OED PROJECT EVALUATION SERIES

Terminal Evaluation of Disposal of Obsolete Pesticides including POPs, Promotion of Alternatives and Strengthening Pesticides Management in the Caribbean

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Abstract

The project, *Disposal of Obsolete Pesticides including POPs, Promotion Alternatives and Strengthening Pesticides Management in the Caribbean* (GCP/SLC/204/GFF) funded by GEF (USD 4 357 500), had a total budget of USD 30 726 239, including co-financing. The project started in November 2015 and is expected to be completed in 2021. The project had six components and covered 11 Caribbean countries. The overall project objective was to promote sound management of pesticides in the Caribbean.

The final evaluation took place between March-August 2021. According to the main findings, the project is relevant to national, regional and global plans/strategies, including GEF and FAO objectives. The key highlight has been the collection and shipment of obsolete pesticides (319 tonnes) from 11 project countries and PCBs (54 tonnes) from four countries. The project has carried out pilot activities on remediation of contaminated sites, empty pesticide container management, regional registration mechanism and alternatives to HHPs; however, it has not been able to successfully replicate, scale up nationally and build capacities with government stakeholders evenly across all countries. It also drafted a regional model pesticide legislation. Not-so-appropriate project structure and weak monitoring led to slow implementation and low budget utilization compounded further by COVID-19.

Overall, the project kick-started various activities covering pesticide life-cycle management in the region and facilitated different vital elements. However, further follow-up and support are required to ensure sustainability and impact in the region and the project countries. Continued support and facilitation is required to approve regional pesticide legislation, creation and functioning of sustainable financing mechanism, regional pesticide registration mechanism, national systems and structures for collection and disposal of obsolete pesticides, empty pesticide container management and reduction of HHPs. Engagement of the private sector and CSOs, in addition to the national government stakeholders, will be critical to the success and sustainability of the national/regional mechanisms.

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The evaluation benefited from the inputs of several regional stakeholders from CARICOM, CAHFSA, CGPC, CARDI, and University of West Indies, and national stakeholders, including government officials from Antigua and Barbuda, Barbados, Dominica, the Dominican Republic, Guyana, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadines, Suriname, and Trinidad and Tobago in addition to farmers and the private sector. Their contributions were critical to the team's work and are deeply appreciated.

Acronyms and abbreviations

ACP	African, Caribbean and Pacific
BH	Budget holder
CAHFSA	Caribbean Agricultural Health and Food Safety Agency
CARDI	Caribbean Agriculture Research and Development Institute
CARICOM	Caribbean Community
CGPC	Coordinating Group of Pesticides Control Boards of the Caribbean
CO	Country Office
COTED	Council of Trade and Economic Development
EMP	Environmental Management Plan
FAO	Food and Agriculture Organization of the United Nations
FAO-GEF CU	FAO-GEF Coordination Unit
FAO SLC	FAO Sub-regional Office for the Caribbean
FPMIS	Field Project Management Information System
GEBs	Global Environmental Benefits
GEF	Global Environment Facility
HHP	Highly Hazardous Pesticide
HQ	Headquarters (FAO Rome)
IICA	Inter-American Institute for Cooperation in Agriculture
IPM	Integrated Pesticide Management
KAP	Knowledge, Attitude and Practice
LOA	Letter of Agreement
LTO	Lead technical officer
LTU	Lead technical unit
M&E	Monitoring and Evaluation
MEA	Multilateral Environmental Agreement
MTE	Mid-term Evaluation
NPC	National Project Coordinator
OED	FAO Office of Evaluation
OCB	Office of Climate Change, Biodiversity and Environment
OPIM	Operational Partner Implementation Modality
PAN-UK	Pesticides Action Network, United Kingdom
PCBs	Poly-chlorinated Biphenyls
POPs	Persistent Organic Pesticides
PRODOC	Project Document
PSC	Project Steering Committee
PSMS	Pesticide Stock Management System
PTF	Project Task Force
RO	Regional office
SLC	Sub-regional Office for the Caribbean
SO	FAO Strategic Objective
SRO	Sub-regional office
TOC	Theory of Change

TOR	Terms of Reference
TE	Terminal Evaluation
TT	Tracking Tools
SDG	Sustainable Development Goal
USD	United States Dollars
UWI	University of West Indies

Executive Summary

Introduction

1. The primary purpose of the terminal evaluation is to provide accountability to national Governments, regional stakeholders, the Food and Agricultural Organization of the United Nations (FAO) Management and technical staff, and the Global Environment Facility (GEF) through the assessment of projects outputs and outcomes achievement, and report on these. The evaluation aims to inform decision-making regarding future activities and initiatives on the life-cycle management and disposal of pesticides and to promote learning and knowledge sharing on results and lessons learned.

2. The project, *Disposal of Obsolete Pesticides including POPs, Promotion Alternatives and Strengthening Pesticides Management in the Caribbean* (GCP/SLC/204/GFF), funded by GEF (USD 4 357 500), had a total budget of USD 30 728 239. The scope of the evaluation covered progress made towards the project's strategic objectives, outcomes and outputs from November 2015 to June 2021.[1] The evaluation examined activities and results delivered through the six components in the 11 project countries.[2]

3. The evaluation questions focused on the project's relevance, the achievement of results (effectiveness), efficiency of project implementation and execution, the likelihood of project results continuing (sustainability), factors affecting performance including monitoring and evaluation, co-financing, stakeholder engagement and partnerships, and knowledge management and communication. The evaluation also examined gender considerations and environmental and social safeguards in the design and implementation of the project.

4. The evaluation ensured a transparent approach and was inclusive of internal and external stakeholders throughout the process to ensure utilization-focused evaluation findings and recommendations. In addition, the evaluation used a mixed-method approach to ensure triangulation and validation of data collected from different sources and the credibility of findings, conclusions and recommendations, and also to overcome the limitation of not being able to carry out field visits due to the COVID-19 pandemic. Methods used included a desk review of more than 50 documents, key informant interviews with 93 individuals (including stakeholders from all project countries and regional institutions) as well as an online survey.

Main findings

5. **Relevance**: The project was relevant to national and regional plans and strategies. Additionally, it was aligned to GEF and FAO strategies/objectives and aligned to the Rotterdam, Stockholm and Basel Conventions. Disposal of obsolete pesticides accumulating in the countries was recognized as a critical need and long overdue. The project's design was appropriate at the time of the project's formulation in 2012-2013

[1] It was informed, during the finalization of this report, that the project was given a no-cost extension until December 2021.

[2] It should be noted that not all activities were carried out in all 11 countries.

based on lessons from two previous regional projects. However, the context and focus of development partners have evolved with greater attention paid to environmental and social safeguards and increased focus on gender aspects since then. GEF has also provided more streamlined requirements (e.g., gender and M&E) in the subsequent funding rounds.[3] Therefore, the rating for relevance is **satisfactory**.

6. **Effectiveness**: The achievement of results was mixed, differing between and among the project components. The collection, repackaging and shipment of obsolete pesticides (319 tonnes) was the single most significant recognizable outcome that benefitted all 11 project countries (Component 1). PCBs shipment was in progress at the time of this evaluation from four countries (Antigua and Barbuda, Barbados, Suriname and Trinidad and Tobago).[4] The identification and remediation of the contaminated site (Component 2) pilot activities faced several challenges; however, the targeted reduction in contamination was met. The project did not successfully ensure capacity development and knowledge transfer evenly among all key government stakeholders across all project countries in this component. The empty container management pilot (Component 3) was completed successfully in one district in Suriname only. None of the 11 project countries (including Suriname) have established a national pesticide container management mechanism.

7. In Component 4, the project had success in developing model regional pesticide legislation incorporating gender aspects and shepherding it through the CARICOM approval process and strengthening CGPC capacity and status.[5] However, regional mechanisms (regional pesticide registration and common regional inspection and control of imported pesticides) and sustainable financing mechanisms have either not been created or are at a very nascent stage. Even though the results of the field trials on alternatives to HHP (Component 5) are encouraging, some alternatives are not ready for scale-up, replication or commercialization. Project implementation based on results-based management (Component 6) could have been better by having a robust M&E design and implementation system to ensure that project activities and budget spending were on track. Overall, the rating for effectiveness is **moderately unsatisfactory**.

8. **Efficiency**: Timeliness and low budget utilization has been an issue throughout the life of the project, even before COVID-19. The pandemic made it worse. As a result, the project is unlikely to complete activities related to all components by the already twice extended timeline of June 2021 (and extended again, at the time finalizing the TE report, to December 2021). Therefore, the rating for efficiency is **moderately unsatisfactory.**

9. **Sustainability**: Without further support from FAO and continued country ownership, sustainability will be an issue. Systems and mechanisms have not been put in place at

[3] The project evaluated was funded through GEF 5. GEF is currently starting funding in GEF 8.
[4] It was reported that the shipment (a total 54 tonnes of PCBs) was completed in August 2021.
[5] There is a potential for overlap of the model legislation on chemical and model legislation of pesticides in countries were both are made available. Also, in some countries the toxic chemicals and pesticides are under a single Act.

the regional and/or country level to ensure the sustainability of the project results. Institutional and governance, political and financial risks will affect sustainability. Furthermore, exit strategies have not been prepared. Therefore, the rating for sustainability is **unlikely**.

10. **Factors affecting performance**: M&E systems were "informal," inadequate and not systematic, which is evident from the delay and non-completion of several activities at the intended project end.[6] The results matrix shows inconsistencies between outputs and indicators and between baseline or intermediate and final targets, and some indicators were not SMART which hindered effective M&E. Therefore, the rating for the M&E system (design and implementation) is **moderately unsatisfactory**. Overall, the project was successful in the mobilization of co-financing. While the Governments exceeded their confirmed amounts, the regional and international institutions failed to meet their commitments. Hence the co-financing is rated as **satisfactory.**

11. **Stakeholder engagement** was very good at the regional level (through CGPC and CAHFSA) but could have been better at the national level (including the private sector and farmers/community organizations).[7] However, the initially intended collaboration (as per PRODOC) with the Caribbean Agricultural Research and Development Institute (CARDI) did not materialize due to a change in top-level personnel and because the project and CARDI could not agree on financial terms. Also, the PRODOC envisaged the collaboration with the BCRC/UNIDO (GEF 5558) project to dispose of PCBs. While activities took place on the ground (in the country), there was a lack of direct and effective communication between the project team and the BCRC team, and this did not create synergies on the ground. The two teams did not share their respective model legislations (BCRC on chemicals and FAO on pesticides). In some countries, the interest waned after the obsolete pesticide disposal activity was completed (e.g., Dominican Republic), as there was no other project activity in the country. Additionally, engagement and interaction were primarily with technical stakeholders, who had high workloads and limited availability, and not with policy-makers at the national level. Stakeholder engagement was found to be **moderately satisfactory.**

12. **Gender**: Attention to gender aspects and perspectives improved in the last two years of the project (after the MTE). However, overall, the gender considerations could have been better integrated into project design and implementation (these were not properly considered in the PRODOC, for instance). However, the project collected disaggregated data on participants in its activities such as training, workshops, and meetings and carried out some activities and published some communication materials with a gender perspective. The incorporation of gender aspects is considered **moderately unsatisfactory**.

[6] At the time of the evaluation the project was scheduled to end by June 2021 (already extended twice from the original end date of September 2019). At the time finalizing the report it was noted that project has been given a no-cost extension until December 2021 (an overall total of 27 months of extension).

[7] As envisaged in the PRODOC, no additional national focal points in other participating ministries. This affected effective engagement and also did not create the commitment to create national mechanisms.

13. **Knowledge management**: Communication improved after the recruitment of a communication person through incorporating gender perspectives, dissemination through different media and a user-friendly newsletter. However, several knowledge products are yet to be finalized for dissemination. In addition, the project could have done better to increase the visibility of the issues it was seeking to address and the project's results. Therefore, the rating for knowledge management and communication is **moderately unsatisfactory**.

Conclusions

14. Conclusion 1. Overall, the project kick-started various activities covering pesticide life-cycle management in the region and has facilitated different key elements to move forward. Nevertheless, it is at a very early stage, and a lot of continued support is required through one or more projects to continue/strengthen various project components.

15. Conclusion 2. The project and its components/activities were relevant to priorities/plans and strategies at regional/national levels and organizations/institutions. However, the project results matrix could have been better adjusted/adapted to reality and changed contexts during the project's life.

16. Conclusion 3. Disposal of obsolete pesticides was a key activity of the project, and all project countries were directly involved and benefitted from it. However, in all other project component activities, most countries were only informed (shared documents) and/or invited to participate in workshops (partially affected by COVID-19 restrictions and insufficient staff capacity in some countries). Additionally, regionalism versus sovereignty could affect the creation of effective regional mechanisms (e.g., regional pesticide registration mechanism).

17. Conclusion 4: The slow pace and non-completion of activities have hindered the project in achieving intended objectives and outcomes. The disposal of obsolete pesticides was the highlight achievement of the project; however, all components have ongoing activities that are not completed yet, which affected the assessment of effectiveness. Also, there is a potential overlap between model pesticide (GEF 5407) and chemical (GEF 5558) legislations in some countries.[8]

18. Conclusion 5. The project structure was not strategically and appropriately envisioned and therefore not staffed adequately to implement a complex project covering 11 countries. This affected project management, monitoring, stakeholders' engagement, timely completion of activities, knowledge products, communication and budget utilization and proved to be one of the main weaknesses of the project.

19. Conclusion 6. Sustainability is an issue in terms of continuity of activities/benefits of the project (including scaling up or replication) with financial, institutional and governance, social-political and environmental risks likely to affect the project.

[8] In some project countries, pesticides and chemicals are under one Act. Also, some of the project countries have both model legislations (the one from BCRC on chemicals and the one from this FAO-GEF project on pesticides).

