



Food and Agriculture Organization
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URGENT SAFE DISPOSAL OF OBSOLETE PESTICIDES STOCKS IN LEBANON

October 2024

SDGs:



Country:

Lebanon

Project Code:

TCP/LEB/3801

FAO Contribution:

USD 350 000

Duration:

1 August 2020–31 December 2023

Contact Info:

FAO Representation in Lebanon
FAO-LB@fao.org

Implementing Partner

Ministry of Agriculture (MoA).

Beneficiaries

Officers and representatives from institutional authorities and the private sector.

Country Programming Framework (CPF) Outputs

CPF 2023–2026

Output 2: Sustainable management of natural resources and the environment supported for healthy ecosystems in the context of climate change.

Sub-output 2.2: Ecosystems restored through integrated marine, land and water resource management.

Regional Initiatives

RI B: Building resilience for enhanced food security and nutrition.



BACKGROUND

According to the Lebanese customs statistics (the only authority offering import/export statistics in an electronic form), Lebanon imports a yearly average of 8 000 tonnes of pesticides. Although the statistics do not establish the difference between pesticides for agricultural use and public health use, most of the imported pesticides are for agricultural purposes. Furthermore, although the MoA counts on a well-established registration system known as the Lebanese Pesticide Management System (LPMS), there is still a need to improve it, so a database is created and updated periodically. The MoA has also limited capacities to conduct accurate inventories, to collect, repack and properly dispose of obsolete or unwanted pesticides stocks. A recent inventory revealed that around 56 tonnes of expired or unwanted agricultural pesticides are stored in different places around the country, such as private companies, the port of Beirut or the MoA Kfarshima lab, where 10 tonnes have been stored for more than ten years, becoming a serious risk to the staff and surrounding population due to their very bad condition (leaking packages and toxic fumes release), as well as to the environment.

In order to address this matter urgently, the project was designed aiming to dispose 20 tonnes of identified unwanted pesticides and to build MoA's capacities to conduct appropriate inventories and prevent new stocks of expired pesticides building up.

IMPACT

The project contributed to protecting the environment and promoting public health by reducing the risk of obsolete pesticide stocks in Lebanon, which contributed to the achievement of the SDG 3 "Good health and well-being" and SDG 12 "Responsible consumption and production" through the improvement of national capacities on pesticides management and safe disposal of obsolete and expired wastes, in a sustainable and environmentally-friendly manner.

ACHIEVEMENT OF RESULTS

The project strengthened national capacities in i) inspection and inventory of obsolete and unwanted pesticides; ii) safeguarding, repackaging, disposal and prevention of obsolete stocks and pesticides management, and iii) good practices to store and manage pesticides stocks. A contract was established with Veolia ES Field Services Limited for safeguarding, transporting internationally and disposing of obsolete pesticides and associated waste in Lebanon.

A total of 44 participants, including 28 women, received training or participated in the training of trainers (ToT) during the project, which covered i) safeguarding, repackaging, disposal and prevention of obsolete stocks and pesticides management, and ii) inspection and inventory of obsolete and unwanted pesticides. The ToT was a useful workshop to ensure continuous improvement and knowledge sharing, from the technical staff of the MoA to further officers and stakeholders. Regarding the workshop on good practices in storing and managing pesticides stocks, 34 participants attended this training including MoA staff and private sector representatives, of whom eight were women. In total, 77 participants attended all trainings, of whom 35 were women, achieving the target by 128 percent.

Furthermore, a questionnaire was elaborated to a mobile application to be completed during the inspection of the agricultural shops. To do this, the sampling datasheet was uploaded on tablets for data collection, using the Open Data Kit (ODK) mobile application. A total of 600 private agricultural shops was inspected to assess their compliance with the standards set by the MoA and to conduct an inventory of the obsolete and illegal pesticides that might be found.

Results revealed that most of the shops were not compliant with the standards and that 20 percent of them were working without a licence. As a result, the project developed a long-term strategy on the management of pesticides' life cycles and a national action plan was elaborated to prevent the accumulation of further obsolete pesticides in the country.

