian language) to the Commission for Chemical Safety. The application must specify the exact name of the pesticide, the percentage and name of the active substance, formulation, purpose, application rate, crop, treated objects and pest. Documents (dossier) for the drug are submitted directly by the registrant to the expert group for the registration of pesticides at the CEP, as well as to the Chemical Commission for information. If necessary, additional materials for the drug are requested from the registrant. The required list of documentation provided by the registrant for registration of pesticides to the Commission on Chemical Safety is given in **Annex 1**.

Registration tests are a mandatory system of scientific evaluation of pesticides, which is the basis for their registration. A prerequisite for registration tests is the inclusion of a pesticide in the test plan, and is agreed with the Ministries of Agriculture, Health and Social

Protection and the Committee for Environmental Protection under the Government of the Republic of Tajikistan.

In the field of regulation of the use of pesticides, as indicated by the legislation of Tajikistan, a prerequisite for state registration of pesticides and agrochemicals is the availability of appropriate documentation for their safe handling, as well as the presence of a positive conclusion of the state sanitary and epidemiological examination of chemical and biological preparations, including pesticides and agrochemicals.

According to information from the State Institution "Plant Protection and Chemicalization of Agriculture" of the Ministry of Agriculture, pesticide imports are carried out by firms identified on the basis of a tender. It is obligatory to provide a Certificate for the drug issued by the manufacturer. Certificate - "Research Protocol" for the imported drug is obtained on the basis of the analysis performed at the Institute of Chemistry, then, on the basis of the Certificate, the Tajikstandart Agency issues a Certificate of Conformity for the pesticide. After these procedures, the State Institution "Plant Protection and Chemicalization of Agriculture" accepts drugs on its balance sheet. Pesticides, according to the procedure, must have information about the active substance, the country of origin, address, labeling, a safety data sheet, and other information.

The technical and regulatory documentation in force in the Republic of Tajikistan contains standards for pollutants - residual amounts of pesticides and agrochemicals in agricultural products, feed, raw materials, food products, soil, water.

It should be noted that in Tajikistan there are many small firms that are engaged in the importation of various drugs for agriculture. The activities of these firms are not sufficiently controlled; there were cases when pesticides were imported illegally.

The Health Code of the Republic of Tajikistan regulates public relations in the field of healthcare and is aimed at the implementation of the constitutional rights of citizens and health protection, defines the rights and obligations of state bodies, enterprises, institutions, organizations and citizens, establishes the procedure for organizing the state sanitary and epidemiological service and implementing the state sanitary and epidemiological supervision.

Sanitary and epidemiological expertise includes laboratory and sanitary epidemiological research (including chemical, toxicological, etc.). Establishes a ban on the use in the Republic of Tajikistan of chemical and biological substances that have a dangerous and harmful effect on human health and future generations, materials on chemical, biological, toxicological, radiological impact on soil, water bodies and atmospheric air. Article 118 - in order to protect human life and health, the interests of consumers, the protection of flora and fauna and the environment, is carried out in accordance with the requirements of the Law of the Republic of Tajikistan "On food safety". Article 119 - mandatory registration will apply to potentially hazardous chemical and biological substances and certain types of products at all stages of circulation.

The Laws of the Republic of Tajikistan "On Environmental Protection", "On State Ecological Expertise", "On Land Use", "On Protection of Atmospheric Air" establish environmental quality standards and allowable impact on it. The laws of the Republic of Tajikistan provide for the production and circulation of hazardous chemicals; allowed after carrying out toxicological-hygienic and toxicological studies of these substances; establishing rules for handling them; compliance with requirements in the field of environmental protection; state registration of these substances, in accordance with the established procedure by the legislation of the Republic of Tajikistan. Article 50 of the Law of the Republic of Tajikistan "On Environmental Protection", Production and handling of hazardous chemicals, establishes a ban on the use of toxic chemicals that are not completely degradable. The law also provides for the State Environmental Monitoring System in Tajikistan.

The Decree of the Government of the Republic of Tajikistan "Procedure for environmental impact assessment" dated November 1, 2018, No. 532 establishes objects and activities for which the development of environmental impact assessment materials is mandatory (for example: production of equipment or devices containing toxic substances,

regulated by international agreements; enterprises for the processing of waste belonging to hazard classes 1 and 2; warehouses of pesticides; etc.).

However, most of the established provisions of laws in the field of environmental safety cannot be implemented due to insufficient control by the state body due to insufficient financial resources and weak enforcement mechanisms.

The technical regulations of the Republic of Tajikistan for raw materials and food products, feed and feed additives establish the regulation of residual quantities of chemical contaminants, including organochlorine and organophosphorus pesticides.

Tajikistan has introduced sanitary requirements, rules and norms for natural water intended for various purposes: SanPiN 2.1.5.006-07. Sanitary rules and norms. Zones of sanitary protection of water supply sources and water pipelines for domestic and drinking purposes. Ministry of Health of the Republic of Tajikistan (2007); SanPiN 2.1.4.004-07. Requirements for the quality of non-centralized water supply. Ministry of Health of the Republic of Tajikistan (2007); SanPiN 2.1.4.005-07. Drinking water. Hygienic requirements for water quality of centralized drinking water supply systems. Quality control. Ministry of Health of the Republic of Tajikistan (2007).