Sustainability is a problem with activities in several components still ongoing and with neither systems/structures/mechanisms nor exit strategies in place at the regional or national levels to address sustainability concerns.

20. Conclusion 7. Stakeholder engagement was good at the regional level but less successful as it went down to national and sub-national/community levels. At the national level, the project depended on the NPC's time and commitment. The hierarchy (level) of the NPC also determined the ability to interact formally/engage with stakeholders in other ministries and with decision-makers within the country. Private sector engagement was primarily at the CGPC level and was not involved as required at the ground level.

21. Conclusion 8. Although the incorporation of gender aspects improved after the MTE, in general, gender mainstreaming was limited and weak. The recruitment of a communication person with gender expertise helped with the review of documents for gender language and improved the focus on gender perspectives in various project activities and communications (e.g., surveys and newsletters).

22. Conclusion 9. The project was successful in the materialization of co-financing (143 percent of the initial commitment). The perceived relevance of project activities, guidance from the project on co-financing, and encouragement from COTED facilitated co-financing from Governments. Co-financing from Governments exceeded confirmed amounts. However, this was all in-kind; there was no cash co-financing from any of the participating Governments.

23. Conclusion 10. Knowledge management and communication were not systematic, and these have largely been done towards the end of the project. Several knowledge products are still a work-in-progress and/or at the draft stage. Some of the technical reports also need to be made user-friendly to be used by the appropriate audience in the field. In addition, the lack of a dedicated communication person in the project team until 2019 affected communication and visibility.

Recommendations

24. **Recommendation 1 to FAO and GEF**: Get/grant a no-cost extension for six to nine months to ensure the completion of ongoing/pending activities,[9] including preparing a sustainable financing strategy/plan to which the project countries should commit. The additional time could also be used to finalize and translate several knowledge products and publish them. No new activity (not planned originally) should be taken up.

    Timeframe: in the next six to nine months, starting immediately.

25. **Recommendation 2 to GEF project formulators and FAO**: In project design and implementation of regional projects in the Caribbean, differences in contextual realities

[9] At the time of finalizing this report, it was reported that the project has been given a no cost extension up to December 2021.

and capacities/resources among larger islands, land-based countries and smaller islands should be taken into account in the project strategy to ensure that no country is left behind.

Timeframe: All future project designs.

26. **Recommendation 3 to FAO:** Prepare a sustainability and exit strategy for each regional/national institution and each country collaboratively and include the following: a) state the role of FAO in supporting/hand-holding through TCPs, and/or linkages with GEF and other projects to continue/strengthen activities on one or more components of the project in the future; b) define FAO's role in continuing activities on regional mechanisms, regional legislation, etc.; and c) detail a feasible system/mechanisms or structures (with roles and responsibilities identified) required at the country level to inventory/collect and store obsolete pesticides in a central location, collection and disposal of pesticide empty container management, sustainable financing, and increased use alternatives to HHP and adoption of model legislation at the national level.

Timeframe: In the next six to nine months.

27. **Recommendation 4 to FAO**: Projects should revisit the results matrix (initially prepared at the project design phase) and revise them periodically (e.g., at inception and/or during MTE), as required/relevant, and report accordingly. There is a lead time of two to four years to develop the proposal, get approval from GEF and start implementation.[10] During this period, context, priorities and governments might have changed. Additionally, the projects take four to five years to implement. Therefore, it is appropriate to revisit and tweak the results matrix to ensure meaningful and efficient implementation, and M&E. PIR reporting should be realistic and aligned to the activities and indicators, including the revised ones.

Timeframe: All future projects

28. **Recommendation 5 to FAO**: Follow-up on the approval of the pesticide legislation. FAO must follow up directly with CARICOM and through COTED and CAHFSA to facilitate that the regional model pesticide legislation goes through the approval process and is approved and sent to member states. In addition, FAO can work through CAHFSA/CGPC to encourage project countries to adapt/adopt the model legislation on pesticides at the country level and avoid any overlap with model regulation on chemicals[11] reviewed by some project countries.

Timeframe: In the next six to nine months.

29. **Recommendation 6 to FAO**: Explore the possibility to create sub-regional mechanisms for pesticide registration and/or common inspection and control of

[10] It was informed that in GEF 7, the lead time was only 15 to 18 months from PIF to PRODOC to inception and is likely to be the same in GEF 8.

[11] Model legislation on chemicals drafted by GEF 5558 does not exclude pesticides and thus creates an overlap.

imported pesticides as feasible before scaling up at the regional level. With regional versus national sovereignty and countries following diverse systems (British, Dutch and Spanish), it may be easier to create sub-regional mechanisms for similar profile countries. For example, the nine OECS countries are similar smaller islands, English speaking and constrained by resources, capacities and structure.

Timeframe: In the next 1 to 3 years.

30. **Recommendation 7 to FAO and GEF**: Support countries to establish a sustainable national mechanism for collection and disposal of obsolete pesticides and empty pesticide containers management. Through future projects, FAO should train countries in preventing the accumulation of obsolete pesticides and create a national mechanism for collection and disposal.[12] For empty pesticide container management, FAO should facilitate establishing a national mechanism involving the environment, health, and agriculture ministries.

Timeframe: In the next 1 to 3 years

31. **Recommendation 8 to FAO and GEF**: Private sector engagement should be a priority; specifically, in pesticide container management and to promote alternatives to HHPs. Have a clear engagement strategy and plan to involve the private sector from project design and/or inception stage, as feasible. The private sector would bring unique skill sets/perspectives and add value, including co-financing.

Timeframe: All similar future projects.

GEF rating table

GEF criteria/sub-criteria	Rating [13]	Summary comments
A. STRATEGIC RELEVANCE		
A1. Overall strategic relevance	S	Overall, strategic relevance was evident from several institutions and stakeholders participating in the project's design. This also ensured that the project actions were aligned to national and regional needs and priorities.
A1.1. Alignment with GEF and FAO strategic priorities	S	The Project components and activities contribute to FAO's Strategic Objective 2 on increasing agricultural production sustainably. The project was also aligned and contributed to implementing GEF 5 – Chemical Strategy (CHEM-1) Outcome 1.4 on POPs sound management and elimination.
A1.2. Relevance to national, regional and global priorities and beneficiary needs	S	The Project was aligned and relevant to national plans and strategies. It was also aligned to regional plans/strategies and global priorities.
A1.3. Complementarity with existing interventions	MU	The Project was complementary and had overlapping activities with GEF 5558 project implemented by BCRC. The Project also included funds to dispose of 100 MT of PCBs from GEF 5558; however, due to various

[12] In the current project the training was only about managing existing stockpiles of obsolete pesticides.
[13] See rating scheme in Appendix 2 of the document.

		issues (e.g., identification of contractor, contracting process and COVID-19), it was delayed till the end of the project to do the shipping. Additionally, GEF 5558 developed model legislation on chemicals at the same time this project developed the model legislation on pesticides. However, there was no communication/interaction or sharing between the two projects with reference to the development of the model legislation; therefore, there is an overlap between the two models.
B. EFFECTIVENESS		
B1. Overall assessment of project results	MU	The main accomplishment of the Project was the disposal of obsolete pesticides. The PCB disposal was still ongoing during the TE. However, since their removal, obsolete pesticides have been accumulating in the countries due to a lack of long-term systems/mechanisms and structures. All other outcomes remained unachieved or are still at early stages of progress towards outcomes.
B1.1 Delivery of project outputs	MU	Several outputs have not been completed yet and are still ongoing. This is indicated by low budget utilization (only 68 percent).
B1.2 Progress towards outcomes[14] and project objectives	MU	While the disposal of obsolete pesticides contributes to the project objectives, the project made very low progress on other outcomes, which affected the overall project objective.
- Outcome 1	MS	The collection, repackaging and shipment of 319 MT of obsolete pesticides remains the most significant achievement of the project. However, the shipment of 74.1 MT of PCBs has been delayed but is now ongoing.
- Outcome 2	MU	Remediation of one contaminated site was done (pilot activities). However, the project has not been successful in ensuring capacity development and knowledge transfer in all project countries equitably. The project site has also not been handed over to the national authorities yet. COVID-19 affected some activities.
- Outcome 3	U	Although a pilot was completed in one district in Suriname, none of the project countries have established a national pesticide container management system (including Suriname).
- Outcome 4	U	The model legislation is yet to be approved at CARICOM, although it is in the process. The intended common tools and regional processes/mechanisms, and sustainable financing have not been delivered.
- Outcome 5	MU	The results from the pilot on alternatives to HHP are encouraging; however, some alternatives are not ready for scaling-up, replication or commercialization. Activities are still ongoing.
- Overall rating of progress towards achieving objectives/ outcomes	MU	With several activities still ongoing on various Components, intended outcomes have not been achieved. Also, no mechanism/process has been in place to prevent the new accumulation of POPs in the countries.
B1.3 Likelihood of impact	MU	The Project made a start to promoting the lifecycle management of pesticides in the Caribbean. However, with many project activities still ongoing and several outcomes not achieved, it is too early to envision the likelihood of impact. The project requires further support and encouragement to be able to have a lasting impact.
C. EFFICIENCY		

[14] Assessment and ratings by individual outcomes may be undertaken if there is added value.

C1. Efficiency[15]	MU	Timeliness was a significant issue for the project. Many activities were delayed and affected budget utilization. This hindered the Project in achieving its intended outcomes and is reflected in the need for another six to nine months extension until December 2021 (an overall extension of 27 months).
D. SUSTAINABILITY OF PROJECT OUTCOMES		
D1. Overall likelihood of risks to sustainability	U	Overall, sustainability is at risk with project activities still ongoing and no clear exit strategies in place yet. As a result, there is uncertainty in scaling up and replication. Fundamental to many Components and specifically for sustainable financing is the approval and adoption of model legislation in the countries and regionally.
D1.1. Financial risks	U	CGPC is not financially sustainable to take up activities. The model legislation is not approved yet, and no sustainable financing mechanism has been put in place by the Project to ensure lifecycle management of pesticides in the region.
D1.2. Socio-political risks	MU	Regionalism versus sovereignty is a key issue to establish regional mechanisms. Even if CARICOM adopts the model legislation, it cannot be enforced at the country level. Not ensuring the linkage of lifecycle management of pesticides with key socio-economic activities will affect the government prioritization. There are disparities in capacity and resources among the countries (e.g., larger islands vs. smaller islands).
D1.3. Institutional and governance risks	MU	CAHFSA taking over as the Secretariat for CGPC is a positive factor. However, acceptance by technical people in the country does not mean it is acceptable at the country's ministerial or cabinet level. Cooperation/coordination mechanisms among ministries within a country have not been put in place/strengthened by the Project.
D1.4. Environmental risks	ML	Elimination of obsolete pesticides has been carried out. PCBs destruction and remediation of contaminated sites are still ongoing. However, there is an accumulation of obsolete pesticides, including POPs, in seven countries. Reduction in HHPs is not evident.
D2. Catalysis and replication	MU	The replication and scaling up of the pilot activities (e.g., remediation of contaminated sites, empty pesticide container management, alternatives to HHPs, regional registration working group) are not evident/systematically planned yet. The model legislation is not approved and has not yet been adopted in any country.
E. FACTORS AFFECTING PERFORMANCE		
E1. Project design and readiness[16]	MS	The Project start was delayed by six months due to the delay in hiring the Project Coordinator. Also, the significant delay between the design phase and the start of the project led to a change of key individuals in key partners/organizations, which impacted readiness (e.g., CARDI) Results matrix design shows some inconsistencies among its elements.
E2. Quality of project implementation	MU	Project oversight has not been effective. The project structure and staffing did not have enough capacity to manage a complex multi-country regional project,
E2.1 Quality of project implementation by FAO (BH, LTO, PTF, etc.)	MU	The Project received technical inputs on project outputs produced by consultants/contractors, which was reviewed by FAO (LTO, BH, PTF). However, the project implementation was affected by the project

[15] Includes cost efficiency and timeliness.