IMPLEMENTATION OF WORK PLAN AND BUDGET

Although most of the activities were successfully completed within the initial budget, the project had two no-cost extensions, first until July 2023, and then until 31 December 2023, due to some delays related to COVID-19 restrictions, the provision of materials and devices to conduct inventories and inspections, and the difficulties that the project faced during the implementation of the contract signed with the company Veolia ES Field Services Limited. Despite the exceptional approval granted to complete the contract until 31 December 2024, several constraints related to changes for the focal point position of the Basel Convention in the Ministry of Environment (MoE) and delays in performing some assessments prevented the MoE from issuing the required permits to transport the expired freight to Switzerland, so the company was not able to complete the disposal of the obsolete pesticides.

No major risks affected the project implementation in the beginning; however, since obsolete pesticides were considered hazardous waste, there were some high risks for the environment associated with pollutants and toxic substances such as fumes and fluid leaking from them. The recruited company Veolia ES Field Services Limited managed and packed all residues in a safe manner, in order to handle them and transport them for disposal.

Another situation emerged in October 2023 in the country, leading to postpone and cancel several activities temporarily and to take the necessary precautions to resume all the work in a safely manner.



FOLLOW-UP FOR GOVERNMENT ATTENTION

A full exit strategy was foreseen through the long-term national strategy elaborated during the project to eliminate future obsolete and expired pesticides and avoid the accumulation of new stockpiles. It is recommended that the government follow up on the adoption of the national strategy and the implementation of the scaled-up Project Document, including the preparation of a strategic environmental and social assessment, in order to ensure to continue strengthening the national management of pesticides and preventing the accumulation of obsolete pesticides, as well as providing safe empty containers for the disposal of obsolete pesticides and developing the guidelines on pesticide use and pesticide risk reduction through pest monitoring and the promotion of integrated pest management.

SUSTAINABILITY

1. Capacity development

The project improved ministerial capacities through a new action plan to serve as a regulatory framework, enforced by the MoA. This plan will support the sustainability of results and will help enforce several existing regulations, such as i) the Law 68/6 regulating the trade in fertilizers, pesticides and fodder; ii) the Decree 5039 related to the regulatory framework for pesticides' trade; iii) the Resolution No. 310/1 regulating the registration and use of pesticides imported and prepared in Lebanon and its amendment by the Resolution No. 545/1 regarding extending deadlines for pesticides' registration, and iv) the Resolution No. 311/1 regulating the import of pesticides.

In addition, several capacity-building activities derived from the Environmental and Social Impact Assessment (ESIA) and ToTs were implemented to improve institutional competencies for MoA staff and other relevant stakeholders from the private sector involved in the treatment of hazardous waste, to strengthen national capacities on the management of pesticides' life cycle. Training the MoA's technical staff to be trainers and continuing to spread the knowledge, as well as assigning the endorsement of the new national strategy to this ministry will help ensure the results sustainability.

2. Gender equality

The project addressed this matter in a systematic way and encouraged both women and men from all sectors to participate in the activities. The project met the needs of both women and men and provided technical trainings to all of the concerned beneficiaries and stakeholders, among whom there were 35 women out of 77 technical staff and representatives of the private sector. Furthermore, the project supported women empowerment and their participation in leadership opportunities, such as the inspections, where the number of women inspectors was almost twice the number of men inspectors (16 women to nine men).

3. Environmental sustainability

The main and ultimate goal of the project was the safe disposal of the obsolete pesticides found in the country, which would contribute to protecting the environment by eliminating toxic gases and fluids. In addition, the project strengthened institutional capacities on the safe management of pesticides by elaborating a long-term national strategy and promoted guidelines to prevent the accumulation obsolete and expired pesticides. Therefore, the implemented activities contributed to environmental sustainability.

4. Human Rights-based Approach (HRBA) – in particular Right to Food and Decent Work

Although this was not one of the ultimate outcomes of the project, human rights were respected during the whole implementation through a non-discrimination and full transparency approach. Regarding the right to a decent job, the project contributed to protecting working environments in the MoA by working on the safe disposal of expired pesticides. To this purpose, the recruited company prepared and repacked the hazardous waste in a safe manner to be disposed of, which improved occupational safety and health at stocks locations, and a ToT on safe repacking and management of obsolete pesticides was provided to the MoA's technical staff.

