



1. Project Data

Project ID P116230	Project Name EG: Sustainable POPs Mngt	
Country Egypt, Arab Republic of	Practice Area(Lead) Environment, Natural Resources & the Blue Economy	
L/C/TF Number(s) TF-17336,TF-B3715	Closing Date (Original) 30-Jun-2021	Total Project Cost (USD) 8,841,823.44
Bank Approval Date 13-Jun-2014	Closing Date (Actual) 31-Dec-2021	
	IBRD/IDA (USD)	Grants (USD)
Original Commitment	8,850,000.00	8,850,000.00
Revised Commitment	8,849,312.42	8,841,823.44
Actual	8,842,776.15	8,841,823.44

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2. Project Objectives and Components

a. Objectives

According to the Project Appraisal Document (PAD) (p.vii) and the Financing Agreement of August 26, 2014 (p. 5), the objective of the project was “to improve the management and disposal of targeted stockpiles of obsolete pesticides, including Persistent Organic Pollutants (POPs) and Polychlorinated Biphenyl (PCBs), in an environmentally sound manner.” For this ICR Review, IEG will assess the following two objectives:

Objective 1: To improve the management of targeted stockpiles of obsolete pesticides, including Persistent Organic Pollutants (POPs) and Polychlorinated Biphenyl (PCBs), in an environmentally sound manner.



Objective 2: To improve the disposal of targeted stockpiles of obsolete pesticides, including Persistent Organic Pollutants (POPs) and Polychlorinated Biphenyl (PCBs), in an environmentally sound manner.

b. Were the project objectives/key associated outcome targets revised during implementation?

No

c. Will a split evaluation be undertaken?

No

d. Components

The project included three components:

Component 1: Destruction of High-Risk Stocks of Obsolete Pesticide (appraisal estimate Bank financing of US\$3.83 million, actual US\$3.83 million): This component was to finance: i) carrying out an environmentally sound program for the safe packaging, removal, transportation, export and destruction of approximately 1,000 tons of identified high risk stocks of pesticides and other high-risk obsolete pesticides, following a risk based prioritization approach, in state-of-the-art facilities overseas, including: a) disposal of the stockpiles of about 220 tons of Lindane at the Al-Adabeya port storage facility; b) disposal of the stockpiles of about 440 tons of pesticides at the EI Saff storage facility; and c) the identification of all high risk stockpiles, and dispose of another approximately 350 tons of high risk stocks currently scattered across a number of sites; ii) technical Upgrading of Ministry of Agriculture and Land Reclamation (MALR) Central Agricultural Pesticides Laboratory to identify unlabeled products uncovered, as necessary, and to analyze pesticide samples; iii) enhancement of the environmental management system of the Ministry of State for Environmental Affairs/Egyptian Environmental Affairs Agency (MSEA/EEAA) to promote the identification, packaging, removal, transportation and destruction of high risk stocks of obsolete pesticides. This was to include training of staff of EEAA and the Cooperating Ministries to track and monitor obsolete stockpiles and ensure the ultimate destruction of high risk stockpiles, Project monitoring and evaluation and enhancing EEAA and MALR system of tracking obsolete pesticides, and dissemination of results, including raising public awareness.

Al-Adabeya port and EI-Saff were identified as priority locations due to their location (close to international waters and densely populated neighborhood).

Component 2: Decontamination of Polychlorinated Biphenyls (PCB)-Containing Transformer Oils (appraisal estimate US\$4.27 million, actual US\$4.27 million): This component was to finance: i) carrying out of a program for the management of PCBs and PCB containing equipment focusing on PCBs in the public electricity generation, transmission and distribution sectors, including a) purchasing and installing equipment for dichlorination and purification of low to medium-concentration stocks of approximately 1000 tons of PCB contaminated oils, which were to produce an oil suitable for reuse in transformers; b) providing technical assistance to EEAA and MOEE/EEHC staff to address the decommissioning of PCB containing equipment; and (c) providing laboratory support and the acquisition and utilization of instruments, electronic equipment and chemicals for sampling to measure the level of PCBs; ii) enhancing the environmental management system of MSEA/EEAA to promote the identification and decontamination of PCB-contaminated oils, including training of staff of EEAA and the Cooperating Ministries to track, monitor and decontaminate PCBs and PCB containing equipment, supporting Project monitoring and evaluation and enhancing EEAA's system of tracking PCBs and PCB containing equipment to ensure sustainable



project outcomes, monitoring of project performance indicators, and dissemination of results, including raising public awareness.