[16] This refers to factors affecting the project's ability to start as expected, such as the presence of sufficient capacity among executing partners at project launch.

		structure and staffing that did not have enough capacity to manage a complex multi-country regional project. The Project oversight through PIR reviews and field visits has had limitations. The plan to use the unspent budget was not developed until June 2021.
E2.1 Project oversight (PSC, project working group, etc.)	MU	Although the PSC met six times, the Project oversight was not effective. It did not provide critical direction while the project was falling behind on the completion of activities and budget utilization. Neither was there any concrete plan until June 2021 on ways to use the unspent budget.
E3. Quality of project execution For DEX projects: Project Management Unit/BH; For OPIM projects: Executing Agency	MU	The Project was not adequately structured to carry out regional coordination of a multi-component complex project covering 11 countries. Also, the project was not staffed appropriately and adequately, which affected the project management, monitoring, stakeholders' engagement, timely completion of activities, knowledge products, communication and budget utilization.
E4. Financial management and co-financing	S	Overall, the Project exceeded the targeted co-financing amount. This was primarily due to co-financing from Governments far exceeding their respective commitments, although the co-financing from the Government was in-kind. On the other hand, the regional and international institutions fell short of their commitment.
E5. Project partnerships and stakeholder engagement	MS	The Project brought together diverse stakeholders at the regional level. However, partnerships and stakeholder engagement were weak at the national level due to a lack of focused efforts (project activities/mechanisms) to involve stakeholders (besides attendance at events). In addition, there was no detailed stakeholder engagement plan for the project to involve stakeholders at the national level.
E6. Communication, knowledge management and knowledge products	MU	Although communication improved with the hiring of a communication person in 2020, the overall visibility of the Project has still been low. Various project knowledge products have not yet been finalized for publishing and dissemination. Several of the reports are technical in nature and not ready for use by people in the field.
E7. Overall quality of M&E	MU	The project monitoring was weak, as evidenced by delays in the completion of activities and low budget utilization throughout the project lifetime. MTE was commissioned only a few months before the original Project end date (September 2019).
E7.1 M&E design	MS	The PRODOC met the GEF requirement of preparing a budgeted M&E plan which includes delivery of reports to FAO & GEF. It also had a provisional work plan by outputs and its activities. However, targets and indicators had issues and were not appropriate for the planned outputs and outcomes.
E7.2 M&E plan implementation (including financial and human resources)	MU	The results matrix was not updated during the Project's lifetime. Under Component 6 there was a budget allocated for M&E, but there was no system or mechanism to systematically follow-up and monitor activities. In addition, the project structure lacked human resources to ensure appropriate and adequate M&E.
E8. Overall assessment of factors affecting performance	MU	The M&E system was weak and inadequate, and partnership and stakeholder engagement at national levels were inadequate. The project lacked visibility and communication, and knowledge management was insufficient and inefficient. However, the Project did well in mobilizing co-financing from Governments.
F. CROSS-CUTTING CONCERNS		

F1. Gender and other equity dimensions	MU	Gender and other equity issues were not part of the project design/PRODOC. Although attention to gender aspects in the last 18 months improved, overall, it was limited.
F2. Human rights issues/Indigenous Peoples	UA	Specific attention to human rights and indigenous issues was not evident in the project design and implementation.
F2. Environmental and social safeguards	S	The Project ensured adequate safeguarding as a key priority in safeguarding contaminated sites and storing and disposing of POPs. No reports on incidents affecting the environment and people's health have been reported due to project activities.
Overall project rating	**MU**	**The Project has not achieved the intended results (outcomes and outputs) despite having an adequate budget. It also did not consider addressing various factors affecting performance, including weak M&E and national stakeholder engagement. As a result, the sustainability of project results is at high risk on various counts. In addition, the project was complex, with multiple components covering 11 countries, and was not staffed appropriately and adequately.**

1. Introduction

1.1 Purpose of the evaluation

1. The primary purpose of the evaluation is to provide accountability to national Governments, regional stakeholders, the Food and Agriculture Organization of the United Nations (FAO) Management and technical staff, and the Global Environment Facility (GEF). The evaluation findings aim to inform decision-making to facilitate sustainability of project results and future activities and initiatives on the life-cycle management and disposal of pesticides.

2. With the project, *Disposal of Obsolete Pesticides including POPs, Promotion of Alternatives and Strengthening of Pesticides Management* - (GCP/SLC/204/GFF), scheduled to end in June 2021, the terminal evaluation was undertaken as required by the GEF and FAO's Office of Evaluation (OED) policies. The Project Document (PRODOC) indicates the conduct of an independent Final Evaluation three months before the terminal review meeting of the project partners.[17] The evaluation report follows the OED recommended report structure for a GEF project terminal evaluation.

1.2 Intender users

3. The main users of the evaluation include the governments of participating countries (including ministries of agriculture, health, and environment), the GEF, the FAO staff, pesticide regulatory authorities, the Coordinating Group of Pesticide Control Boards of the Caribbean (CGPC), Caribbean Agricultural Health and Food Safety Agency (CAHFSA) and other regional organizations, the private sector, and farmer organizations (Box 1).

4. During the inception phase, the evaluation team undertook a stakeholder analysis[18] to identify key stakeholders for interviews.

Box 1. Targeted audience and expected use of the Terminal Evaluation (TE) results

Primary audience • Governments of participating countries • FAO (at various levels) • CGPC • Pesticide regulatory authorities • GEF	Intended use • To inform decision-making and strategic actions • To ensure resources and an adequate budget for follow-up. • To carry on project activities/results to scale and facilitate sustainability of the project results • To share/disseminate lessons learned for future projects.
Secondary audience • Caribbean Community (CARICOM)	Intended use

[17] PRODOC for GEF 5407 – page 53.
[18] Inception Report – Section 3.

• Council of Trade and Economic Development (COTED) • CAHFSA • Caribbean Agriculture Research and Development Institute (CARDI) • Other research/academic and regional institutions – University of West Indies (UWI) and Inter-American Institute for Cooperation on Agriculture (IICA).	• To create enabling environment in the region. • To facilitate and strengthen regional cooperation/harmonization. • To promote replication/scaling-up of project activities and results.
• Private sector • Farmers groups/organization	• To carry out eco-friendly practices to ensure a clean environment, better health and food safety

1.3 Scope and objectives of the evaluation

5. The objectives of the evaluation were to assess the relevance of the project, its effectiveness in achieving positive outcomes for beneficiary countries, its efficiency and likelihood of sustainability, its strategy for stakeholder engagement and partnerships, as well as the consideration and involvement of gender issues, environmental and social safeguards during its implementation. It also identified elements to improve and guide future actions.

6. The scope of the evaluation is to assess progress towards the project's strategic objectives, outcomes, and outputs. The evaluation covers the period from November 19, 2015, to June 30, 2021, and focuses on relevant activities carried out by the project under its six components, with particular attention to progress made since the mid-term evaluation (i.e., from June 2019 to date). Although a sub-regional project, the evaluation provides insights on progress and achievements on the six components across the eleven target countries.[19]

7. The list of evaluation questions is presented in Box 2.

Box 2. Evaluation questions by GEF criteria

Relevance	• Were the project outcomes congruent with the GEF focal areas/operational programme strategies, regional strategies, country priorities and FAO Country Programming Framework? • Was the project design appropriate for delivering the expected outcomes? • Has there been any change in the relevance of the project since its design, such as new national policies, plans or programmes that affect the relevance of the project objectives and goals?
Effectiveness - Achievement of project results	• To what extent have project objectives been achieved, and were there any unintended results? • To what extent did the project's actual outcomes and outputs commensurate with the expected outcomes and outputs? • To what extent can the attainment of results be attributed to the GEF-funded component?

[19] It must be noted that activities from all components did not take place in all project countries.

Efficiency, project implementation and execution	• (Implementation) To what extent did FAO deliver on project identification, concept preparation, appraisal, preparation, approval and start-up, oversight and supervision? How well were risks identified and managed? • (Execution) To what extent did the executing agency effectively discharge its role and responsibilities related to the management and administration of the project? • To what extent has the project been implemented efficiently, cost-effectively, and the management has been able to adapt to any changing conditions to improve the efficiency of project implementation?
Sustainability	• What is the likelihood that the project results will continue to be useful or remain even after the end of the project? • What are the key risks which may affect the sustainability of the project benefits?
Factors affecting performance:	
Monitoring and Evaluation (M&E)	Was the M&E plan practical and sufficient?
Quality of implementation	• Did the M&E system operate as per the M&E plan? Was information gathered in a systematic manner, using appropriate methodologies?
Quality of execution	• Was the information from the M&E system appropriately used to make timely decisions and foster learning during project implementation?
Financial management and mobilization of expected co-financing	• To what extent did the expected co-financing materialize, and how the shortfall in co-financing or materialization greater than expected co-financing affected project results?
Project partnerships and stakeholder engagement	• Were other actors, such as civil society, indigenous population or private sector, involved in project design or implementation, and what was the effect on the project results?
Knowledge management, communication and public awareness	• How is the project assessing, documenting and sharing its results, lessons learned and experiences?
Gender	• To what extent were gender considerations taken into account in designing and implementing the project? Was the project implemented in a manner that ensures gender-equitable participation and benefits?
Minority Groups/Indigenous Peoples[20]	
ESS risks	• To what extent were environmental and social concerns taken into consideration in the design and implementation of the project?

[20] There was no evaluation question in the TOR; however, the issue has been discussed in the Findings - Section 3.7.

1.4 Methodology

8. The evaluation adhered to the UNEG Norms and Standards[21] and ethical guidelines[22] and followed the OED Manual and methodological guidelines and practices in addition to GEF's Evaluation Policy[23] and Guidelines to conduct Terminal Evaluations.[24] The evaluation adopted a participatory and collaborative approach. The evaluation ensured a transparent approach and was inclusive of internal and external stakeholders throughout the process to ensure utilization-focused evaluation findings and recommendations.

9. The evaluation used a mixed-method approach[25] to collect data as a best practice. This ensured triangulation and validation of data collected from different sources using different methods and enhanced the credibility of findings, conclusions and recommendations. Both qualitative and quantitative data were gathered from primary[26] and secondary[27] sources.

10. As part of the inception phase, the evaluation team conducted a stakeholder analysis and developed an evaluation matrix (Annex 2) and stakeholder appropriate interview guides and an online survey. The evaluation matrix provides details of methods used to collect data for each evaluation question and data source. With COVID-19 protocols and travel restrictions still in place, travel to countries and site visits were not an option. Therefore, all interviews and consultations were virtual. Stakeholders from all project countries, regional partners and relevant FAO staff in the region and the headquarters (HQ) were interviewed virtually.

11. Methods used to collect data to address the evaluation criteria and questions within the timeline and budget included:

- Desk review – a wide range of documents were reviewed, including project documents. Overall, more than 55 documents were reviewed (Appendix 6).

- Semi-structured interviews – virtual interviews were conducted with 93 individuals (Box 3). Refer to the detailed list of individuals interviewed by category presented in Appendix 5.

Box 3. Summary of key informant interviews

- Regional stakeholders (8 institutions) – 17 (9 male and 8 female)
- Government stakeholders – 30 (14 male and 16 female)

[21] United Nations Evaluation Group (UNEG), 2016. (http://www.uneval.org/document/detail/1914).
[22] UNEG, 2008. (http://www.uneval.org/document/detail/102).
[23] GEF 2019. (https://www.thegef.org/council-meeting-documents/gef-evaluation-policy).
[24] GEF 2017 (https://www.gefieo.org/sites/default/files/documents/reports/gef-guidelines-te-fsp-2017.pdf)
[25] Integrating both quantitative and qualitative data collection through various data collection methods and subsequently analyzing them.
[26] Interviews, surveys, project document/project monitoring data.
[27] Literature review, national data, other relevant evaluation reports.

- FAO staff and project team – 17 (5 male and 12 female)
- Others (including the private sector and farmers) – 29 (18 male and 11 female)
- Total – 93 (46 male and 47 female)

- An online survey was sent to 160 stakeholders and followed up with three reminders were sent.[28] Responses (49) were received from stakeholders working in all 11 project countries. More stakeholders responded from Suriname and Trinidad and Tobago, accounting for 34 percent (16 percent and 18 percent) of the total responses received. Responses received were gender-balanced (female-51 percent; and male-49 percent). Refer to Annex 3 for key survey results.

12. The evaluation was conducted between March and June 2021, with the bulk of data collection during April and May 2021. The evaluation was managed by OED and was conducted by an independent evaluation team consisting of an evaluation team leader and a technical specialist.

1.5 Limitations

13. COVID-19 restriction and protocols restricted the evaluation team from undertaking country missions and project site visits to observe, meet and have discussions with farmers and project beneficiaries to assess outcomes and impact. The approach and methodology were designed to mitigate limitations due to travel restrictions and COVID-19 protocols. The evaluation team relied on evidence from various stakeholders and an online survey to minimize the constraint to some extent and, where feasible, looked at photographs (not necessarily current).

14. The long implementation period of the project meant the turnover of champions and key stakeholders (change in government officials). Also, the availability of stakeholders within the short window of data collection was seen as a risk in gathering evidence. The volcano eruption in Saint Vincent (in April 2021) also caused some delays and connectivity/availability issues. The evaluation team was supported well by FAO SLC/project teams, OED and National Project Coordinators to ensure appropriate stakeholders were available for discussions.

15. With pilot/field activities focused on few large countries and travel restrictions due to COVID-19, not all countries had the same in-depth knowledge of all components and project activities. Also, during data collection, the evaluation team noted that activities were still ongoing in various components, which limited assessment of outcomes.

[28] An online survey was used to quantitative information and also to reach out to larger number of stakeholders.

2. Background and context of the project

16. This section provides a brief description of the context and the project. Box 4 presents the basic project information.

Box 4. Basic project information

- GEF Project ID Number: 5407
- Recipient countries: Antigua and Barbuda, Barbados, Dominica, Dominican Republic, Guyana, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago.
- Total Project Budget: USD 30 728 239 (GEF – USD 4 357 500; Co-financing – USD 26 368 739)
- Implementing Agency: Food and Agriculture Organization of the United Nations (FAO).
- Executing Partner: Coordinating Group of Pesticide Control Boards of the Caribbean (CGPC).
- Date of project start and expected end: November 19, 2015, to December 31, 2021.[29]
- Date of Mid-Term Evaluation: June 2019.

17. Pesticide application poses a critical risk to the fragile island ecosystems of the Caribbean, which are included in the Critical Ecosystem Partnership Fund list of the world's 35 diversity 'hotspots.[30] The Global International Waters Assessment[31] identified the impacts of chemical pollution on water resources in the Caribbean small islands as moderate, observing that "*the use of agrochemicals within the agricultural sector is a source of significant damage to both surface and groundwater resources*." Weaknesses in the capacity of responsible institutions, farmers and other actors to effectively manage pesticides and associated wastes throughout their lifecycle and gaps in the legal and regulatory framework have led to the accumulation of obsolete pesticides stockpiles and contamination of sites threatening unique ecosystems their biodiversity and human health.[32] In the Caribbean and participating countries, the legislation and regulations for managing pesticides during their life-cycle are fragmented and at various stages of development and enactment. Furthermore, the availability of alternatives to hazardous pesticides is a constraint in the Caribbean.