5. Technological sustainability

The project did not introduce any new technologies but focused on minimizing the risk of building up stocks of obsolete pesticides by training the MoA personnel and several stakeholders from the private sector on pesticides' stock management. To this purpose, a thorough inventory was conducted, and a data collection form was produced through the ODK mobile application to work as a model for future inspections; and by conducting an inspection to the agricultural shops to assess their compliance with the standards set by the MoA with regard to storing pesticides and conducting an inventory of the obsolete pesticides.

6. Economic sustainability

During the whole implementation process the project team worked in close collaboration with the MoA and the plant pharmacy department to increase their competencies, so they are capable of implementing the national strategy and the action plan. However, due to the economic context in the country, the MoA might find several limitations to implement the strategy on its own at a national level. Despite the knowledge transfer that was achieved through this project, the sustainability of the project results might be at risk and may not be fully achieved due to the lack of financial resources required to maintain periodic inspections and conduct an inventory of obsolete pesticides and their safe disposal. Nevertheless, the elaboration of the action plan and the ToT prepared the ground to continue training further officers and resuming the activities once the economic context is suitable.



DOCUMENTS AND OUTREACH PRODUCTS

- ❑ **FAO.** 2023. *Workshop within the framework of the project “Urgent disposal of pesticide stocks in Lebanon”.*
https://www.facebook.com/FAOinLebanon/posts/pfbi_d0fh13qT6pqmShH6aDat4JoZjfUMbBhmqCRHXtW415_VaAPsojgERKwGRUdAvv8tpNxl.
- ❑ **FAO.** 2023. *Workshop within the framework of the project “Urgent disposal of pesticide stocks in Lebanon”.* (only available in Arabic).
<https://x.com/FAOLEbanon/status/1710217215658569822?t=AYghr0EDxk3pJcqKRn3CvQ&s=19>.



ACHIEVEMENT OF RESULTS - LOGICAL FRAMEWORK

Expected Impact	Reduced risk of obsolete pesticides stocks on public health and the environment		
Outcome	National capacities for sustainable pesticides' life cycle management and safe disposal of obsolete pesticides, and associated wastes have been improved in an environmentally sound manner		
	Indicator	Quantities of eliminated obsolete pesticides stocks.	
	Baseline	0	
	End Target	20 tonnes.	
	Comments and follow-up action to be taken	The project strengthened national capacities in i) inspection and inventory of obsolete and unwanted pesticides; ii) safeguarding, repackaging, disposal and prevention of obsolete stocks and pesticides management, and iii) good practices to store and manage pesticides stocks. A contract was established with Veolia ES Field Services Limited for safeguarding, transporting internationally and disposing of obsolete pesticides and associated waste in Lebanon (contract 64-2021), from 16 June 2021 to 31 July 2023. The dossier faced many problems in getting approval from MoE regarding the notification document required for the movement of the obsolete pesticides and their disposal. Following a no-cost extension approved until 31 December 2023 and an exceptional approval to complete the contract until 31 December 2024, other limitations prevented the MoE from granting a timely approval for the transportation of residues, so the contract was terminated without being able to eliminate the obsolete pesticides.	
Output 1	Capacity of the staff of the MoA, customs authorities and other stakeholders in safe inspection, inventorying and managing obsolete and unwanted pesticides stocks improved including institutional capacity-building activities derived from the ESIA/Environmental and Social Management Plan (ESMP) (activity 2.2)		
	Indicators	Target	Achieved
	Number of trainees participating in the training workshops on inspection, inventorying, and safeguarding obsolete and unwanted pesticides stocks.	60	Yes
Baseline	0		
Comments	A total of 77 participants, including 35 women, was trained in good practices in store and pesticides stock management, inspection and inventorying of obsolete pesticides and safeguarding, repackaging and disposal of obsolete stocks. The target was achieved by 128.3 percent.		
Activity 1.1	Project inception workshop		
	Achieved	Yes	
Activity 1.2	Comments	The inception workshop was conducted at the same time as the ToT from activities 1.3 and 1.4.	
	Achieved	Yes	
Activity 1.3	Comments	A training course on "Good practices in store and pesticides stock management" was successfully completed by an international expert on 5 October 2023. A total of 34 participants attended the training, of whom eight were women. Among the participants, there were 17 officers from the MoA working in store management (two women) and 17 representatives from private companies (six women). Information and details about this activity were broadcast through social media to increase its visibility and scope.	
	Achieved	Yes	
Activity 1.4	Comments	Activities 1.3 and 1.4 were conducted under the same ToT, which included i) a training course on the inspection and inventory of obsolete and unwanted pesticides, and ii) a training course on safeguarding, repackaging, disposal and prevention of obsolete stocks and pesticides management. The ToT was held from 13 to 21 December 2021 by the international expert. A refreshment session was conducted virtually from 15 to 18 March 2022 by the head of the Directorate of plant resources from the MoA, who used the technical materials sent by the international expert. A total of 44 participants from the MoA attended the training (28 women).	
	Achieved	Yes	
Activity 1.4	Comments	This ToT was merged with the previous activity, and both were successfully completed. Please refer to Activity 1.3 for further details.	
	Achieved	Yes	