Program for the development of the seed industry in the Republic of Tajikistan for 2016 - 2020. The policy of the Government of the Republic of Tajikistan is aimed at developing grain growing and increasing the production of its own grain. However, at present, the technology of growing grain crops is not observed and seed farms do not have a powerful material and technical base. It is necessary to introduce high-yielding varieties in production and improve agricultural technology.

The introduction of a seed certification system, including variety control at test plots, field seed inspection, seed crop inspection and laboratory seed diagnostics, facilitates the production, processing and marketing of high-quality seeds. It is noted that the activities of the laboratories do not meet the requirements, the equipment in the laboratories is worn out.

Food safety program in the Republic of Tajikistan for 2019-2023. Food safety issues are closely related to government policy aimed at sustainable development. The main goals of the development of the Program and the priority areas include: ensuring the safety of food products, aimed at improving the quality of food and public health; support for the development of the agricultural sector; ensuring inspection and control of quality food safety. State support for agricultural production will be aimed at: protecting plants and animals; seed production and breed breeding; others

To ensure the development of crop production, the protection of cultivated lands, orchards and vineyards from pests and infections of plant diseases plays a decisive role. In the fight against pests and especially dangerous diseases (locust, mulberry moth, shrew, turtle bug, late blight of potatoes, yellow rust, brown rust), it is necessary to carry out constant plant protection measures and ensure their financing. For the timely provision of chemicals and the organization of the necessary measures, it is planned to create a reserve reserve of chemicals to combat harmful organisms.

In the field of food security diagnostics, the national center and food security diagnostic centers in cities and regions and consumer markets conduct chemical and toxicological studies of animal and vegetable products, as well as water, soil, animal feed, etc. To date, diagnostic centers have not fully created conditions for the detection of pesticides, dioxins and other contaminants in food raw materials and products.

The Program provides for the re-equipment of diagnostic centers, the purchase of modern equipment, diagnostic materials, necessary reagents and retraining of personnel. In accordance with the legislation of the Republic of Tajikistan, food safety points (used pesticides, food and food additives, animals, food raw materials, food additives, materials in contact with food products, prepared food, as well as technological processes, collection, transportation, storage, operation) must comply with the requirements technical regulations and other normative legal acts of the Republic of Tajikistan in the field of sanitary, veterinary and phytosanitary and quarantine measures. The technical regulations for food products provide for: regulation of pesticides, animal medicines, animal feed and feed additives.

The Program mentions that in Tajikistan there are cases of registration of unknown chemicals as pesticides; these drugs do not comply with the rules and international standards for the circulation of pesticides (“Requirements for pesticides and agrochemicals” of Chapter II of the Uniform sanitary-epidemiological and hygienic requirements for goods requiring sanitary-epidemiological control, approved by the Resolution of the Commission of the Customs Union dated May 28, 2010, No. 299). According to international practice, imported pesticides are registered and allowed for use if they have received prior consent and have been registered in the country of origin.

The action plan for the implementation of the Food Safety Program of the Republic of Tajikistan for 2019-2023, in the field of crop production and food safety, contains key elements in pesticide management.

Crop development

1.	Increasing the yield of strategic food crops (wheat, cotton, potatoes, sugar beets, vegetables, gourds) and the implementation of the necessary agrotechnical work by agricultural structures
2.	. Carrying out measures to protect sown lands, melons, horticulture and viticulture from insects and infectious plant diseases
3.	Creation of a reserve reserve of chemicals for pest control
4.	Creation of quarantine sites to study and determine the existence of harmful quarantine organisms in seedlings and seeds received from abroad

Food Safety

1.	State regulation of production, import, circulation and use of pesticides 2022 Ministry of Agriculture, Committee for Environmental Protection
2.	. Improvement of the State list of pesticides and agrochemicals, permitted for use on the territory of the Republic of Tajikistan 2022 Ministry of Agriculture, Committee for Environmental Protection
3.	Improvement of state regulation of production, import and use of medicines for animals 2022 Food Security Committee

Rules and norms for ensuring quarantine and plant protection, approved by the Decree of the Government of the Republic of Tajikistan dated October 4, 2013, No. 450, in the new edition of the Decree of the Government of the Republic of Tajikistan dated June 23, 2020 No. 376. The purpose of developing the Rules is to carry out activities to prevent the penetration and spread of quarantine harmful organisms into the Republic and to ensure the fight against them. The provisions of the Rules are implemented by the Food Security Committee under the Government of the Republic of Tajikistan, and their requirements must be met by state bodies, local executive bodies of state power, as well as individuals and legal entities (as amended by the Decree of the Government of the Republic of Tajikistan dated June 23, 2020 No. 376). According to the Rules, quarantineable materials imported from abroad, if quarantine harmful and other dangerous harmful organisms are found in them, are subject to mandatory disinfection (fumigation by chemical or other methods).