18. Between 2010 and 2013, inventories of obsolete pesticide stocks in the Caribbean region were undertaken by national authorities[33] with the support from the European

[29] At the time of finalizing this report it was informed that the project end date has been extended from June 30, 2021 to December 31, 2021.
[30] CEPF (2009) Caribbean Islands Biodiversity Hotspot: Ecosystem Profile Summary.
[31] GIWA (2006) Regional Assessment 3a – Caribbean Sea/Small Islands Assessment.
[32] PRODOC p9.
[33] These states are Antigua & Barbuda, the Bahamas, Barbados, Belize, Cuba, Dominica, Dominican Republic, Guyana, Haiti, Jamaica, Saint Kitts & Nevis, Saint Lucia, Saint Vincent & the Grenadines, Suriname, Trinidad & Tobago (http://www.fao.org/3/bd598e/BD598E.pdf). All of these countries have participated in the project, with the exception of the Bahamas, Belize, Cuba, Haiti and Grenada.

Union (EU) funded project[34] and technical assistance from FAO. The inventories found approximately 300 metric tons of obsolete stocks, which required safeguarding and environmentally sound removal. A subsequent workshop between FAO, the CGPC and the Ministry of Agriculture, Forestry and Fisheries, Grenada on Pesticides Risk Reduction and Obsolete Pesticides Elimination identified the need for improvement in five priority areas.[35] These discussions led to the preparation of the GEF Project Identification Form (PIF) with assistance from the FAO Pesticides Risk Group, which resulted in the signature of the *Disposal of Obsolete Pesticides, including POPs, Promotion of Alternatives and Strengthening Pesticides Management in the Caribbean* (GCP/SLC/204/GFF) in 2015.

19. The overall project objective is to promote the sound management of pesticides in the Caribbean throughout their life-cycle in ways that lead to the minimization of significant adverse effects on human health and the global environment. The project consists of six main components, each with specific objectives, outcomes and outputs (Table 1).

Table 1. Six components – their objectives and outputs

Component	Outcomes	Outputs
Component 1: *Safe disposal of Persistent Organic Pesticides (POPs) and other obsolete pesticides and Polychlorinated Biphenyls (PCBs)*	• Safely destroy POPs and obsolete pesticides.	1.1 Regional risk reduction and disposal strategy. 1.2 Safeguarding, centralization and destruction of obsolete pesticides.
Component 2: *Technology transfer of methodologies for identification and remediation of contaminated sites*	• Remediate pesticide-contaminated sites.	2.1 Capacity building of national authorities in remediation of contaminated sites. 2.2 Remediation strategies and environmental management plans for pilot sites. 2.3 Demonstration of implementation of remediation strategies for pilot sites.
Component 3: *Development of systems for the management of empty containers*	• Establish mechanisms to deal with empty pesticides and other waste plastic containers.	3.1 Pesticide container management options identified. 3.2 Container management practices improved.

[34] *Capacity Building related to Multilateral Environmental; Agreements in Africa, Caribbean and the Pacific States – Clean-up of obsolete pesticides, pesticides management and sustainable pest management* (GCP/INT/063/EC).

[35] Priority areas: a) the life-cycle management of pesticides; b) the transfer of locally available technology for the remediation of pesticides contaminated sites; c) empty pesticides container and waste management; d) the institutional and regulatory capacities for pesticides life cycle management and; e) the promotion of alternatives to toxic chemical pesticides.

Component 4: *Strengthening the regulatory framework and institutional capacity for sound management of pesticides*	• Strengthen the institutional and regulatory framework for managing pesticides through their life-cycle.	4.1 Model harmonized regulations provided to countries. 4.2 Regional harmonized pesticide registration mechanism. 4.3 Common system for inspection and control of imported pesticides. 4.4 Sustainable financing for regional pesticide life-cycle management.
Component 5: *Promotion of alternatives to chemical pesticides*	• Increase the successful update of alternatives to the most hazardous chemical pesticides on key crops.	5.1 Regional highly hazardous pesticides (HHP) use and risk reduction plan. 5.2 Field demonstration of alternatives to HHP. 5,3 Promotion of integrated pest management (IPM).
Component 6: *Monitoring and evaluation*	• Manage, monitor and evaluate the project and establish awareness/ communication strategy.	6.1 Project monitoring system. 6.2 Mid-term and final evaluations conducted. 6.3 Dissemination of project lessons learned.

20. The total project budget is USD 30 726 239, with GEF contributing USD 4 357 500 and the national governments and international/regional institutions contributing USD 26 368 739.[36] Refer to discussions in Section 4.5.3 and Appendix 3 on co-financing. Box 5 presents key stakeholder and their role in the project.

Box 5. Key stakeholders of the project and their roles

<table>
<tr><td colspan="2">Regional stakeholders – support regional cooperation.
• CARICOM and COTED – facilitate establishing a harmonized regional regulation and mechanisms/tools in the CARICOM Member States.
• CAHFSA – advise project implementation and host information from CGPC.
• CGPC – lead executing partner.
• UWI/IICA – research and knowledge transfer on integrated pest management (IPM) and sustainable agriculture.</td></tr>
<tr><td>National (Government) stakeholders
• Ministries of Agriculture, Health and Environment
• Pesticide and Toxic Chemical regulatory authorities in project countries
• Customs and excise departments</td><td>Role in the project
• Project management/oversight, including mobilizing co-financing.
• Capacity development and institutional strengthening.
• Improving the regulatory framework and harmonizing pesticide legislation.
• Dissemination of information and transfer of knowledge</td></tr>
</table>

[36] Project document (PRODOC) and Terms of Reference (TOR) provide break down by each organization/national government.

	• Promoting the reduction of HHP use and improve IPM. • Promoting safe handling and disposal of pesticides and empty containers.
<u>Other national stakeholders</u> • Farmers • Manufacturers/Importers/distributors and retailers • Waste recyclers	<u>Role in the project</u> • Improving pesticide lifecycle management. • Participation in training/workshops and field activities (tests). • Information sharing.

Source: Adapted from Evaluation TOR

21. The project targeted 11 countries in the Caribbean Region (Figure 1).[37]

22. Initially, the project was scheduled to be completed by September 2019. However, due to delays in the start-up and subsequently based on the Mid-term Evaluation (MTE) recommendations,[38] the project was extended to December 2020. Delays due to the COVID-19 pandemic led to the project timeline being further extended to June 2021. During the preparation of this report, it was informed that the project has now been extended until December 2021. In 2021, the volcanic eruption in Saint Vincent and Grenadines and the subsequent spread of volcanic ash to nearby islands further affected socio-economic activities in a few islands.

Figure 1. Map of the Caribbean region

Source: United Nations Economic Commission for Latin America and the Caribbean

23. A Regional Coordinator (funded by the project and based in Barbados) managed the project supported by a project assistant and a communication officer[39]. Also, a national

[37] Antigua and Barbuda, Barbados, Dominica, Dominican Republic, Guyana, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago.

[38] The MTE was conducted between February – June, 2019.

[39] Recruited based on MTE recommendation – joined in February 2020.

consultant was recruited in the Dominican Republic.[40] National Project Coordinators (NPCs), government employees, coordinated the project activities at the country level.

2.1 Theory of Change

24. Although the project document (PRODOC) has a results matrix providing an overview of the project's intended impact and its components with defined outcomes, outputs and indicators, the overall Theory of Change (TOC) was not explicit in the document. Therefore, the MTE team had constructed the TOC (Figure 2) explaining the causal linkages which were considered valid and used to perform this terminal evaluation.

25. The achievement of outcomes and outputs due to project activities have been based on the following assumptions:[41]

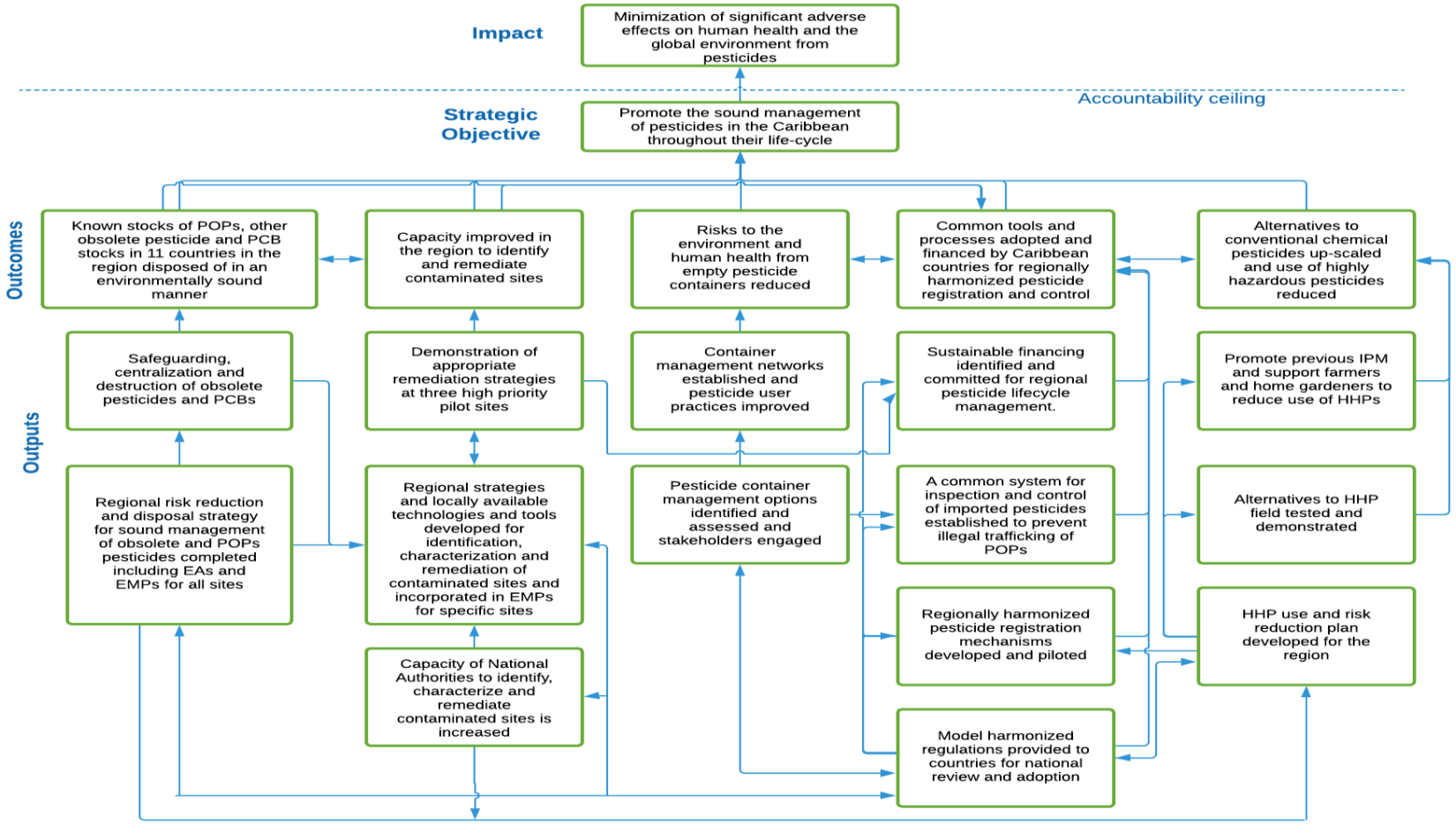
- There is the active participation of key stakeholders to support the implementation of project activities;
- Training provided to targeted project beneficiaries meets the necessary capacity needs across all countries;
- Regional bodies foster collaboration among national focal points;
- Sufficient resources are available and provided to support all project activities;
- The CGPC is capable of coordinating regional registration and enables collaboration on the project, and there are enough and robust expertise and technical skills in the region to handle and analyze soil samples and carry out site remediation;
- The pilot studies develop and demonstrate best practices to remediate contaminated sites and promote effective highly hazardous pesticides (HHP) alternatives;
- There is an equitable representation of all relevant actors in the project; and
- There is a political willingness to adopt the model regulations to harmonize pesticide registration and control at the regional level.

26. During the evaluation, it was noted that although the theory of change holds good in terms of defined outputs contributing to intended outcomes and the overall impact, the activities may not have been well-conceived in some instances to achieve the intended outputs and/or the indicators not defined well to measure the output (refer to further discussions in Section 3.5.1).

[40] Recruited based on MTE recommendation. Joined in November 2019 and, subsequently the contract was renewed from November 2020 to June 2021.

[41] Mid-term Evaluation of Disposal of Obsolete Pesticides including POPs, Promotion of Alternatives and Strengthening Pesticides Management in the Caribbean. June 2019.

Figure 2. Theory of change



Source: Mid-term Evaluation Report, 2019.

3. Key findings by evaluation criteria

3.1 Relevance

Finding 1. The project was relevant to national and regional plans and strategies. Additionally, it was aligned to GEF and FAO strategies/objectives and aligned to Rotterdam, Stockholm and Basel Conventions. Disposal of obsolete pesticides accumulating in the countries was a critical need and long overdue.

27. The review of documents and discussions with various stakeholders highlighted the project's relevance to the region, especially in terms of disposal of obsolete pesticides, among others. Stakeholders remarked that such a project was implemented for the first time in the region and was long due.

28. The project was aligned and relevant to the national plans and strategies of the project countries, especially in the agriculture sector, with reference to sustainable food production, food safety, integrated pest management (IPM), and good agricultural practices (GAP), as the countries participated in the project design. The project also addressed the need to strengthen the regulatory authorities (Pesticides and Toxic Chemicals Boards or Pesticide Control Boards) and update legislations that were 10 to 30 years old. Furthermore, as discussions revealed, the project was also relevant to ensure clean environments and better health.