Output 2	Twenty tonnes of obsolete and unwanted pesticides stocks collected and properly disposed off		
	Indicators	Target	Achieved
	The proper disposal of 20 tonnes of obsolete pesticides and relevant waste completed	One	No
Baseline	0		
Comments	A contract was established with Veolia ES Field Services Ltd. for safeguarding, transporting abroad and disposing of obsolete pesticides and associated waste in Lebanon (contract 64-2021), from 16 June 2021 to 31 July 2023. Although it was exceptionally approved to extend the contract until the end of 2024, the notification approval was not granted on time by the MoE due to some delays in reviewing the dossier, which hindered the timely submission of the requested documents, and prevented the obsolete pesticides disposal within the project's timeframe. The contract was terminated without disposing of the obsolete pesticides. (Please refer to Activity 2.5).		
Activity 2.1	Assess the situation and conduct detailed inventory of types and quantities of each pesticide of the targeted stockpiles to be eliminated		
	Achieved	Yes	
	Comments	A detailed inventory of the quantities and types of obsolete pesticides to be disposed of was conducted, estimating 33.45 tonnes to be eliminated.	
Activity 2.2	Prepare an ESIA including an ESMP		
	Achieved	Yes	
	Comments	An ESIA was conducted by the international expert, and an ESMP to address the results was prepared.	
Activity 2.3	Develop technical documents (ToRs) for the tender		
	Achieved	Yes	
	Comments	A document with technical specifications was elaborated to prepare the tender.	
Activity 2.4	Launch tender process and award service provider		
	Achieved	Yes	
	Comments	The tender was launched at international level, and the company Veolia ES Field Services Limited was awarded the contract for safeguarding, transporting abroad and eliminating expired pesticides and other related waste under the contract 64-2021.	
Activity 2.5	Implement the contract with the service provider		
	Achieved	Yes	
	Comments	<p>The company collected and packaged all obsolete pesticides (an estimate of 33.45 tonnes), and the complete dossier was submitted to the Lebanese MoE on 4 January 2022. The MoE is the Lebanese representation for the Basel Convention on hazardous waste, and they are responsible for issuing notifications to be used as a permit for the movement of hazardous wastes among transit countries.</p> <p>Once the project started, the notification was not issued for several reasons related to internal staff limitations within the ministry and the changing of focal points, which delayed the review of the dossier until April 2023, when the MoE's resolution was delivered. The MoE requested several changes to the dossier since a third-party liability insurance was required to comply with the Basel Convention requirements. Exporters included the MoA, the General Directorate of Customs, and the General Directorate of General Security, which could not issue and submit an insurance, while Veolia ES Field Services Limited was not able to act as exporter/notifier in this dossier. Following many discussions, Veolia ES Field Services Limited signed an agreement with another company to act as the exporter for this dossier. In order to complete this task, a no-cost extension was requested and approved until 31 December 2023, and an exceptional approval was granted to complete the contract until 31 December 2024.</p> <p>The company prepared and submitted the entire dossier again with a new notification number, and the MoE studied the dossier. The new comments were received from the MoE on 22 August 2024, after some delays caused by the change of the main focal point at the MoE. The company submitted the updated documents based on the MoE's comments and requested another four months (until April 2025) to finalize the contract.</p> <p>Given the short timeline left to close the contract, considering the time required to get the consent of 11 countries to ship the obsolete pesticide from Lebanon to Veolia disposal site in Switzerland, and the time required for container loading, customs clearance, sea freight, road transport, and safe disposal of pesticides, the contract was terminated by the project's end date without disposing of the expired pesticides.</p>	