The program for the control of pests and diseases of orchards and vineyards for 2011-2015 (Decree of the Government of the Republic of Tajikistan No. 625, 2010) provided for the use of agrotechnical and chemical (pesticides and agrochemicals), biological (microbiological preparations and pheromone traps) methods.

1.3 Tajik authorities responsible for registration of pesticides

In Tajikistan, the state bodies that are responsible for the registration of drugs, including pesticides, according to the "List of chemicals and biological drugs permitted for use in the Republic of Tajikistan" include the following ministries and departments.

In accordance with the document "On Amendments" to the Decree of the Government of the Republic of Tajikistan dated March 3, 2003 No. 92, June 2, 2011 No. 290, based on Article 42 of the Law of the Republic of Tajikistan "On Normative Legal Acts", the Government of the Republic of Tajikistan decides: Annex to the Decree of the Government of the Republic of Tajikistan dated March 3, 2003, No. 92 "On the formation of the Commission on Chemical Safety of the Republic of Tajikistan" Composition of the Commission on Chemical Safety of the Republic of Tajikistan (by position):

Deputy Prime Minister of the Republic of Tajikistan - curator of the industry (Chairman of the Commission);

Chairman of the Committee for Environmental Protection under the Government of the Republic of Tajikistan (Deputy Chairman of the Commission);

Minister of Health of the Republic of Tajikistan (Deputy Chairman of the Commission);
Members of the Commission:

Deputy Chairman of the Committee for Environmental Protection under the Government of the Republic of Tajikistan;

Deputy Minister of Justice of the Republic of Tajikistan; Deputy Minister of Finance of the Republic of Tajikistan;

Deputy Minister of Economic Development and Trade of the Republic of Tajikistan;

Deputy Head of the Customs Service under the Government of the Republic of Tajikistan;

Deputy Chairman of the State Committee for National Security of the Republic of Tajikistan

Deputy Minister of Internal Affairs of the Republic of Tajikistan;

Deputy Minister of Energy and Industry of the Republic of Tajikistan;

Chief State Sanitary Doctor - Deputy Minister of Health of the Republic of Tajikistan;

Deputy Minister of Agriculture of the Republic of Tajikistan;

Deputy Chairman of the Committee for Emergency Situations and Civil Defense under the Government of the Republic of Tajikistan;

Deputy Director of the Drug Control Agency under the President of the Republic of Tajikistan;
Vice President of the Academy of Sciences of the Republic of Tajikistan.

Activities in the field of pesticide management are divided mainly between the Committee for Environmental Protection under the Government of the Republic of Tajikistan (CEP) and the Ministry of Agriculture of the Republic of Tajikistan (MOA).

Ministry of Agriculture of the Republic of Tatarstan. In the structure of the Ministry of Agriculture, in accordance with the Decree of the Government of the Republic of Tajikistan, No. 372 of August 1, 2008, the State Inspection Service for Phytosanitary and Plant Quarantine was established, the Regulations of which list the following responsibilities: Acquisition of fumigants and pesticides at the expense of the state budget; Creation of fumigation units equipped with special equipment; preventing the spread of quarantine and dangerous pests, plant diseases and weeds. Another Decree of the Government of the Republic of Tajikistan No. 595 dated December 29, 2017 established the Food Security Committee under the Government of the Republic of Tajikistan. By this Decree, the State Inspection Service for Phytosanitary and Plant Quarantine is included in the list of organizations of the Committee for Food Security under the GoT.

The analysis and evaluation of pesticides is carried out by the institution "Control and toxicological laboratory", a structural subdivision of the Ministry of Agriculture; one of the directions is to determine the maximum allowable concentration (MPC) of pesticides in agricultural products, as well as to determine the maximum permissible concentration of pesticides in soil and water. However, full studies were carried out until 1992, and later such activities ceased due to the lack of accreditation from the state standardization body and technically outdated laboratory equipment, as well as problems with human resources.

The State Institution "Plant Protection and Chemicalization of Agriculture" of the Ministry of Agriculture publishes a quarterly report. Obsolete pesticides/ pesticide circulation/ storage, etc. – should be considered in the document, but they do not have the resources and people. The report mainly contains a forecast for the seasonal distribution of plant pests and diseases.

Ministry of Health and Social Protection of Population of the Republic of Tajikistan. The issuance of permits and licenses for the import and export of pesticides is carried out by the Ministry of Health and Social Protection, in accordance with the Laws of the Republic of Tajikistan "On the Permit System" and "On Licensing Certain Types of Activities".

The authorized state body in the field of sanitary and epidemiological supervision issues a sanitary and epidemiological conclusion; carries out the coordination of methods for the destruction of pesticides and pesticides not allowed for use with an expired period of use.

Structural unit "Sanitary and epidemiological control" of the Service of the State Sanitary and Epidemiological

Committee for Environmental Protection under the Government of the Republic of Tajikistan. The state institution "Center for the fulfillment of the obligations of the Stockholm Convention on POPs" carries out research within the framework of the implementation of projects and programs. The structure of the CEP has a subdivision "Analytical control service", which should conduct research to determine the content of pesticides and, in particular, HHP, in the natural environment. But even here there are problems: the potential for technical development, trained and certified personnel, etc.