29. The project is aligned with the *Revised OECS Regional Plan of Action for Agriculture (2012-2022)*.[42] Additionally, the project supports the implementation of multilateral environment agreements in the Caribbean. Environmentally sound production of agricultural products and efficient management and sustainable exploitation of the Region's natural resources are among the goals of the Community Agricultural Policy[43], as outlined in Articles 56 – 58 of the Revised Treaty of the Chaguaramas[44] that established the Caribbean Community (CARICOM). The consideration of model draft pesticide legislation bill by COTED and CARICOM for adoption and the move to have CAHFSA[45] as the Secretariat for CGPC in 2019 highlights the project's relevance at the regional level.

30. The project was aligned and contributed to the implementation of GEF 5 – Chemical Strategy, and more specifically to CHEM1 – POPs waste prevented, managed and disposed; POPs contaminated to sites managed in an environmentally sound manner, and country capacity developed to phase out and reduce releases of POPs effectively. Furthermore, the project was facilitating Caribbean countries to implement the International Code of Conduct on Pesticide Management, which is also the guiding

[42] https://www.oecs.org/en/our-work/knowledge/library/agriculture/revised-oecs-regional-plan-of-action-for-agriculture-2012-2022

[43] https://agricarib.org/images/docs/Community_Agricultural_Policy_JULY_24_2012.pdf

[44] https://caricom.org/documents/4906-revised_treaty-text.pdf

[45] CAHFSA itself is relatively new (established in 2015) is a technical arm of CARICOM and receives core budget from CARICOM. Pesticide management was not a mandate of CAHFSA initially. It was included along with Agricultural Health and Food Safety due to project support.

reference for all the project activities on developing capacity for regulation, including legislation, registration, inspection and control, phasing out of HHPs and promotion of alternatives.

31. The discussions and the desk review noted that the project was also aligned to Rotterdam, Basel and Stockholm Conventions. All the project countries have ratified the Stockholm Convention and, in their National Implementation Plans submitted, prioritized the disposal of POPs waste, management of contaminated sites, strengthening legislative, institutional and technical capacity and specifically for prioritized issues of obsolete stocks and pesticide management.[46]

32. The project is relevant to the mandate of FAO, which includes prevention and management of agricultural pests; safe distribution and use of pesticides, including disposal as governed by the International Code of Conduct on Pesticide Management (2013);[47] and the control of international trade in particularly hazardous pesticide formulations as governed by Rotterdam Convention.

33. The project was principally aligned to FAO Strategic Objective (SO) 2. The project was relevant to the Country Programme Frameworks (CPFs), prioritizing several issues related to pests and pesticide management.

34. Interviews highlighted that the project design was appropriate at the time of design in 2012-2013. The project (GCP/SLC/204/SFF) was based on lessons from two European Union projects[48] of Multilateral Environmental Agreements (MEA) related to different components. The budget and design were completed "*in a rush*" to meet the GEF 5 submissions deadline. The project design also included funds to dispose of up to 100 tonnes of PCBs and PCB contaminated wastes inventoried under the Basel Convention Regional Centre (BCRC)/UNIDO project (GEF 5558[49]).

35. Since then, the context and focus of development partners have changed (more rigour on environmental and social safeguards and increased focus on gender aspects). GEF has evolved and has provided more streamlined guidelines in the subsequent rounds of GEF (currently starting GEF 8). Interviews and desk reviews revealed that some project activities were modified (e.g., no baseline and final survey were conducted to measure the percentage of farmers triple rinsing pesticide containers, and surveys undertaken by PAN-UK are not KAP surveys, as planned) or new activities (e.g., facilitating the creation of Secretariat for CGPC, and regional pesticide inspectors' manual) were taken up,[50] which meant reallocating the budget. It was noted during discussions with the project team/FAO that the changes to originally planned activities

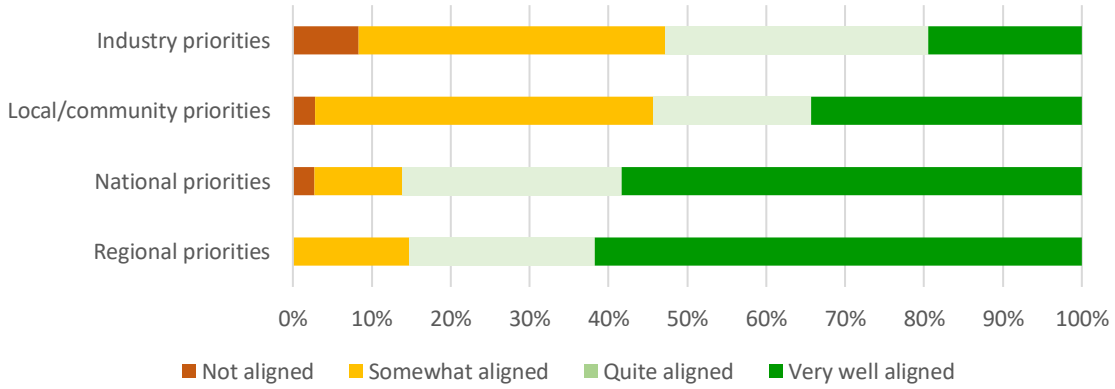
[46] PRODOC, p17.
[47] http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/CODE_2014Sep_ENG.pdf
[48] GCP/INT/153/EC – "*Capacity Building related to MEAs in African, Caribbean and Pacific (ACP) countries*" Phase II and GCP/INT063/EC – "*Capacity Building related to ACP countries – Clean up of obsolete pesticides, pesticides management and sustainable pest management*."
[49] "*Development and implementation pf a sustainable management system for (industrial) POPs in the Caribbean*" implemented by UNIDO and executed by BCRC.
[50] During the project lifetime.

were made due to priorities, and needs have evolved/changed since the project design. Also, some aspects of the project design were not feasible/relevant in the current context.

36. Since the project design, governments and/or ministers have changed in the countries, including personnel. Nevertheless, the project activities remained relevant[51] (Figure 3), despite pesticide management not being among the government's top priorities in many countries. The linkage between pesticides and socio-economic was not evident in the design.

37. Survey responses mirrored discussions on that the project being a regional project (covering multiple countries), it was more aligned to regional and national priorities (86 percent of respondents) than for local/community (54 percent) and industry priorities (52 percent) – Figure 3.

Figure 3. Alignment to priorities (n=49)



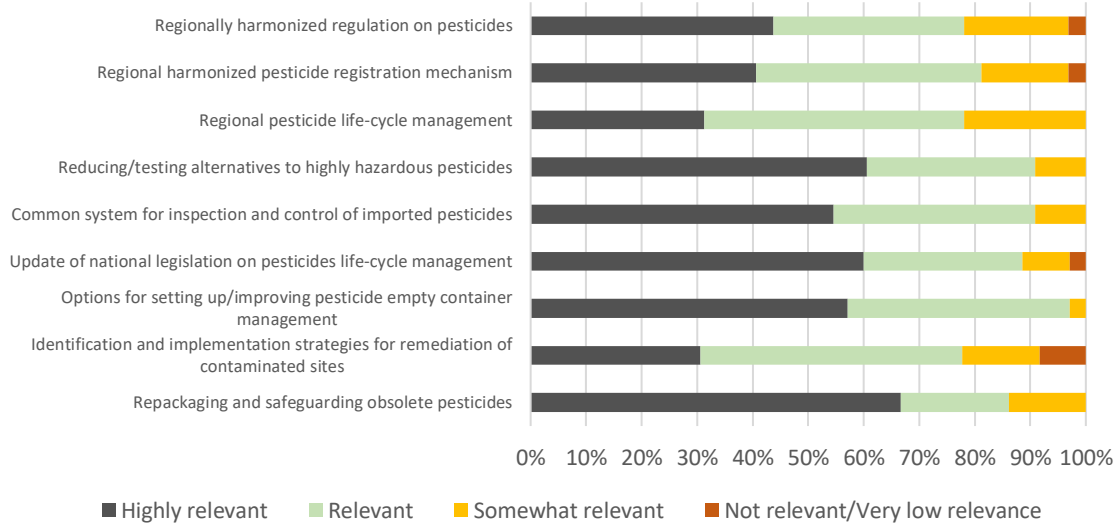
Source: Survey - GCP/SLC/204/GFF Terminal Evaluation (2021).

38. In addition to interviews, the evaluation also explored how the countries perceived the relevance of the project's components. At least 70 percent of the survey respondents indicated that each component/approach was highly relevant or relevant (Figure 4).

39. Pesticide empty container management (97 percent), testing alternatives/reducing HHPs (91 percent), updating national legislation for pesticide life-cycle management (89 percent), and repackaging, storing and disposal of obsolete pesticide (86 percent) were perceived relatively more highly relevant/relevant as compared to identification and remediation of contaminated sites (77 percent), regional harmonized regulation on pesticides (78 percent) and regional pesticide registration mechanism (82 percent) – Figure 4.

[51] As some of the project activities such as training on IPM, triple rinsing and registering of pesticides are part of regular ongoing activities in the project countries.

Figure 4. Relevance of project components/approaches to country priorities (n = 49)



Source: Survey – GCP/SLC/204/GFF Terminal Evaluation (2021).

40. The **rating for relevance criteria is satisfactory**

3.2 Effectiveness

Finding 2. The collection, repackaging and shipment of obsolete pesticides is the single most significant recognizable outcome that benefitted all project countries.

41. **Component 1** is concerned with the safe disposal of obsolete pesticides, including POPs and PCBs. The disposal of 319 tonnes of obsolete pesticides (target 300 tonnes) was the key aspect and highlight of the project.[52] The target was estimated based on an inventory taken during an earlier project[53] and did not include the Dominican Republic. The inventories were verified before repackaging for shipment to the United Kingdom for destruction.[54] Certificates of destruction were presented to Ministers of Agriculture (of the 11 project countries) at the COTED meeting in October 2017.

42. Some inventories were not entirely accurate and some quantities of obsolete pesticides were not inventoried (e.g., Dominican Republic) and in other cases there were discrepancies between the inventories and the on-site verification carried out by the company contracted for their disposal, which took the quantities that were agreed in their contract. This situation resulted in obsolete pesticides being left in the country.

[52] Shipment of obsolete pesticides including POPs was done by Veolia Field Services.
[53] GCP/INT/153/EC – Multilateral Environmental Agreements in ACP countries.
[54] The stock of 10 countries were shipped first (289 tonnes) and then when Dominican Republic completed its stock taking, 30 tonnes were shipped.

43. In addition, obsolete pesticides have continued to accumulate in the region since disposal in 2016. Even though capacities[55] have been developed and a request was made at the 22nd CGPC meeting in June 2018 to conduct an inventory of obsolete pesticides, at the time of this evaluation, seven project countries reported quantities of having an additional stock, which included stockpiles that were not shipped, of about 116 tonnes (Guyana – 27.5 tonnes, Suriname – 66 tonnes, Dominican Republic – 13 tonnes, Trinidad and Tobago 5 tonnes, Barbados – 2.5 tonnes, Saint Lucia 1.5 tonnes and Dominica – 0.5 tonnes). It was noted that these stocks had not been brought to a centralized location in respective countries except for Guyana and Saint Lucia, which reported to have a system now for recording and collecting obsolete pesticides. Suriname has identified a storage site; however, it is awaiting approval. None of the countries are clear about the disposal as there is no facility for disposal in the region.

44. Environmental assessments were conducted in 2016 for all 11 project countries. Environment management plans were completed for each site where obsolete pesticides were found and stored.

45. In parallel, the Basel Convention Regional Centre (BCRC) based in Trinidad and Tobago was doing an inventory of PCBs in five countries (Antigua and Barbuda, Barbados, Saint Kitts and Nevis, Suriname and Trinidad and Tobago) from June to October 2016. It was noted that at the time of project design, it was agreed that FAO would make the shipment of PCBs also. Turnover of personnel in BCRC and delays due to the FAO procurement process in addition to the COVID-19 pandemic-related delays led to shipment only in 2021. A total of 74.1 tonnes were repackaged for shipment from four countries.[56] A discrepancy in the inventory was noted when repackaging for shipment, as the original inventory reported by BCRC was 72.14 tonnes.[57] At the time of this evaluation, discussions revealed that shipment of PCBs had been completed in Antigua and Barbuda, Barbados and Suriname. Shipment from Trinidad and Tobago had not yet taken place (but work in progress for shipment to be done in the next couple of months).[58] The local license in Trinidad and Tobago is still pending, and with all the delays, the shipping line has now changed the route, which means an additional clearance (for the extra stop) has to be obtained.[59] It was reported that the shipment, with a total of 54 tonnes of PCBs, was completed in August 2021.

[55] It was reported that the training was done at regional level for government officials (covering all project countries) in December 2013 under the EU project (GCP/INT/153/EC). Veolia trained national stakeholders during repackaging and shipment.

[56] It was reported during interviews that there was no inventory of PCBs found in Saint Kitts and Nevis.

[57] Some stakeholders also reported issues of vandalism. Also, the stocks were not available in various locations where it was initially inventoried Inadequate capacity to inventory PCBs in the country and the time lag between conducting the inventory and shipping (4 to 5 years) were also noted as factors that contributed to inventory discrepancy. During the finalization of this report, it was informed that the actual quantity of PCBs shipped was approximately 54 tonnes.

[58] Shipment of PCBs is being undertaken by Polyeco SA – contracted in November 2019. However, they work with local companies including training them to ensure all protocols are met. Shipments require clearance from country and export permit from Ministry of Environment and Basel Convention.

[59] Clearance/license has to be obtained from Basel for all transit countries in addition to the origin and destination countries and the license is valid for only year. For all other transit countries (for shipment from Trinidad and Tobago), it was obtained at the end of 2020.

Finding 3. The identification and remediation of the contaminated site (pilot activities) faced several challenges; however, the targeted reduction in contamination was met. The project was not successful in ensuring capacity development and knowledge transfer evenly across all project countries.