When the project received Additional Financing (AF) in September 2020, a third component was added. Components 1 and 2 were not modified.

Component 3: Air Quality Monitoring and Laboratory Equipment (appraisal estimate US\$0.75 million, actual US\$0.75 million): This component was to finance the purchase of air quality monitoring and laboratory equipment to provide the government with capacity to perform apportionment of air pollution sources and other chemical substances.

e. **Comments on Project Cost, Financing, Borrower Contribution, and Dates**

Project Cost: The project was estimated to cost US\$23.46 million. Actual cost was US\$24.49 million.

Financing: The project was financed by grants from the Global Environment Facility (GEF) and the Pollution Management and Environmental Health Multi-Donor Trust Fund in the amount of US\$8.85 million. Actual disbursement was US\$8.84 million.

Borrower Contribution: The Borrower was to contribute US\$15.50 million. Actual contribution was US\$15.65 million.

Dates: The project was restructured three times:

- On August 14, 2018, the project was restructured to extend (by 22 months) the project's closing date from November 30, 2018 to September 30, 2020 to allow for the completion of project activities which had been delayed due to: i) required re-tender of the Personal Protection Equipment due to sharp devaluation of the Egyptian Pound; ii) delays of the inventory of the transformers in the transmission and distribution network to determine the amount and concentration of PCB contamination; and iii) delays during the fasting month of Ramadan and emergency status in the distribution sector during the summer months.
- On September 16, 2020, the project received AF in the amount of US\$0.75 million and the closing date was also extended from Sep 30, 2020, to Jun 30, 2021, to complete the decontamination of PCB oils in component 2.
- On June 25, 2021, the project's closing date was restructured to: i) extend the closing date of the GEF financed activities of the project (TF017336) from June 30, 2021 to December 31, 2021 and extend closing date of AF activities (TFB3715) from June 30, 2021 to September 30, 2021 to allow for the completion of project activities which had been delayed due to the COVID-19 pandemic; and ii) reallocate savings under Component 1 towards project management activities in the extended project period.

3. Relevance of Objectives



Rationale

According to the PAD (p. 2) environmental protection had become more important in Egypt over the last 20 years. Improving public education and awareness as well as increasing privatization of the industrial sector put pressure on the Government to take action and strengthen accountability. Also, Egypt had been experiencing high economic costs due to environmental degradation. A study, conducted in 2009, showed that this cost amounted to 4.8 percent of Egypt's Gross Domestic Product (GDP), plus an additional 0.6 percent of damage to the global environment. About two thirds of the degradation was related to the impact on human health. Even though Egypt was able to make some progress since the study was conducted, the percentages were unlikely to have changed dramatically since there was a widespread use of chemicals in a large spectrum of sectors. In the rural areas, agrochemicals were extensively used. In industrial areas, toxic chemicals were widely used in a multitude of sectors found in every town and in urbanized areas throughout the country, such as textiles, tanning and metal finishing, mining and processing manufacturing.

Furthermore, due to the lack of sufficient treatment and disposal facilities, hazardous industrial waste generated by industries was disposed in nearby desert areas, public dump sites and mixed with municipal waste.

Especially, obsolete pesticides constituted an immediate danger to the health of humans and livestock since they were often stored in populated areas, potentially leaking, and contaminating groundwater and the environment in general. Many of the toxic emissions from anthropogenic sources and obsolete pesticides consisted of Persistent Organic Pollutants (POPs) which were some of the most dangerous pollutants for human health and environment.

In 2005, the government of Egypt recognized the importance of this issue and ratified the Stockholm Convention on POPs, which aims to eliminate or restrict the production and use of POPs. Also, the government developed a National Implementation Plan (NIP) in accordance with the requirements of the convention.