The Committee for Environmental Protection, State Institution "Center for the fulfillment of the obligations of the Stockholm Convention on POPs" implemented several projects and completed a report on the inventory of obsolete pesticides and POPs. The country has developed a National Plan for the Implementation of the obligations of the Republic of Tajikistan under the UN Stockholm Convention on Persistent Organic Pollutants (approved by the Decree of the Government of the Republic of Tajikistan on 01.10.2007,

No. 502). According to this document, the Committee (CEP) is appointed as the coordinating agency for the implementation of obligations on POPs.

Committee for Emergency Situations and Civil Defense of the Republic of Tatarstan. The Committee operates the "Republican Chemical and Radiometric Laboratory", which conducts chemical, toxicological and radiometric studies. Control of soil, atmospheric air, water. Currently, the laboratory has chromatographic systems for the determination of organic pollutants and other equipment for toxicological studies. But studies are not carried out in full, due to the lack of consumables, reagents and standard samples.

Food Security Committee under the Government of the Republic of Tajikistan. The structural subdivision "National Center for Diagnostics of Food Security" is a laboratory network, has a chemical-toxicological department, whose functions include the study of plant materials, feed, feed additives, food and water for residual amounts of chemical contaminants. The center is well equipped with analytical equipment with computer programs, has the ability to control food and feed safety. The authority includes certification of feed and feed additives, meat and dairy products. The structural subdivision of the Department of Permits, Certification and Supervision of Veterinary Drugs registers drugs for animals imported (manufactured) into the Republic. Another department - "Phytosanitary and Plant Quarantine" conducts entomological-herbological and phytopathological control. Carry out the analysis of the quality of seeds, soil, control of seed and variety testing areas.

Agency "Tajikstandart". Responsible for the state policy in the field of certification of products and services, state supervision over compliance with the requirements of standards and technical regulations. Develops technical regulations, including the safety of products and raw materials.

The Test Center at Tajikstandart has a well-equipped laboratory; conduct research on food products, raw materials, drinking water (determine phenolic compounds, organic pollutants, including pesticides). The testing laboratory is ISO 17025 accredited.

Tajikstandart accredits and inspects accredited laboratories, including certification bodies, consumer societies and manufacturers' representatives.

The Academy of Sciences of the Republic of Tajikistan (National Academy of the Republic of Tajikistan, 2020) provides scientific support in the development of environmental policy (Presidential Decree No. 12, 2012, powers vested in the Ministry of Education and Science).

Thus, at present, there are no financial and technical resources for the effective application of laws in Tajikistan, government agencies and subordinate laboratories have a very low potential for conducting research to determine the active substance in pesticides.

The State Statistical Committee of the Republic of Tajikistan carries out coordination between ministries and departments on the basis of the Law "On State Statistics" dated January 12, 2010, No. 588 and the Agreement on Mutual Cooperation. This office performs collection, storage and analysis; publishes statistics. However, in the publications and collections of the State Statistics Committee there is little information on chemicals, in

in particular, on pesticides and agrochemicals used for the needs of agriculture in the republic.

Customs Service under the Government of the Republic of Tajikistan. The authority of the Service includes accounting for the import and export of chemicals.

Current situation in pesticide management

There has never been any production of pesticides in Tajikistan. All pesticides are imported. Much of the use of pesticides is to protect crops from pests and diseases. Most of the applied pesticides on crops are seed treaters.

Within the framework of the project, with the support of FAO, a "Plant Protection Handbook" was published in Tajikistan (Jalilov A., Vakhidov A., 2010). In 2015, the FSPI conducted an analysis that compared pesticides banned for use at the international level (PAN International List of Highly Hazardous Pesticides, Hamburg-November, 2013, www.pan-international.org) with a list of pesticides recommended for use according to

Plant Protection Handbook. It turned out that a fairly large number of drugs recommended for use in Tajikistan (more than 30) contain plant protection products that are banned at the international level.

Within the framework of the project "Ensuring access of Tajik agricultural products to export markets by improving the food safety system" with the support of the Ministry of Economic Development and Trade of the Republic of Tajikistan, the Ministry of Agriculture of the Republic of Tajikistan and the International Trade Center (ITC), the Standards and Trade Development Fund (STDF) in studies were carried out in cooperation with the Food and Agriculture Organization of the United Nations (FAO) (2019). Samples of dried apricots were taken from all regions of Tajikistan to test the content of residual amounts of agrochemicals and pesticides. A total of 24 apricot samples were selected. Samples were homemade SO₂ treated apricots, treated apricots with secondary SO₂ treatment, peeled and "organic" apricots dried without exposure to sulfur dioxide. Sampling was carried out on the basis of a random sample. The analysis was carried out in an accredited laboratory - Eurofin global control; Hamburg, Germany. The results of the analyzes showed that pesticides were not detected in the samples of dried apricots. Out of 24 samples, SO₂ excess was found in 8 samples (33%) (2000 mg/kg, Codex standard Stn 130-1981). Very low concentrations of residues of cyhalothin (insecticide) and cyprodinil (fungicide) were found in only one sample (from workshop materials).