Output 3	A long-term strategy of pesticide risk mitigation through their lifecycle including disposal of all remaining identified obsolete pesticides stocks and prevent the accumulation of new stocks and relevant draft project are submitted to the MoA		
	Indicators	Target	Achieved
	A long-term strategy of pesticide risk mitigation through their lifecycle including disposal of all remaining identified obsolete pesticides stocks and prevent the accumulation of new stocks and relevant draft project are prepared.	One	Yes
Baseline	0		
Comments	A long-term strategy to mitigate pesticide risks and a new project were prepared and submitted to the MoA by the international expert to prevent the accumulation of further expired pesticides.		
Activity 3.1	Conduct an accurate inventory and assessment of the condition of the remaining previously identified public and private stocks of obsolete and unwanted pesticide		
	Achieved	Yes	
	Comments	A questionnaire was elaborated to be completed during the inspection of the agricultural shops. The sampling datasheet was uploaded on tablets for data collection, using the ODK mobile application. A total of 600 private agricultural shops was inspected to assess their compliance with the standards set by the MoA and to conduct an inventory of the obsolete and illegal pesticides that might be found. Results revealed that most of the shops were not compliant with the standards and 20 percent of them were working without a licence, due to the fact that no inspections have been conducted for four years, because of the lack of financial resources required to run them.	
Activity 3.2	Conduct a comprehensive inventory of potential obsolete pesticides within the private and public sector stocks		
	Achieved	Yes	
	Comments	This activity was conducted with Activity 3.1. Please refer to the above-mentioned information for further details. As a result of the agricultural shops' inspection conducted under this project and finding illegal and obsolete pesticides, including for public health, the Ministry of Public Health issued a decision stating that no permission to import public health pesticides will be issued unless they are previously included in the MoA's registry.	
Activity 3.3	Develop long-term strategy for pesticide risk mitigation throughout their lifecycle		
	Achieved	Yes	
	Comments	A long-term strategy was prepared by the international expert, including i) the situation of obsolete pesticides; ii) governance and regulations for obsolete pesticides disposal, such as a risk assessment and guidelines for pesticide stock control and inventory of stockpile; iii) aspects affecting the accumulation of obsolete pesticides stockpile; iv) guidelines for the disposal of obsolete pesticides; v) guidelines to reuse expired pesticides; vi) deep cleaning and rehabilitation of contaminated sites and equipment; vii) acknowledging the role of private stakeholders in lifecycle of pesticides and preventing the accumulation of obsolete pesticides; viii) providing strategic recommendations to strengthen the national management of pesticides and prevent the accumulation of obsolete pesticides, and ix) guidelines for the safe disposal of empty pesticides' containers.	
Activity 3.4	Draft a scaled-up project document including the preparation of a strategic environmental and social assessment in support to the long-term sustainable management of obsolete pesticides		
	Achieved	Yes	
	Comments	A draft project proposal was developed by the international expert and submitted to the MoA, including three main components: i) strengthening the legal, institutional, and regulatory framework to manage the pesticide life cycle; ii) developing a national plan for pesticide management and disposal of obsolete pesticides and empty containers, and iii) developing the guidelines on pesticide use and pesticide risk reduction through pest monitoring and the promotion of integrated pest management.	
Activity 3.5	Final dissemination workshop		
	Achieved	No	
	Comments	Due to some unrelated aspects occurring in the country, the final dissemination workshop was not conducted.	

Partnerships and Outreach

For more information, please contact: Reporting@fao.org

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