To help achieve the goals highlighted in the NIP, the government sought funding from the Global Environment Facility (GEF) through the World Bank since the Bank had extensive experience with hazardous waste management in many regions. Also, the objective of the project supported the government's Egypt 2030 Sustainable Development Strategy which aimed to prevent environmental degradation. Especially, the objective of the project was in line with Key Performance Indicator 5) "percentage of hazardous waste safely disposed (treatment, recycling, final disposal)."

The objective of the project was in line with the Bank's recent Country Partnership Framework (CPF) (FY2015-21), which recognized the negative impact of environmental degradation on health and economic growth. Also, the CPF identified air, water, and soil pollution among Egypt's environmental challenges

Finally, the PDO was adequately formulated to achieve outcome-level results and was sufficiently ambitious.

Rating

High



4. Achievement of Objectives (Efficacy)

OBJECTIVE 1

Objective

To improve the management of targeted stockpiles of obsolete pesticides, including Persistent Organic Pollutants (POPs) and Polychlorinated Biphenyl (PCBs), in an environmentally sound manner

Rationale

Theory of Change: The project's theory of change envisioned that project activities/outputs such as the upgrading of the centralized OP tracking system and equipping the agricultural pesticides laboratory as well as identifying unlabeled products and analyzing pesticide samples were to result in the outcome of improving the management of POPs and PCBs within the Ministry of Agriculture and Land Reclamation (MALR). This outcome was to result in the long-term outcome of the management of POPs stockpiles being in compliance with international obligations (Stockholm and Basel conventions).

The project made the following assumptions: i) security clearances for equipment importation obtained in a timely manner; ii) cost of international incineration is cost-effective; and iii) co-financing by the government provided in a timely manner.

Outputs:

- A tracking system for the management of obsolete pesticides (OP) was developed and is operational, achieving the target of this tracking system being operational.
- A tracking system for the management of PCBs was developed and is operational, achieving the target of this tracking system being operational. The bar code system has been used for labeling identified PCB transformers at five selected storage/screening lab sites.
- Air quality equipment is operational and provides improved air quality information for decision making, achieving the target of being operational and providing information.

Outcomes (these results were not measured by the Results Framework and thus did not have any formal target):

- The use of the OP tracking system by MALR supported the identification of a larger number of OP stockpile sites (65 sites instead of the original estimate of 35 sites) resulting in an increase of the number of OPs to be disposed by 20 tons and the number of project beneficiaries by 260,000.
- Through the bar-coding tracking system, a total of 1,013 tons of PCB oil were identified as needing treatment with 789 tons in in-service transformers and 169 tons in out-of-service transformers. The PCB inventory, testing, and bar-coding system supported the prioritization of locations of PCB contaminated oil and to identify optimal transport routes for PCB oils requiring shipment to the centralized decontamination units reducing the overall health and safety risk of disconnecting transformers from the distribution network.



The project was able to achieve all its output targets under this objective. While it was able to achieve relevant outcomes under this objective as well, they were not measured under the Results Framework and thus did not have any targets. Taking everything together, the achievement of this objective was Substantial.

Rating

Substantial

OBJECTIVE 2

Objective

To improve the disposal of targeted stockpiles of obsolete pesticides, including POPs and Polychlorinated Biphenyl (PCBs), in an environmentally sound manner

Rationale

Theory of Change: The project's theory of change envisioned that project activities/outputs such as strengthening the capacity to dispose POPs at the Al-Adabeya port, El Saff and Batheem storage facilities and other sites in Egypt in compliance with international best practice and the Stockholm and Basel Conventions as well as installing decontamination equipment for PCBs were to result in the outcome of improved disposal of targeted stockpiles of obsolete pesticides. This outcome was to result in the long-term outcome of reducing the health risks from OPs, PCBs and air pollution.

Outputs:

- 1,082 tons of obsolete pesticides including POPs pesticides disposed of in an environmentally sound manner, exceeding the target of 1,000 tons.
- Obsolete pesticides at El-Staff were removed and disposed, achieving the target of being removed and disposed.
- Obsolete pesticides at Al-Adabeya were removed and disposed, achieving the target of being removed and disposed.
- Workers received training in Occupational Health and Safety aspects and the use of proper personal protection equipment for handling and repackaging of materials. The MoERE received training workshops on surveying transformers, sampling PCBs, labeling and coding transformers for their level of toxicity, and Occupational Health and Safety. These results were not measured by the Results Framework and thus did not have any formal target.
- The project decontaminated and purified a total of 418 tons of PCB oils, not achieving the target of 1,000 tons. The project was not able to achieve the target due to: i) the contractor's inability to provide the third PCB decontamination unit on a rental basis in a timely manner; and ii) the actual time taken to decontaminate and reduce the PCB concentration from a high level of PCB contamination to an acceptable level.