Stockpile management of obsolete pesticides

According to information received from the Statistical Agency, as well as from employees of the Ministry of Agriculture, since 1992, there has been a decrease in the consumption of pesticides. Currently, minimal amounts of pesticides are used for agricultural needs, primarily because of their high cost. It should be noted that obsolete/buried pesticides can be considered as potentially dangerous sources of hazardous environmental pollution.

Previously, within the framework of the World Bank project in 2009/10, as well as FAO in 2013 (information about the work is available on the website (<http://psms.fao.org>), field inventories and data collection on requirements, conditions and inventory, storage, disposal methods for obsolete pesticides.

The national inventory of POPs was carried out in January-May 2014. This activity was carried out by the State Institution "Center for the implementation of the obligations of the Stockholm Convention on POPs" under the CEP under the Government of the Republic of Tajikistan, in cooperation with other government agencies. GEF/UNIDO project "Ensuring activities for the review and updating of the National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants in the Republic of Tajikistan". The inventory was carried out in the following areas:

- Carrying out an inventory of electrical equipment containing PCBs;
- Conducting an inventory of POPs pesticides;
- Conducting an inventory of unintentionally produced POPs;
- Conducting an inventory of new POPs.

The GEF/UNIDO project "Ensuring activities for the review and updating of the National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants in the Republic of Tajikistan" pursued the following goals:

- Coordination mechanism and awareness raising. Coordination mechanism established with stakeholders aware of emerging POPs risks and policy implications;
- Inventory of new POPs (and updating of original POPs) approved by relevant stakeholders;
- Assessment of national capacities and identification of priorities for the management of new POPs. Identified national capacity to manage new POPs and prioritize new POPs risk reduction options identified by stakeholders;

1.4. International chemical conventions and agreements relating to pesticides (Stockholm, Montreal Protocol, Rotterdam, SAICM), whether or not the country has ratified (or is participating in), and the name of the focal point or designated National Authority for each

Stockholm Convention

Tajikistan became a party to the Stockholm Convention on POPs on May 3, 2007. In 2016 in Tajikistan, the National Center for the implementation of the Stockholm Convention (SC) was established. The country first reported to the Convention Secretariat in 2010. for the second round of reporting, there were no further reports for other rounds.

Stages of implementation of the Stockholm Convention in the Republic of Tajikistan (with financial support from the GEF):

- 2003-2005 - development of the National Action Plan for the implementation of the Stockholm Convention on Persistent Organic Pollutants of the Republic of Tajikistan.

- In 2007 on the basis of the Decree of the Government of the Republic of Tajikistan dated March 03, 2003 No. 17-r "On approval of the composition of the working group to develop an action plan to reduce the use of persistent organic pollutants in the Republic of Tajikistan" and the memorandum signed on September 04, 2003 between UNEP and the Ministry of Nature Protection of the Republic of Tajikistan was the National Implementation Plan (NIP) of the obligations of the Republic of Tajikistan under the Stockholm Convention on POPs was drawn up.

- The NIP was developed based on the results of the 2004-2005 primary inventory of chemicals related to POPs in the following areas: • obsolete and banned pesticides, including those related to POPs, pesticide storage facilities; • electrical equipment containing PCBs; • releases of unintentionally produced POPs (dioxins and furans); • territories contaminated with POPs (aircraft sites for agricultural purposes, landfills for disposal of pesticides).

- 2010-2011 - the project "Elimination of pesticides with POPs properties, reduction of harmful effects and management of pollution sources." The project raised the issue of building the capacity of local authorities responsible for identifying and managing obsolete stocks of pesticides. The project did not include an inventory of pesticides.

- 2013-2015 - UNIDO / GEF project "Updating the National Action Plan (NAP) for the implementation of the Stockholm Convention on POPs in the Republic of Tajikistan. To date, the NAP has not been approved by the Government.

- 2010-2016 "Demonstration and expansion of sustainable alternatives to DDT for the control of vector-borne diseases in the South Caucasus and Central Asia." The project helped eliminate the possibility of using DDT in vector control without increasing the number of cases of disease, the introduction of environmentally sound alternatives.

environmental assessment of the drug, the establishment of environmental standards and rules for handling it;

- preparation of an opinion on the results of registration tests of the pesticide;

- state registration of the drug.

To date, the Regulation on registration tests and state registration of pesticides in the Republic of Tajikistan has not been approved by the Government of the Republic of Tajikistan.

State Chemical Commission of Tajikistan (SCC RT)

SCC RT was organized by the Decree of the Government of the Republic of Tajikistan dated March 3, 2003, No. 92 "On the formation of the Commission on Chemical Safety of the Republic of Tajikistan". The State Chemical Commission was established to coordinate the activities of ministries, departments, local authorities and self-government in the field of controlling the handling of chemicals, regulating measures against persistent organic pollutants, ensuring environmental safety and protecting public health.

The Government of the Republic of Tajikistan has set the task of reorganizing the State Chemical Commission of Tajikistan, the Regulations on the Chemical Commission have been drawn up, but so far, the Memorandum on the reorganization of the commission has not been approved.