46. **Component 2** is related to technology transfer for the identification and remediation of contaminated sites. At the start of the project, contaminated sites were reported in six countries (Barbados, Dominica, Dominican Republic, Saint Kitts and Nevis, Suriname and Trinidad and Tobago). The project conducted a rapid environmental assessment, including soil sampling training of 52 technicians from 12 countries (including all project countries spread across 2017, 2018 and 2019).[60] The training manual on remediation for technicians, produced under the project, is being prepared for publication. After the initial analysis of all the soil samples tested, two sites (one each in Suriname and Saint Kitts and Nevis) were selected as priority sites. Finally, one site in Suriname was selected for a pilot (project target was three sites). It was reported that other sites were not considered as the contamination was not seen to be at dangerous levels, and one site had access issues.

47. The project had challenges in identifying a suitable laboratory for doing comprehensive analysis, and only in the latter half of 2018 finally identified a laboratory in the USA. Even though there were a few well-equipped laboratories in the Caribbean, they either did not have the capacity, or their cost was high to analyze pesticides and/or microbial activities.[61] However, getting clearances and approvals USDA to send the soil samples to the USA led to further delays. Subsequent project training only benefitted 35 national stakeholders and technicians in Suriname. However, a virtual workshop (attended by 62 participants) was conducted in 2021 to share initial findings on remediation.[62] Discussions with researchers involved in the pilot and data shared indicate that contamination levels are decreasing and have reached approximately 50 percent of contamination reduction. However, the remediation of the site has not been concluded. Therefore, the responsibility for continuing the remediation process beyond the project end date will have to be made by the project.

48. While the project expects to share the experience and findings of the pilot in Suriname at the CGPC (with the participation of 15-17 countries, including the 11 project countries), discussions with project countries (other than Suriname) revealed that virtual sharing of information is not the same as having a practical experience in the remediation of contaminated soils. Countries also reported that enough knowledge

[60] The evaluation team did not have access to the training participant list. It is based on PIR 2020-2021.

[61] It was noted during interviews that the costs in the USA were 50 percent lower and the costs included testing for various pesticides. On the other hand, in the Caribbean the cost of test was for each pesticide.

[62] The workshop also had presentations on "Pesticide Contaminated Site Assessment" and "Pesticide Contaminated Site Remediation." A survey was conducted by the project team o evaluate the workshop among participants, even though the responses were positive, 59 percent of the respondents were researchers, students and other and 41 percent were government officials.

had not been shared on all field trial activities on remediation of contaminated soils partly attributed to the COVID-19 situation.[63]

Finding 4. The pilot was completed successfully in one district in Suriname. However, none of the 11 project countries have established a national pesticide container management system.

49. **Component 3** is the development of systems to manage empty pesticide containers at the national level to reduce the risks to the environment and human health. Although surveys were undertaken in two pilot countries in Antigua and Barbuda and Suriname,[64] they were not Knowledge, Attitude, and Practice (KAP) surveys. The surveys did not collect information to measure the level of adoption of triple rinse of containers by farmers. They mainly gathered information for the establishment of schemes for the management of empty pesticide containers. The project also did surveys in Barbados and Jamaica on pesticide use and what they do with containers, which did not assess the proportion of farmers doing triple rinses of empty containers. Although the project planned to establish a baseline on pesticide container types and quantities in 11 project countries, it could collect information only from six countries.[65]

50. None of the project countries (target 2) have centralized data on containers collected. The tool kit on pesticide container management has been drafted, and although shared with all the NPCs, it has not yet been finalized (at the time of this evaluation). It was noted that the development of the tool kit was not a planned output/activity, and its content is very basic.[66] In 2021, AGRIVALOR started working in Dominica, Barbados, and Guyana to establish an empty pesticide container management system. AGRIVALOR is expected to present options to these three countries and also in a regional meeting. The work is not likely to be completed before September 2021.

51. The pilot in Antigua and Barbuda did not happen due to a lack of commitment and strong interest from the country. The pilot was done in Suriname in one district. This included creating a container management network in 2018 with stakeholders from various ministries (environment, health, education, trade and customs), pesticide importers/distributors and waste recyclers. While the pilot successfully created awareness in changing farmers' behaviour to triple rinse and collect empty containers (more than 12 tonnes bags collected in big bags), the collected containers have neither been recycled nor exported yet. During interviews with national stakeholders in Suriname, it was reported the network was discussing with a recycling company; however, the issue has been the lack of buyers for the recycled product.

52. The container management system has been established in one district in Suriname; however, it has not yet been rolled out nationally, as discussions on a budget are still

[63] Refer to discussions in Relevance Section – Component 2 was also perceived as less relevant at the country level vis-à-vis all other components.
[64] Surveys were undertaken by PAN-UK.
[65] As reported in the first PIR (2016-2017).
[66] The contents of the tool kit currently provide only guidance on how to conduct a survey on empty pesticide containers. It may need further strengthening.

ongoing. Barbados had an exploratory meeting with diverse stakeholders, including the private sector (distributors/importers and recyclers), but further progress has been stalled due to COVID-19.

Finding 5. Development of model regional pesticide legislation incorporating gender aspects and putting it through the CARICOM approval process, and strengthening CGPC capacity and status are the highlights. Establishing regional mechanisms and ensuring sustainable financing in countries are at nascent stages.

53. **Component 4** was planned to strengthen the regional regulatory framework and institutional capacity for sound management of pesticides. The intended outcome of having common tools and processes adopted and financed by Caribbean countries for regionally harmonized pesticide registration and control is far from being achieved and remains a work in progress and would require further support and hand-holding beyond the project. The model legislation on pesticides is a key highlight of the project and was seen as fundamental to the success of several project activities (e.g., sustainable financing of regulatory bodies in pesticide management, regional registration and/or mechanism, etc.).

54. As part of developing the model legislation on pesticides, the project undertook a review of the national legislations in the nine English-speaking countries (British legal system) in the latter half of 2017. Additional studies were taken up in Suriname (Dutch system) and the Dominican Republic (Spanish system). The review identified gaps in national legislation and compliance areas in line with the International Code of Conduct and Guidelines on Pesticide Management.[67] The project also incorporated gender aspects, as appropriate, in the draft legislation. The project has sent the draft model legislation on pesticides to CARICOM, OECS and CGPC. Although it was reported that there had been no response from OECS, the model legislation is going through the formal process of consideration for approval in the CARICOM. At the CARICOM Secretariat, the model legislation has gone through technical review before going to the legal department for reviewing the clauses. Based on this, it has been cleared to be presented at the next meeting of COTED (Agriculture) for approval. COTED is required to get no objection from all member states before giving its approval.[68] Discussions with CARICOM reported that it is now with COTED, and there is more than 80 percent probability that the member states will adopt it.

55. Once cleared at the COTED, the legislation has to go to the senior official of the Legal Administrative Council of the CARICOM for clearance. Then the Legal Affairs Committee (comprised of all Attorneys General from the member states) has to approve it before it goes to the member states. During discussions with CARICOM, it was noted that the approval at the COTED would not be until October 2021, as the

[67] http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/CODE_2014Sep_ENG.pdf
[68] It was noted that this is not certain.

model legislation has to go to the special COTED on agriculture which meets only once a year.[69]

56. Simultaneously, the project has already shared the draft legislation with project countries[70]. Some are doing a preliminary review at the technical level or by the pesticide review committee, as applicable. During interviews, some countries perceived that it was meant for countries with Pesticides Act. However, many indicated they would look at ("*cherry-pick*") what could be modified to strengthen/update their respective Acts (which are 10 – 30 years old) to meet current standards. Suriname did not have a Pesticide Act, so they adopted it in June 2020; however, in July 2020, a new Government came in, and it has to go through the process again.

57. Additionally, national stakeholders indicated that even though there could be support at the technical level and the relevant Minister (health or agriculture), ultimately, the approval of changes/adoption of legislation is at the Cabinet-level.[71] Approval of the Act may take more than one to two years, while in some countries, where feasible, they could instead of changing the Act, having a regulation may be quicker (a few months). Adopting or updating the legislation in various countries would require follow-through from FAO after the project has ended. Also, countries participating in GEF 5558 project have to consider revisions on the general law on chemicals and work on the model legislation on pesticides. There is potential overlap as the model chemical legislation also includes pesticides. Also, some of the project countries have one common Act for chemicals and pesticides.

58. A regional harmonized registration mechanism was not created during the project's lifetime. However, a pilot Technical Working Group (TWG) was created in 2020 with a Letter of Agreement (LOA) with CAHFSA. The TWG had representatives from Guyana, Saint Kitts and Nevis, Suriname, and Trinidad and Tobago, all trained on FAO Pesticide Management Tool Kit. The TWG met three times (once in person) during 2020. Discussions revealed that the TWG has completed its mandate, reviewed seven dossiers received from the countries facilitated through CAHFSA, looked at improving the pesticide evaluation process, and created a uniform registration form and a checklist[72] to proceed with the evaluation. However, neither the TWG members nor the regional/national stakeholders were clear about the next steps, the structure/mandate/authority of the regional registration mechanism, and resources (including funding) despite a unanimous decision at CGPC[73] for a unified registration mechanism. During discussions several regional and national stakeholders (including all private sector distributors/importers interviewed) indicated that it would be more efficient and effective to have a harmonized mechanism at the regional level. The project team reported creating a draft MOU for the mechanism; the national

[69] The full COTED meets twice a year in June and in November.
[70] It was shared to the focal point/NPC of the project countries.
[71] Discussions highlight that the nuances of the process and the time required to change legislation in the countries may not have been well thought through during the project design phase. This is a weakness of the project design.
[72] It helped countries to know what needs to be sent for registration.
[73] CGPC does not by itself does not have any authority – it has to go through CAHFSA and COTED

stakeholders (including TWG members) were unaware of such a document,[74] although the project team reported sharing it with CAHFSA. It was noted that the private sector has been pushing for a regional pesticide registration mechanism for more than 20 years; however, the countries have not been able to agree on it so far.

59. Unlike the regional registration mechanism, most stakeholders interviewed were not aware of the project's planned output of common regional inspection and control of imported pesticides. However, the project had carried out capacity development in the inspection and control of imported pesticides. The project trained 25 customs and pesticide inspectors on pesticide import/export control in March 2017 (done in collaboration with the ACP project – MEA's Phase II). Subsequently, a draft pesticide inspectors manual[75] was developed, and 110 pesticide inspectors and technical officers from relevant agencies in all 11 project countries were consulted and trained on the manual. The project team reported that PSMS exists but is on hold with the IT department of FAO. However, no Project information was inserted into the System.

60. A sustainable financing mechanism was not put in place at the country and regional level for pesticide management by the project, as initially planned. Some countries (e.g., Guyana and Jamaica) already have a cost recovery mechanism and are better funded. The project conducted a cost-recovery analysis study, and although presented at CGPC, no recommendation was made (target at least one recommendation). It was reported that the report needed an upgrade and revisions to be more meaningful for the countries to act. The project was also not able to design and implement a mechanism for CGPC member countries to cover the costs of their participation in the CGPC meetings. Virtual meetings experience, incidentally due to the COVID-19 situation, is now considered an alternative to reduce participation costs.[76]

61. One of the highlights ("*big achievement*") of the project was CAHFSA becoming the secretariat for CGPC in 2019.[77] This was an important step for CGPC, as CAHFSA, created in 2015, is a technical arm of COTED, which is the arm of CARICOM. Thus, the project has given CGPC[78] a better status and linkage in the regional structure. This must be seen as an unintended result of the project to strengthen regional mechanism/structure in pesticide management. It was not a planned activity of the original results matrix. Additionally, CAHFSA is also the secretariat for the Plant Health Directors' Forum, and this also gives CGPC additional linkages.

[74] A weakness of project of not systematically planning and executing all the steps of a set of activities to achieve the end outcome. This is one of the reasons why the project has not able to achieve intended outcomes. Also sharing of document to a person in an institution without clear instructions will not automatically lead to wider sharing of the document always, especially if it is draft document.

[75] This was not a planned activity or output of the project (as per PRODOC results matrix).

[76] Virtual meetings were held quarterly.

[77] Prior to this IICA (an international organization) acted as the Secretariat for CGPC.

[78] It was reported that CGPC was originally created as a working group during the Banana issue during Windward Islands since then has acted as more as an information sharing body and has no regional status or membership. The participants in the CGPC meetings are representatives of the country and it could vary meeting to meeting. It was reported that CGPC lacks formal recognition by CARICOM.

Finding 6. Even though the results of the field trials on alternatives to HHP are encouraging, some of them are not ready for scale-up, replication or commercialization.

62. **Component 5** was on the promotion of alternatives to chemical pesticides. Countries have identified HHPs; however, there is no evidence of a reduction[79] in the number of HHPs registered due to project activities. Banned HHPs (in origin countries) are still being imported in the Caribbean.

63. A risk reduction plan[80] has been prepared at the regional level and presented to the project countries; however, it has not been done at the national level (country-specific). CGPC endorsed the plan. The regional risk reduction plan presented includes a general national plan – "*one size fits all*" and therefore, the need to have a more strategic document was identified. It has to be adopted and adapted to countries and simplified for farmers and field-level people to understand and implement. During interviews, it was noted that no follow-up or further actions had been agreed upon yet.

64. The initially intended partnership with CARDI to implement field tests on alternatives did not work out due to the change of key personnel and also because the project and CARDI were not able to agree upon financial terms. Therefore, the project worked with UWI. The UWI did field tests on alternatives to HHP through their campuses in Trinidad and Tobago (on fungicides) and Jamaica (on insecticides). The field trials indicated no significant difference in yield levels between the use of alternatives and chemicals. However, the alternatives pose less risk to farmers and the environment.