Outcomes:



- 1,500 tons of POPs waste was destroyed, disposed or contained in an environmentally sound manner, not achieving the target of 2,000 tons.
- The project benefitted 3.1 million direct project beneficiaries (achieving the target of 50 percent being female), substantially exceeding the target of 30,000 beneficiaries. The ICR (p. 14) stated that the target set at appraisal was underestimated since it did not include the population around the 30 additional OP sites, which were identified through the OP inventory and tracking tool or the PCB sites until the transformers had been tested for PCB contamination and transport routes selected off-site treatment.
- According to the ICR (p. 14) the removal of OPs/POPs directly benefited site-specific workers and communities living in and around contaminated sites. Given the population density around these sites about 3.1 million people live within two kilometers from the storage sites. Also, interviews with residents of El Saf indicated noticeable declines in health-related effects, especially for women, who might have been more exposed through washing contaminated clothes of workers and children or working with potentially contaminated food.

The project was able to achieve three out of four output targets and was not able to achieve the PDO target of POP waste being destroyed. Therefore, taking everything together, the achievement of the objective was Modest.

Rating

Modest

OVERALL EFFICACY

Rationale

The achievement of the first objective was Substantial while the achievement of the second objective was Modest. Overall, the rating is Substantial with moderate shortcomings.

Overall Efficacy Rating

Substantial

5. Efficiency

Economic efficiency:

The PAD (p. 13) stated that it was not possible to conduct a cost-benefit analysis since due to the lack of reliable baseline- and on related health impacts- data.



The ICR (p. 16) conducted a cost-benefit analysis, which defined the benefit as “deaths avoided through the removal of POPs”. Due to the long-term nature of the effects, these benefits were to materialize about ten years after the removal of POPs. Costs only took the GFF financing into account. The analysis applied a discount rate of 6 percent. The Internal Rate of Return (IRR) was 43.5 percent in year 10 assuming a mortality rate of 5 per 1,000. The analysis calculated a Net Present Value (NPV) of US\$7 billion, indicating that the project was a worthwhile investment.

Due to the identification of local disposal options, disposal cost ended up being much lower than estimated at appraisal. According to the ICR (p. 16) cost of the 712 tons of OPs collected, repackaged and exported internationally for incineration in France was between US\$1,239/ton and US\$1,914/ton. Once the institutional and legal arrangements were made with private operators in the local cement industry, the project did not need to export OPs for incineration in France anymore. The local option of repackaging and transportation only cost between US\$261/ton and US\$418/ton resulting in substantial cost savings. As a result, 30 additional sites, identified in the Ministry of Agriculture and Land Reclamation (MALR) OP tracking system, could be remediated.

Also, the government co-financed the laboratory equipment for PCB testing and the MoERE financed the costs of decontaminating transformer oils also resulting in cost savings (compared to if it had to be done by private operators).

While the project was only able to treat 418 tons of PCBs, the unit cost was still lower than estimated at appraisal (US\$5,935/ton vs. US\$6,600/ton).

Operational efficiency:

The project was extended three times (by a total of three years). According to the ICR (p. 21) implementation delays during the first two years of project implementation were a result of PMU hiring delays and lack of experience in developing the Terms of References (TORs) and bidding documents for hazardous waste. Also, Egypt lacked experience in logistics and processing the safe transport and disposal of hazardous waste resulting in legal delays to export POPs. Furthermore, the MoERE was slow in sampling of PCB and verifying transformers resulting in delays in developing the feasibility study to determine the final options/facilities for decontamination, procurement and operation of the facilities. Finally, the project experienced additional delays when the contractor was not able to provide a third PCB decontamination unit on a rental basis resulting in a significantly longer than planned time (weeks instead of days per transformer) to lower the concentration of the oils to less than 50ppm.