Basel Convention

Tajikistan joined the Basel Convention on May 13, 2016 in accordance with the Decree of the Parliament of the Republic of Tajikistan, No. 437. According to the decision of the Government of the Republic of Tajikistan, Tajikistan became a party to the convention on September 28, 2016. Basel Convention in accordance with the internal order of the Committee for Environmental Protection (CEP) under the Government of the Republic of Tajikistan, which is also the contact person for the Rotterdam Convention in Tajikistan. The National Center for the implementation of the Basel Convention has not yet been established in the country.

Rotterdam Convention

Signing by Tajikistan of the Rotterdam Convention, the scope of which applies to: a) banned or severely restricted chemicals; b) severely hazardous pesticide formulations, held in 1998.

The Rotterdam Convention has not yet been ratified by the country, which will be the objective of the project "Strengthening the Capacity for the Implementation and Ratification of International Conventions on Chemicals and Waste in Tajikistan" (2020-2022) with the support of UNEP/BRS Convention Secretariat/IPEN.

Minamata convention

Tajikistan is not a party to the Minamata Convention on Mercury.

Mercury reserves in Tajikistan make up 3% of the total mercury reserves in the CIS countries, the largest mercury deposits are located in the Zeravshan zone, Dzhizhikrutskoye deposit.

The government of Tajikistan did not support international projects within the framework of the implementation of the Minamata Convention. In the country, increased attention is being paid to the accelerated development of the coal mining industry and the construction of cement plants. In 2019 There are 14 coal-fired cement enterprises operating in Tajikistan with a total design capacity of 5.1 million tons.

Stimulating the signing of the Minamata Convention on Mercury will be one of the objectives of the project "Strengthening the capacity for the implementation and ratification of

international conventions on chemicals and wastes in Tajikistan” (2021-2022) with the support of UNEP/BRS Conventions Secretariat/IPEN.

Montreal Protocol

The Republic of Tajikistan acceded to the Montreal Protocol on December 13, 1997, deposited an instrument of accession to the Protocol on January 7, 1998. The Protocol entered into force for Tajikistan on April 7, 1998.

Regulations on the procedure for importing ozone-depleting substances into the Republic of Tajikistan. Approved by the Decree of the Government of the Republic of Tajikistan dated December 3, 2002 No. 477 (as amended by the Decree of the Government of the Republic of Tajikistan dated January 26, 2008 No. 47).

Control over the import of ozone-depleting substances (ODS) into the Republic of Tajikistan is carried out in accordance with the established procedure by the Customs Service under the Government of the Republic of Tajikistan, the Ministry of Agriculture of the Republic of Tajikistan and other specially authorized state bodies of the Republic of Tajikistan within their competence.

The Government of Tajikistan, as a party to the Montreal Protocol and its reforms, must comply with the requirements and schedule for the elimination of ODS. The strategy of the Government of the Republic of Tajikistan in this direction is as follows:

- Prohibition of the use of CFCs and HCFCs within the time limits specified in the Montreal Protocol;
- Adhere to the HCFC and methyl bromide replacement schedule for the countries referred to in Article 2 of the Protocol;
- Speed up the replacement of ODS as soon as possible in accordance with the conditions specified in international agreements;
- Develop regulations under the Kigali Amendment of the Montreal Protocol for the Protection of the Ozone Layer.

SAICM

Tajikistan endorsed and adopted the Strategic Approach to International Chemicals Management (SAICM, 2006-2020), which is a global policy and strategy designed to protect human health and ecosystems from harm caused by toxic chemicals, including pesticides, in February 2006

SAICM implementation includes: development of sustainable agriculture, environmentally sound waste management and minimization; cleaner production, use of safer alternatives, etc. Issues coordinated by SAICM and outside the scope of international environmental conventions: lead in paint; chemicals in goods; hazardous substances in the life cycle of electronics; nanotechnologies and manufactured nanomaterials; chemicals that disrupt the endocrine system; pharmaceutical contaminants; highly hazardous pesticides.

Hazardous waste management activities in support of SAICM implementation:

- Use of highly hazardous pesticides in the agricultural sector of Tajikistan;
- Introducing the development of legal aspects on hazardous chemicals into the Short-term Sustainable Development Strategy of the Republic of Tajikistan.

2. Status of pesticide use in Tajikistan

2.1. List of pesticides registered at the national level in Tajikistan

State regulation of the circulation of pesticides and agrochemicals, as well as updating the State Register of pesticides and agrochemicals permitted for use on the territory of the Republic of Tajikistan were assigned to the Ministry of Agriculture and the Committee for Environmental Protection.

The use of pesticides and agrochemicals in the Republic of Tajikistan is carried out in accordance with the current document "List of chemical and biological preparations permitted for use in the Republic of Tajikistan" (approved by the decision of the Commission on Chemical Safety of the Republic of Tajikistan No. 4, June 11, 2004).