65. Additionally, some of the trial results are not enough to scale up, commercialize or advocate to farmers. Discussions with various stakeholders indicated challenges in the uptake of alternatives despite some alternatives/biopesticides available in the market. Challenges reported include not having enough efficacy results to demonstrate to farmers and relatively higher costs of alternatives to HHPs. Additionally, it was reported that there was no specific alternative to recommend when advising the farmers not to use an HHP. Also, the level of understanding of farmers about IPM is very low, and the project did not focus much on improving the situation (especially with a complex mandate to achieve).

66. Support to farmers and home gardeners to reduce the use of HHPs, directly through project activities is not evident, except for support to Pesticide Awareness Week in countries. The project produced IPM communication materials and sent them to project countries (to the NPCs), but this alone is not likely to reduce the use of HHPs. It was also noted that a Guidance Note on IPM is being prepared by PAN-UK (not finalized yet). The evaluation team noted that the life-cycle management activities of the project are very superficial and were limited to producing brochures and distributing them at events.

[79] The project target was 20 percent reduction in HHPs.

[80] As noted during the interviews, the regional risk reduction plan was prepared by PAN-UK primarily based on survey and document review than on consultations.

Finding 7. Results-based management could have been better by having a systematic M&E process and ensuring project activities and budget spending was on track.

67. **Component 6** is concerning project implementation grounded on results-based management and project results shared between project countries and outside stakeholders. The project had a results matrix[81] with a baseline and an M&E plan[82] in the PRODOC. The project prepared Annual Work Plans and submitted six-monthly reports (two in the first year and subsequently one each year) and annual Project Implementation Reports[83] (PIR); however, the project results matrix was not updated or adjusted during the project's lifetime (refer to detailed discussions in Section 3.5).

68. The MTE (February – June 2019) and the final evaluation (ongoing since March 2021) were commissioned and conducted by independent evaluation teams as envisaged in the PRODOC. However, the monitoring and follow-up of activities after the MTE continued to be "informal" and were not systematic, leading to low budget utilization and delays in project activities, partially attributed to the issues of the project structure (refer to further discussions in Section 3.3). Project activities not being on track (as per original timelines) and overall slow progress also contributed to delayed MTE[84], among other factors. Appendix 4 presents the results matrix with updated achievements (on outcome and outputs) and evaluation team remarks.

69. The project relied primarily on CGPC meetings, in addition to emails, to communicate with project country stakeholders and to share information (results/lessons) on pilot activities in one country to other project countries. Overall, communications (including sharing lessons) have improved with the recruitment of a communication person[85] in 2019; it still remained inadequate with many knowledge products not ready for publication or wider dissemination (refer to detailed discussions in Section 3.5.5).

70. Based on findings, the **rating for effectiveness is moderately unsatisfactory.**

Progress to impacts

71. The project has made a start to promote the sound management of pesticides in the Caribbean throughout their lifecycle. However, it is in the early stages and needs further support and push to move forward.

72. The project has delivered significant and immediate global environmental benefits (GEBs) through the safe disposal of 319 tonnes of obsolete pesticides at a cost of USD 2 418 per ton. This has been reported in the POPs tracking tools (TT) as the disposal of

[81] Appendix 1 of PRODOC.
[82] Table 4.3 (Summary of M&E activities) and Appendix 2 (Provisions Work Plan) of PRODOC.
[83] During review of PIRs it was noted that PIRs report activities completed and implementation status. It does not mean that intended results (outputs and outcomes) are being achieved (or progress is being made towards achievement of results).
[84] Conducted only a few months before the original project end date of September 2019 (while the project started in November 2015).
[85] The communication person was recruited based on MTE recommendation.

obsolete pesticides, including POPs in an environmentally sound manner, constitutes the main indicator reported by the project in the TT. These benefits should have increased due to the shipment of 54 tonnes of PCBs, as reported by the project team. However, the new accumulation of obsolete pesticides is emerging in seven project countries, which is beginning to diminish the benefits achieved by the project.[86] There was a lack of a waste management plan to prevent the accumulation of pesticide stocks and empty pesticide containers.

73. Reducing contamination levels, especially of Endrin, Endrine-Ketone and Dieldrin, at a contaminated site in Suriname also contributes to GEBs by reducing releases of hazardous products into the land, air and water. Through the collection of 12 tonnes of empty pesticide containers and the triple rinse awareness campaign in Suriname, achieved by the formation of a network of farmers, government and private sector, the risks of surface and groundwater contamination and soil degradation in the area covered by the network have been mitigated. The biopesticides tested in the field trials, which showed promising results in replacing the use of highly hazardous pesticides, are also expected to reduce environmental pollution.

74. All of the above constitutes quantitative evidence of the project's contribution to reducing environmental stress caused by hazardous chemicals in the Caribbean region.

3.3 Efficiency

Finding 8. Timeliness and low budget utilization have been an issue throughout the life of the project. As a result, the project is unlikely to complete activities related to all components by the end date.

75. Timeliness was an issue in the project. In addition to the delayed start of six months[87], the project had two no-cost extensions, initially based on MTE recommendation (until December 2020) and then subsequently due to COVID-19 until June 2021. Initially, the project was planned to be completed by September 2019. At the time of this report, the project has been given another extension until December 2021.

76. Project structure and HR for a complex multi-country project such as this one could have been more strategic. The project had a Project Coordinator (based in Barbados), supported by a Project Assistant, who managed all the project activities in the 11 countries. The communication person joined the project team only in 2019. It could have helped have at least one more person with project management abilities to support the Project Coordinator. This could have helped better follow-up and monitoring of activities in the countries and the consultants and knowledge management. Additionally, the FAO policy of recruiting project personnel on an 11-

[86] Lack of training, as part of the project, on how to prevent accumulation of obsolete pesticides and not creating a national system and structure (in any of the project countries) to not only prevent accumulation but also for the collection and disposal of obsolete pesticides, has led to this accumulation.

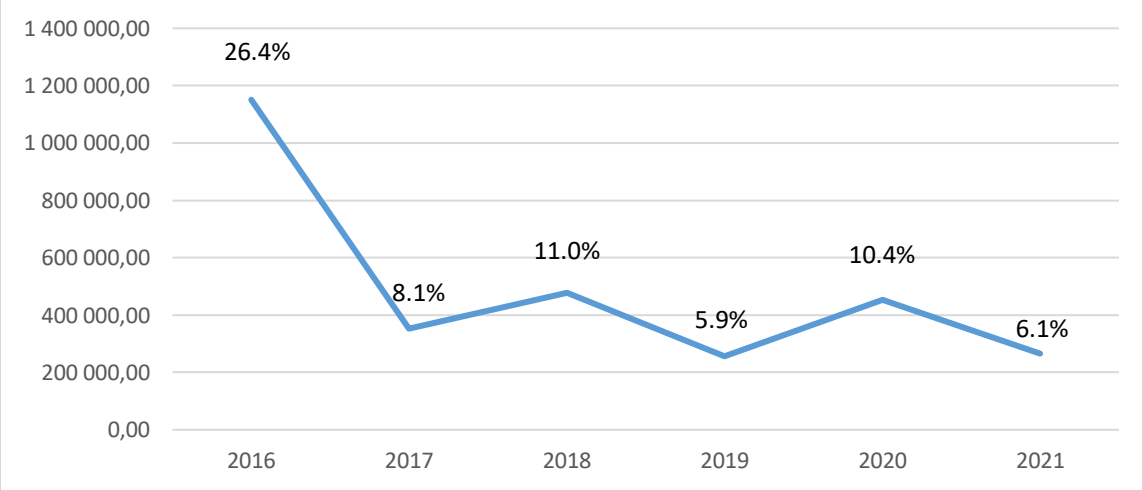
[87] Planned start was November 2015. The project actually started in May 2016, when the Project Coordinator joined.

month contract meant that there was no one dedicated full-time to manage the project or follow-up on activities during the contract break of the Project Coordinator.

77. The budget was noted to be adequate by all stakeholders to carry out project activities; however, the utilization has been an issue (Figure 5 and 6). The project is coming to an end in June 2021, but the project has utilized only USD 2 956 822 (67.9 percent of the budget) as of mid-June 2021. The project still has activities going on, including the disposal of PCBs (part of Component 1) and has another USD 553 456 in commitments (12.7 percent of the budget) as of mid-June 2021.[88] The project still has USD 847 222 (19.4 percent of the budget) as a balance but has no concrete plan for utilizing it (even though it is being discussed). Discussions with the project team highlighted USD 225 810 saving (part of the unspent balance) is because of the travel restrictions and not having face-to-face meetings/workshops due to COVID-19 conditions. In general, project activities were perceived to be conducted cost-effectively, and they also attracted co-financing (refer to discussions in Section 3.5.3).

78. Utilization has been slow during the last three years – 2019 to 2021 (Figure 5). During 2016-2018, the project spent 45.5 percent of the budget[89] (67.0 percent of the expenditure spent as of mid-June 2021); however, only 22.4 percent of the budget has been spent from 2019 till date (33.0 percent of the expenditure as of mid-June 2021). Higher spending in the first year was due to the disposal of obsolete pesticides (Component 1), which constituted 50 percent of the overall project budget.

Figure 5. Budget utilization by year



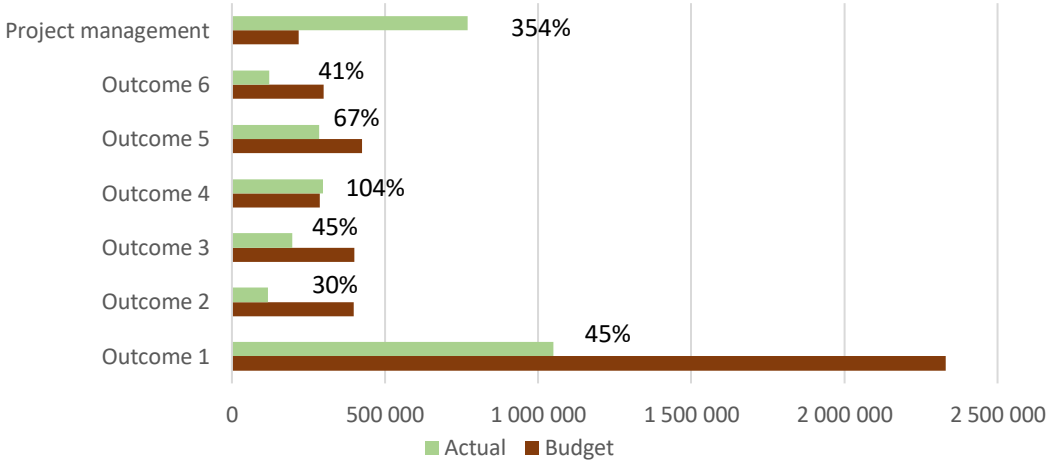
Note: Percentages indicate the proportion of the overall project budget spent in a year
Source: Project data – June 17, 2021 (based on actuals and does not include commitments).

79. Low utilization throughout the project lifetime has been due to the slow pace and non-completion of several project activities by the project end date. Except for Component 4 (regional mechanism and tools), all the other components have spent only 56 percent

[88] As per June 17, 2021 project financial statement.
[89] 26.4 percent (in 2016) + 8.1 percent (in 2017) + 11.0 percent (in 2018).

or less (Figure 6). In Component 4 the utilization has exceeded the budget; however, activities have not been entirely completed.[90] During discussions, it was noted that It is unlikely the project will complete all the activities envisaged in the project (for all components) and utilize the budget left by the end of June 2021. Therefore, the new extension until December 2021 will help to some extent in this regard.

Figure 6. Budget utilization by component



Note: The comparison is made with the original budget as in PRODOC
Source: Project data (as of May 31, 2021).

80. Project extensions increase management and supervision costs, and this has led to a higher proportion (354 percent) of spending in project management, vis-à-vis the budget. For example, the Project Coordinator was budgeted for only 48 months. Additionally, during discussions, it was highlighted that initially, the cost of the Project Coordinator was budgeted at a lower level. It was noted that hiring a communication person did not increase spending, as it was already budgeted.

81. Based on findings, the **rating for efficiency is moderately unsatisfactory.**

3.4 Sustainability

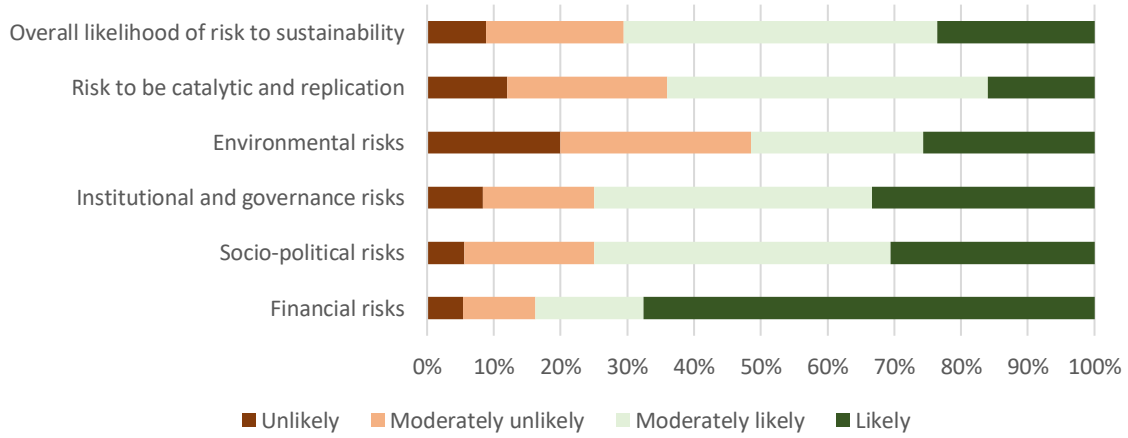
Finding 8. Sustainability is an issue without further support. Systems and mechanisms have not been put in place at the regional and/or country levels to ensure the sustainability of project results. Institutional and governance, political and financial risks will affect sustainability.