Despite these implementation delays, efficiency of the project was Substantial given the positive results of the cost-benefit analysis and cost savings in the treatment of PCBs.

Efficiency Rating

Substantial

a. If available, enter the Economic Rate of Return (ERR) and/or Financial Rate of Return (FRR) at appraisal and the re-estimated value at evaluation:

Rate Available?	Point value (%)	*Coverage/Scope (%)
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Appraisal		0	0 <input type="checkbox"/> Not Applicable
ICR Estimate	✓	43.50	36.10 <input type="checkbox"/> Not Applicable

* Refers to percent of total project cost for which ERR/FRR was calculated.

6. Outcome

Relevance of the objective was High given the objective’s alignment with the Bank’s recent Country Partnership Framework (CPF) (FY2015-21), which recognized the negative impact of environmental degradation on health and economic growth. Achievement of the first objective was Substantial while achievement of the second objective was Modest. Efficiency was Substantial. Taking everything together, the project’s overall outcome rating is Moderately Satisfactory.

a. Outcome Rating

Moderately Satisfactory

7. Risk to Development Outcome

According to the ICR (p. 27) there are no major risks to the development outcomes given the safe removal of hazardous substances and the capacity built to ensure a safe removal in the future. Also, the government continues to remain committed to the Stockholm Convention as demonstrated by the MoERE having a dedicated PCB unit and funding the operation & maintenances phase of decontamination. Also, the project was able to build capacity within the government and sites. Furthermore, the EEAA has an annual budget in its air quality management program to supply public information on air quality.

8. Assessment of Bank Performance

a. Quality-at-Entry

The project design built on lessons learned from other Bank projects in Egypt which stressed the importance of local institutions being involved. Also, the project built on the recommendations from the National Implementation Plan (NIP) and the ongoing United Nations Environment Program (UNEP) Programme for the Assessment and Control of Pollution of the Mediterranean, an arm of the Mediterranean Action Plan (MEDPOL) project, which targeted and disposed high concentration PCBs. Furthermore, the project conducted a project preparation study, which built on the NIP recommendations, and identified locations for OP removal and locations of PCB transformers.

According to the PAD (p. 12) the Bank team identified relevant risks as High including: i) stakeholder risk due to a large number of different stakeholders making coordination challenging and whose support/commitment might wane over course of implementation; ii) implementing agency risk due to



limited capacity in key areas including technical, financial management, procurement, and safeguards: iii) design risk due to complex project design involving separate programs for the management and disposal of two categories of POPs; and iv) social and environmental risks due to danger of handling POPs chemicals to workers, the general population and the environment. The Bank mitigated these risks by providing training, hiring international experts, and conducting broad consultations and outreach activities with various stakeholders. Also, an inter-ministerial steering committee was established to guide and coordinate project implementation and ensure cooperation. However, these measures were not sufficient resulting in delays in the fully staffing of the Project Management Unit (PMU), developing Terms of Reference (TORs) and bidding documents for hazardous waste during the first two years of implementation. Also, the Bank did not identify the risk of potential delays due to internal clearances. According to the ICR (p. 20) security clearances for the importation of decontamination equipment for component 2 delayed implementation of project activities for up to a year.

The Results Framework had a shortcoming and did not include a PDO indicator to measure the first aspect of the PDO (improve the management of stockpiles of obsolete pesticides) (see section 9a for more details).

Taking everything together, the Bank's quality at entry rating is Moderately Satisfactory.

Quality-at-Entry Rating

Moderately Satisfactory

b. Quality of supervision

According to the ICR (p. 26) the Bank conducted 14 supervision missions and reported its findings in Implementation Status Reports (ISRs). Throughout implementation the Bank team was proactive in identifying implementation bottlenecks and engaged with stakeholders. The project benefitted from a smooth turnover between Task Team Leaders (TTLs) (four TTLs in total) and the core team remaining on the project throughout implementation. However, according to the ICR (p. 26) the project could have benefitted from more frequent reporting before the Mid-Term Review (MTR) to identify implementation bottlenecks for component 2.