According to the reports of the Ministry of Agriculture in recent years, the dynamics of the consumption of agrochemicals in the Republic of Tajikistan indicates their multiple

reduction in the protection of grain, fruit crops and vineyards. Among the applied pesticides on crops, most of them are seed treaters (due to the fact that dressing is a mandatory procedure for protecting these crops from seed infection). Fungicides, insecticides, herbicides are also used on crops. In the cultivation of cotton, the use of pesticides has also decreased significantly. An exception is pastures, where planned locust control activities are actively carried out.

The Food and Agriculture Organization of the United Nations (FAO), the Government of Japan, the Japan International Cooperation Agency and the Ministry of Agriculture of the Republic of Tajikistan, within the framework of cooperation, are implementing the second phase of a regional project (Tajikistan, Kyrgyzstan and Afghanistan) to strengthen locust control in Tajikistan (2020). The aim of the project is to improve food security and livelihoods of the rural population by preventing and limiting the threat of locust infestations and the damage they cause to crops and pastures in terms of human health and the environment. This project aims to strengthen regional cooperation between countries, which is a key factor in the successful management of transboundary plant pests such as locusts. Therefore, the constant and timely exchange of information between neighboring countries and partners, as well as environmentally friendly methods of dealing with it, are of the utmost importance. "FAO supports the use of a locust monitoring system to help prevent serious damage caused by locusts and reduce the amount of chemical pesticides used," such measures will reduce the negative impact of traditional locust control methods on human health and the environment.

2.2. List of HHPs among the list of pesticides registered at the national level in Tajikistan

In Tajikistan, the use of pesticides is carried out according to the current document "List of chemical and biological preparations permitted for use in the Republic of Tajikistan" (approved by the Commission on Chemical Safety of the Republic of Tajikistan No. 4, June 11, 2004). Although, according to some sources, the List has been updated, and is currently under consideration by the Government of the Republic of Tajikistan, but has not been approved, and is currently not available for use by interested parties.

To date, there are no legal restrictions in Tajikistan prohibiting the use of HOPs that are on the list of permitted formulations of pesticides.

Technical support to improve the pesticide registration and quality control system is provided by FAO at the request of the Government of Tajikistan.

At present, the Agreement on the implementation of the project "Locust Control in Central Asia" has been signed. The document provides for the continuation of the project (since 2015 - 2nd phase of the regional project "Improvement of locust control". A draft agreement on technical cooperation "Preparation and emergency measures to prevent locust invasion in Tajikistan" was also signed. These Projects are financed by Japan and implemented by FAO, the project partner is the Ministry of Agriculture of the Republic of Tajikistan, and are designed for 2020-2025.

3. Mitigation measures.

3.1 Impacts on human health, environment or human rights due to HEPs in Tajikistan.

The potential for chemical poisoning is suspected to exist, which in principle is of concern and poses a significant health risk. At the same time, the lack of detailed statistical data reflecting the real situation in Tajikistan does not allow monitoring the effectiveness of the measures taken to improve the state control of chemical pollution, and especially the PEP.

There are no official data on pesticide poisoning in Tajikistan.

In Tajikistan, there are repeated cases of complaints from beekeepers about the mass death of bees. Probably, such cases are related to the mishandling of pesticides, which are used on crops, by farmers in the fields. There is no exact data on the poisoning of bee colonies with pesticides and the damage caused to beekeepers. It is necessary to conduct research, as well as conduct information activities among farmers and dekhkan farms. We believe that the main reason that is a threat to beekeeping is the lack of regulations that regulate the actions and

proper handling of pesticides by agricultural producers; and that beekeepers (or the Association of Beekeepers) be informed in a timely manner of the use of agrochemicals in the fields.

3.2 National provisions for phasing out the use of HLOs.

The Committee for Environmental Protection under the Government of the Republic of Tajikistan (CEP) is responsible for implementing a unified state policy in the field of environmental protection. The Ministry of Agriculture (MOA) of the Republic of Tajikistan has been assigned the most important role in dealing with pesticides. In accordance with the Regulation (2008), the MOA is responsible for developing proposals for the development of the use of pesticides; providing comprehensive assistance to agricultural enterprises in the introduction of new and effective methods and methods of handling pesticides and plant protection products. The Ministry of Health and Social Protection of the Population (MoHSP) of the Republic of Tajikistan is the state body responsible for public health activities. But, it should be noted that interdepartmental interaction is extremely low, information exchange is weak. In the presence of departments dealing with the handling of pesticides, there are no effective mechanisms for interaction.

National efforts in the country are aimed at food security, the components of which are the introduction of ecological production of agricultural products using biological control methods, modern agricultural technology, selection of seed varieties, water and soil management, biodiversity conservation by maintaining the population of pathogens and pests below the threshold of harmfulness.

Food security is ensured by the basic conditions - access to food and its quality and safety. Safe food, as well as safe production conditions, are integral elements of public health. In this regard, special programs have been developed. In all developed documents in the field of development of agriculture in Tajikistan, one can trace, among the main tasks, the creation of favorable conditions for the development of this sector of the economy. At the same time, the documents note that a certain amount of agricultural production is damaged annually. In some cases, this leads to the destruction of plants and trees due to the development and spread of diseases and pests. Therefore, the protection of seeds, orchards and vineyards, orchards, mother orchards from diseases and pests are among the main tasks of the Programs. It is noted that in order to prevent the spread of diseases and control pests, it is necessary to use scientifically based recommendations and proposals of scientific and technological achievements. And the reasons for the spread of diseases and pests include: low-level agrotechnical measures, the difficult financial situation of farms, the lack of technical equipment for chemical processing, the high price of fuel and pesticides, as well as insufficient knowledge of farm managers on plant protection.