According to the ICR (p. 21) the project experienced several implementation delays due to Egypt's lack of experience in logistics and processing the safe transport and disposal of hazardous waste resulting in legal delays to export POPs from Al-Adabya port and delays to obtain importation clearances for PCB decontamination equipment. Also, slow PCB sampling and verification of transformers within the MoERE led to delays in developing a feasibility study to determine the final options/facilities for decontamination, procurement and operation of the facilities. During project implementation, the contractor was not able to provide a third PCB decontamination unit on a rental basis and the reduction of the concentration of the oils to less than 55ppm took much longer than planned (several weeks instead of days per transformer), all resulting in delays and the reduction a lower than planned number of tons being treated.

While the project was restructured three times, the Results Framework was not revised to include a PDO indicator focusing on the management of stockpiles of obsolete pesticides aspect and reduce the target for PCB oil decontamination.



Taking everything together, the Bank's quality of supervision rating is Moderately Satisfactory.

Quality of Supervision Rating

Moderately Satisfactory

Overall Bank Performance Rating

Moderately Satisfactory

9. M&E Design, Implementation, & Utilization

a. M&E Design

The objective of the project was clearly specified. The indicators in the Results Framework were not sufficiently relevant since the Results Framework included only one relevant PDO indicator (tons of POPs waste destroyed, disposed or contained in an environmentally sound manner) to assess achievements of the PDO. Also, the intermediate results indicators were not adequate to measure the contribution of the project activities toward achieving the project objective. It would have been better if the units of measures for the Intermediate Results indicators on "Obsolete pesticides at El-Staff/Al-Adabeya removed and disposed of" were quantities (e.g., tons/year) instead of yes/no. In addition, the intermediate results indicators on tracking systems were inadequately designed. It would have been better if the indicators were phrased something like: All Ops/PCBs identified and entered in tracking database for Egypt. However, the objective of the project included management and disposal of obsolete pesticides. The PDO indicator in the Results Framework only focused on disposal, not measuring the second key aspect of the objective. Also, according to the ICR (p. 22) the methodology used for estimating the number of beneficiaries did not include a significant proportion of project sites that were not known during project preparation since the identification of project size was dependent on sampling outcomes for PCB analysis and OP inventorying activities. This resulted in a significant underestimation of beneficiaries. Also, the number of beneficiaries is an output indicator.

According to the PAD (p. 11) the EEAA was to be responsible for the overall monitoring and supervision of the project and was to report implementation progress in a quarterly basis to the Bank.

b. M&E Implementation

According to the ICR (p. 23) M&E reporting experienced delays during the first year of project implementation until the PMU was fully set up. By the time of the Mid-Term Review (MTR) M&E reporting was more actively used. Also, data was collected on a regular basis when OPs and PCBs were identified, inventoried, transported and ultimately destroyed.

The project's Results Framework was revised in September 2020 when the project received AF and component 3 was added. However, the underestimated target for project beneficiaries was not adjusted during implementation.



According to the Bank team (October 22, 2022) M&E data was found to be good and reliable. This was ensured with adequate sampling and guidance from national and international experts on OPs and PCBs. For example, the data on OPs and POPs was initially inventoried during the NIP as part of the GEF project and project preparation for this project. During the implementation of this project additional sampling was undertaken for OPs to prioritize stocks to be removed and incinerated. Likewise, PCBs-contaminated oil needed to be (scientifically) tested in order to know the treatment time (because concentrations varied from source to source and had to be treated to <50 ppm). Therefore, data collected and verified during the project implementation and its quality was key to the success of achieving cleanup objectives.

c. M&E Utilization

According to the ICR (p. 23) the project team used the M&E data to monitor implementation progress. For example, during the MTR in 2018, M&E data allowed the project team to identify the disposal speed and lack of progress on PCB decontamination resulting in the extension of the closing date until September 2020. Also, measuring progress towards the achievement of the PDO target required sampling results from laboratory testing. For example, results from the sampling of PCB-contaminated transformers were assessed on a regular basis to analyze implementation speed and decide which areas should be focused on.

The ICR (p. 23) stated that the Persistent Organic Pollutant Steering Committee (PPSC) reviewed data to inform decision making and addressed implementation issues on a regular basis. For example, when the explosions in Beirut happened, an accelerated plan to dispose all stocks in Egyptians ports was developed.