4.1 Parameters to be monitored.

Monitored parameter	Recommended management strategy
Leakage	<p>Ensure that all storage locations and facilities are appropriate and secure.</p> <p>Ensure that all pesticides can be contained in selected storage areas and facilities.</p> <p>Provide appropriate equipment and materials for cleaning up spills.</p>
Transportation and Delivery of Goods	<p>Cover any cargo with pesticides during their transportation.</p> <p>Make sure pesticide supplies are made at the right time.</p> <p>Do not accept any pesticide containers that are damaged or leaking.</p> <p>Make sure that all leaks that occur during delivery are cleaned up properly.</p>
Dust release from storage areas and facilities	<p>Store pesticides covered and sealed.</p> <p>Clean up leaks immediately.</p>

	Keep inventory "in use" to the minimum required. Collect and dispose of spills promptly and properly.
Cross-contamination of product	Store each product in a separate storage container and in its own place within the facility and premises.
Storage Areas - Floors	Flush floors regularly.
Product Mixing	Keep accurate storage records/logs. Keep foods and mixtures separate from each other at all times Make sure all storage bays and bins are clearly marked Ensure that storage, loading and mixing plant and equipment are cleared of all residues when moving from one product to another. Do not store the product in packages that are not properly labelled.
Occupational safety and health	Contact with people will be kept to a minimum.
Risk assessments	Risk assessments should be carried out for the acquisition, storage and handling of chemicals.
Community contact	Managers will develop, implement and monitor the effectiveness of risk management procedures. Managers should ensure that personnel are aware of any local and industry regulations that must be followed.
Personal Protective Equipment	Personnel must be provided with appropriate personal protective equipment (PPE) when using pesticides.
Lack of appropriate warning label and information	Managers should ensure that appropriate warning labels and information about the nature of the hazards and risk management measures are displayed.
Poor Maintenance and Scheduled Maintenance	All personnel are responsible for implementing sound facility maintenance practices and arranging regular, scheduled maintenance for all equipment in use.
Faulty and unusable equipment	Conduct regular inspection and testing of equipment and infrastructure to identify maintenance requirements.
Incorrect and unsuitable product mixtures	Mixes should be prepared using the correct grades of raw materials in the correct proportions. All products will be inserted into the distributors, in the right condition and weight. No training Staff will provide appropriate training.
Lack of appropriate records and documentation	All relevant records and documents that should be maintained and retained, e.g. training documentation, risk assessments, maintenance schedules, instructions for safe handling of materials, etc.

4.2. Technical information for pesticides

Specifications required by the Buyer	Actual characteristics of the offered product (to be completed by the bidder)
State registration: (toxic chemicals) that have passed state registration are imported into the Republic of Tajikistan.	

Type of packaging.

Delivery of pesticides is carried out only in the manufacturer's packaging.

Marking:

The label must indicate:

- The name of the drug, its quantity and concentration;
- Name of the manufacturer;
- Date of manufacture and expiration date.
- Instructions for using the product: method of preparing the working solution, the area of the territory for which the prepared amount of the working solution is calculated, the method and frequency of processing, the period of entry of people into the territory after processing to continue agricultural work, as well as the date of the last processing before harvesting, the so-called waiting period.
- Instructions for the safe handling of the drug during storage, preparation of a working solution, application, as well as during work on cleaning working equipment

Storage conditions:

Storage and use (of pesticides) is carried out in compliance with the requirements of the current sanitary norms and rules for sanitary protection zones and sanitary classification of enterprises, structures and other facilities and is carried out in specially designed storage facilities that meet the requirements of environmental

safety, construction and sanitary and epidemiological rules and norms. The criteria for hygienic safety of the functioning of operated or closed storage facilities are the maximum permissible concentrations of chemicals in the air of the working area, atmospheric air, in the water of open reservoirs and in the soil, as well as the maximum permissible levels of physical factors.

When storing pesticides (toxic chemicals), it is necessary to comply with the requirements stipulated by the transport label, recommendations for the use of specific pesticides (toxic chemicals), their classification codes, including the creation of conditions for the separate storage of drugs that are incompatible in their physical and chemical properties (volatility, oxidizability and other properties), fire and explosion hazard, reaction activity, temperature storage conditions.

It is not allowed to store (toxic chemicals) in bulk on the floor of the warehouse without the use of pallets and racks.

Must comply with the requirements of **GOST 2081-2010**

Certification Requirements

The Contractor must provide copies of all necessary documents for the entire Goods supplied, including, but not limited to, certificates issued by organizations accredited by GOSSTANDARD:

Certificates of conformity; Quality certificates; and etc.

The above copies of the certificates must be submitted by the Supplier simultaneously with the delivery of the Goods.