M&E Quality Rating

Substantial

10. Other Issues

a. Safeguards

The project was classified as category A and triggered the Bank's safeguard policies OP/BP 4.01 (Environmental Assessment) and OP/BP 4.09 (Pest Management). The project was governed by Bank OP/BP 4.00 "Piloting the use of borrower systems to address environmental and social safeguard issues". The project prepared a total of 15 Environmental and Social Impact Assessments (ESIA)/Environmental and Social Management Plans (ESMP) for various sites which were also reviewed by the Egyptian Environmental Affairs Agency/ Environmental Impact Assessment (EEAA/EIA) department and confirmed with national Egyptian legislation and the Bank's OP/BP 4.01 policy. According to the ICR (p. 24) safeguard risks were mitigated by national workers receiving all required training for safely repacking OPs. Also, trainings were conducted for PCBs related to surveying transformers, sampling, labeling and coding transformers, as well as Occupational Health and Safety (OHS). The project's safeguard rating was Satisfactory at project closing.



However, according to the ICR (p. 22) there should have been stricter adherence to (and monitoring of) the Safeguards Gap-Filling Measures outlined in the PAD (Annex 3, pages 45-46) which could have revealed important deficiencies earlier in implementation. Also, the ICR did not provide information if the project completed planned mitigation activities and any findings from any independent review of safeguards implementation.

b. Fiduciary Compliance

Financial Management:

According to the ICR (p. 25) the project complied with the Financial Management (FM) arrangements as stated in the grant agreement. Also, the Project Management Unit (PMU) submitted Interim Financial Reports (IFRs) on a bi-annual basis as well as annual financial statements to the Bank. Audit reports identified areas to be reconciled or corrected, which were addressed by the PMU. The external auditor's opinions were unqualified and no material issues were found.

Procurement:

According to the ICR (p.25) prior to 2016 the project's procurement experience delayed due to several issues such as legal issues with exporting OPs from Al-Dabaya port and a longer than planned PCB sampling of transformers process. In 2016, a full-time procurement specialist was hired, and the PMU was able to speed up procurement processes. The ICR further stated that record-keeping of procurement documents was of acceptable quality. Furthermore, procurement post-reviews between 2017 and 2021 found that procurement processes complied with the Bank's procurement guidelines.

c. Unintended impacts (Positive or Negative)

According to the ICR (p. 19) the project was responsive to external events such as the explosion at the port of Beirut in August 2020. As a result, the government decided to expedite the disposal of all POPs stored in various ports of the country.

d. Other

11. Ratings

Ratings	ICR	IEG	Reason for Disagreements/Comment
Outcome	Moderately Satisfactory	Moderately Satisfactory	
Bank Performance	Moderately Satisfactory	Moderately Satisfactory	



Quality of M&E	Substantial	Substantial
Quality of ICR	---	Substantial

12. Lessons

The ICR (p. 28-29) provided several lessons learned that may be useful for future projects related to management and disposal of stockpiles of obsolete pesticides. Two of them are presented below with rephrasing.

- **Local institutional involvement can be critical for addressing a delivery challenge caused by a sudden increase in foreign disposal costs strengthening a local disposal capacity.** In this project, costs for disposal/incineration in France and Sweden increased by 40 percent. Since the project worked with local incinerators to comply with international requirements, the second batch of OPs was disposed locally increasing Egypt's long-term capacity of an environmentally sound and cost-effective disposal.
- **Designing an implementation plan that identifies potential bottlenecks is critical for achieving set targets.** This project encountered several implementation challenges including local regulations, customs clearances and working with foreign contractors, which resulted in the project not being able to achieve its target of 1,000 tons PCB decontamination.

13. Assessment Recommended?

No

14. Comments on Quality of ICR

The ICR provided a good overview of project preparation and implementation. Also, the ICR was internally consistent, concise and included an adequate Economic analysis. Furthermore, the ICR was sufficiently outcome driven and critical of shortcomings. The lessons learned in the ICR would have benefitted from focusing each on one topic and being more in-depth. Also, the ICR had some missing information on external audits etc. that was later provided from the last TTL by an email dated October 22, 2002. Taking everything together, the ICR's overall quality rating is Substantial.

- a. **Quality of ICR Rating**
Substantial