[90] For example, model legislation activities are still ongoing, and sustainable document is not finalized, regional pesticide registration mechanism is not in place yet.

82. The PRODOC narrates how results will be sustained.[91] There are several assumptions made in the PRODOC to ensure the sustainability of results. The issues about these assumptions and the sustainability of various Component activities and results are discussed in this section. The MTE highlighted the risk of sustainability of project results.

83. While there is some potential to carry on selected project activities in some countries, overall, sustainability was considered a big issue by all stakeholders. This was also mirrored by survey respondents reflecting on the likelihood of various risks affecting the project results/outcomes sustainability (Figure 7). Overall, 70 percent of the respondents indicated that risks are likely/moderately likely to affect sustainability. Among the risks, financial risks (84 percent indicated some level of likelihood), followed by institutional and governance risks (79 percent) and socio-political risks (75 percent), are more likely to affect sustainability.

Figure 7. Likelihood of potential risks affecting sustainability (n=49)



Source: Survey final evaluation of GCP/SLC/204/GFF.

84. Overall, the project trained 520 participants (313 male and 207 female) through various training sessions and workshops. Many stakeholders indicated that the project helped increase their capacities, and several have put them into practice. However, it was noted that in most trainings, no pre-and post-assessment of knowledge and skill level were conducted, or to what extent their new knowledge and skills had been adopted as a standard practice in their institutions. It was also noted that the KAP surveys conducted were not appropriately designed to measure behavioural and attitudinal changes. During interviews with stakeholders, it was highlighted that the capacity development on remediation of soils was weak and uniform across project countries (as the training was virtual due to COVID-19).

85. Nonetheless, the survey results indicated that 90 percent of the respondent increased knowledge and 80 percent increased skills. The survey also revealed 76 percent of the

[91] Section 5 of PRODOC.

respondents are currently using the knowledge and skills gained, and 89 percent will use them in the future (Annex 3).

86. However, issues persist in terms of enabling environment and resources. Policies and frameworks could be there more at an organizational level to enable using the new capacities than at the country level. More survey respondents indicated enabling policy and frameworks at the organizational level (74 percent) than at the national level (53 percent). At the same time, less than 30 percent of the respondents indicated budget and resources at organizational (28 percent) and national level (21 percent) as a constraint to continue using new capacities.

87. In terms of disposal of obsolete pesticides (Component 1), no system/mechanism has been created in the project countries to inventory/collect periodically and safeguard/store in a central place for disposal (an institutional and governance risk). However, Guyana and Saint Lucia[92] reported creating a system to inventory, collect and store obsolete pesticides. Five other countries reported inventorying the stocks but are not collecting or safeguarding them at a centralized location.[93]

88. The issue of pesticides beyond the expiry date (obsolete pesticides) will likely continue in the countries because the labels are changed at the retail level, or pesticides are pushed down the distribution chain at a discounted price closer to the expiry date. Also, even if there is a policy, it is not enforced (or there is no authority to take action) to restrict imports close to the expiry date. Another issue is illegal trade coming into Guyana and Suriname from neighbouring Latin American countries (Brazil and Venezuela). Additionally, it is likely there are some obsolete pesticides still present in the countries due to commodity organizations and public health entities (for vector control) importing in bulk to save costs, pesticide samples sent to research institutions for testing/research and also earlier donations from international organizations. These socio-political risks affect sustainability in eliminating obsolete pesticides safely in the immediate future.

89. The scaling-up/replication of remediation of contaminated soils (Component 2) is likely to be affected by low capacities in the project countries in identifying/testing and remediation in most project countries, except in Suriname, where the pilot was carried out. While manuals developed on identification and remediation of contaminated sites are expected to be published by the project, the lack of practical experience for project countries during the Suriname pilot was seen as a negative factor in sustainability. Furthermore, the task of continuing the soil remediation process at the contaminated site in Suriname is not evident.[94]

90. Although pilot on pesticide empty container management system (Component 3) was done in only one district in Suriname, there is more interest and traction on this

[92] Most pesticides collected in Saint Lucia are illegal pesticides.
[93] Suriname has identified a central location for storage; however, it does not have authorization to use it store pesticides and chemicals.
[94] As discussed earlier, the activities of Component 2 (remediation of contaminated site) have not been completed yet. It needs to be carried on after the project end-date and this also is not evident.

component in several countries. Suriname is planning to create a national system – but it is not done yet as they are waiting for the pesticide legislation approval and budget allocation. Countries reported that more awareness had been created on triple rinsing since the beginning of the project. Some stakeholders also remarked that, in general, farmers tend to rinse as much as possible to get the last drop of pesticide out of the containers. It was noted that Trinidad and Tobago have 2-tier training in the country (not under the project) in collaboration with MOA for agri-shops (which come under MOH due to licensing) and registered farmer groups. Barbados, Jamaica and Guyana[95] have had an initial meeting (including diverse stakeholders, including the private sector) to discuss the potential to create a system for pesticide container management; however, further discussions and actions have been stalled due to COVID-19. Jamaica intends to fund it through private sector support (corporate social responsibility). Antigua and Barbuda also intended to create a pilot project with a government budget to collect empty containers. Except for this above action in the countries, overall, there is a lack of policy, structure, funding/budget and coordination mechanism at the country level (socio-political and financial risks).

91. For Component 4 (strengthening of the regulatory framework and institutional capacity for sound management of pesticides), sustainability is affected by various aspects to varying degrees.

92. A critical positive and sustainable development has been strengthening CGPC (in its stature) by facilitating CAHFSA to become the secretariat of CGPC. CAHFSA is a technical arm of COTED, which in turn is part of CARICOM. Although CAHFSA is limited in resources, it is still an official regional body and has permanent staff (currently two) with some financial resources (a financial risk). Moreover, CAHFSA can also take matters of CGPC to COTED – CGPC by itself cannot do it, as CARICOM does not officially recognize it (an institutional and governance risk).

93. A positive factor for the regional pesticide legislation has been the ability of the project to get the legislation to be considered in the CARICOM process for approval. It is now awaiting approval at the COTED (in the special COTED meeting to be held in October 2021), after the end date of June 2021.[96] After the approval at COTED, it has to go to the senior official of the Legal Administrative Council of the CARICOM and then to the Legal Affairs Committee (consisting of all Attorney Generals of the member states) before it goes to the member states. While CARICOM is willing to ensure continuity and coordinate the process, it was noted that it would take time – at least a year after COTED approval, which is well beyond the current project completion date (institutional and governance risk). Additionally, discussions with key regional stakeholders indicated that the legislation is likely to happen because CAHFSA is handling CGPC affairs, and therefore it is expected to be pushed. At the same time, follow-up from FAO will be required to ensure that the final objective of getting the

[95] Barbados and Guyana are part of the AGRIVALOR ongoing study to explore options in establishing a pesticide container management system. Dominica is the third country which is part of the study.
[96] Now the new end date is December 2021.

approved regional legislation and sent to the countries is done (which might take one to two years).[97]

94. Discussions revealed that even if the regional legislation is approved at the CARICOM, the adoption at the national level is up to the countries, as it cannot be enforced (socio-political risk).[98] However, the project has taken proactive measures to share the draft model legislation with the countries (while going through the CARICOM approval process). While there is a positive development of Suriname adopting the legislation in June 2020, it is going through the process again, as there was a change of government in July 2020. In all other project countries, the draft legislation is being reviewed at the technical level (e.g., Pesticide Review Committee, Pesticide Control Board or at relevant ministry level). While all countries (at the technical level) realize the need to update at least some aspects of their respective legislation, if not all, no concrete steps have been taken to decide what aspects or get the ministry of legal affairs to review. It was revealed that even if the Minister is in favour of it, it has to be approved by the Cabinet. Changing/updating legislation could take one to two years, and it needs a champion to drive it, which is not clear (socio-political risk). At the same time, regulations could be an option in some countries as it can be done in less than a year, it still needs someone to push it as a priority, and it is not evident yet in the ten project countries. It is also likely decisions on what would be adopted in a country depends on who is in charge of the legislation – agriculture, health or environment (institutional and governance risk).

95. Additionally, to complicate the matter, GEF 5558 project introduced a model bill on chemicals in seven project countries.[99] In some countries, pesticides and toxic chemicals are under one regulatory authority. However, there was no interaction between FAO and BCRC/UNIDO on the respective model bills, and the chemicals bill also includes pesticides. As well, there was no clear strategy on how these seven countries would be supported further in reviewing and considering the two model legislations.

96. In terms of regional pesticide registration mechanism, although a technical working group (TWG) was created that fulfilled its mandate (during 2020), there is no evidence of steps to create a functional regional mechanism. The TWG members were also not aware of future action or their involvement or role. Similarly, no common mechanism for inspection and control of imported pesticides has been created by the project, and hence the issue of sustainability does not arise. During discussions, it was highlighted that the demand for regional registration mechanism from the private sector has existed for more than 20 years. However, the issue of regional versus national sovereignty has been the main hurdle (socio-political risk). Discussions revealed that a regional mechanism is a viable option; however, it is not straightforward, and

[97] It was noted that FAO does not lobby for a legislation but coordinate the approval.

[98] CARICOM is not structured like the European Union. CARICOM can recommend to countries and support but cannot adopt on behalf of any country or enforce.

[99] Antigua and Barbuda, Barbados, Saint Lucia, Suriname, Trinidad and Tobago, Saint Vincent and Grenadines, and Saint Kitts and Nevis in addition to Belize (a non-project country). The model bill did not go through the CARICOM process of approval.

challenges include – a) pesticide use varies from country to country; b) resources (financial and human) allocated to pesticide regulatory bodies varies among countries and c) authority and work of regulatory bodies also vary among counties (institutional/governance risk and financial risk).

97. Regarding sustainable financing, the project has not made any concrete suggestions to the countries to ensure sustainable pesticide life-cycle management (financial risk). Additionally, varying capacities of pesticide regulatory bodies in countries is another factor that will affect sustainable pesticide management. However, during interviews, it was reported that Jamaica, Guyana and Trinidad and Tobago have a sustainable financing model (not linked to the project). Suriname is awaiting the re-approval of the new legislation to introduce sustainable financing.

98. The field tests on alternatives to HHPs (Component 5) are not ready for scaling-up or replication. From the discussions, it was noted that some alternatives tested are not ready for commercialization. While a typical remark by government stakeholders is that there is pushback from industry on reducing HHP, they also acknowledge the lack of demand from farmers on alternatives (socio-political risk). However, discussions with the private sector noted that they are willing to bring alternatives if there is demand. Also, both the government and the research institutions are not able to suggest a substitute (alternative) when requesting the farmers to reduce HHP. Some countries are importing HHPs from countries where they are banned (e.g., Paraquat imported from China is banned for use in China). Some Caribbean countries banned glyphosate, but it was lifted due to political and industry push back. There is also no needs/risk assessment on HHPs by country on how to mitigate (institutional and governance risk).

99. Discussions also indicated that some of the project activities of various components are also tied to the legislation being adopted/updated in many project countries (e.g., having a strong regulatory body with appropriate structure, financing pesticide management, and enforcing action to reduce HHPs). Different activities could be taken up at the ministry's initiative as in Jamaica for pesticide container management.[100]

100. With activities on various components still ongoing, it is challenging to ensure closure and proper handover to the countries and institutions/agencies by the project's end of June 2021. This has also been hindered by the skeletal (not so strategic) project structure. While the terminal workshop has been planned, there is no exit strategy prepared in consultation with stakeholders in regional institutions and project countries.

101. Potential linkages of some project activities with newer projects are being explored - for example, the Islands project and the Soil Care projects.

102. The **rating for sustainability is unlikely**

[100] AGRIVALOR is currently (at the time of this evaluation) working in Dominica, Guyana and Barbados to present options to establish an empty container management system (project activity not completed yet).

3.5 Factors affecting performance

3.5.1 Monitoring & Evaluation (M&E) System

Finding 9. M&E systems were "informal," inadequate and not systematic. The weak M&E system is highlighted by the fact that it was not able to identify, the delay and non-completion of several activities by intended project end and low budget spending throughout the project's life.

M&E Design

103. The PRODOC met the GEF minimum requirement 1 (on the design of the M&E plan) with a fully developed and budgeted M&E plan at CEO endorsement. As mentioned earlier in Section 4.2, the PRODOC had a results matrix with a baseline and an M&E plan. The project also had a provisional work plan (broken down by outputs and its activities for each Component) and a results budget with detailed line items for each Component.[101] The project prepared Annual Work Plans and submitted six-monthly reports[102] and annual Project Implementation Reports (PIRs).

104. However, the evaluation team noted issues with some targets and indicators. For example:

- Output 4.2 is on regionally harmonized pesticide registration mechanism developed and piloted. The three indicators are about registrars trained, registration in PSMS and dossiers evaluated by the working group. From the indicators, it is not clear if a regional mechanism was created through these planned activities.
- Output 4.3 is about a common system for inspection and control of imported pesticides established to prevent illegal trafficking of POPs; however, the indicators were about inspectors scoring higher in the training evaluations and inspectors from various countries exchanging information.
- Output 4.4 is about sustainable financing identified and committed, yet the indicator was about a recommendation for increased budget allocation. It does not indicate if there was a commitment.
- Output 5.3 indicated that the project would promote IPM and support farmers and home gardeners to reduce the use of HHPs. Still, the indicator is about the number of communication tools developed and awareness about IPM. Communication is one thing, and support is another, and the latter is not measured/indicated (e.g., type and level of support provided). Additionally, the baseline for this indicator (little policy support or outreach) had no connection to the end-of-project target (final KAP survey).

[101] Appendix 2 and 3 of the PRODOC.

[102] Two six-monthly reports were submitted in the first year and then subsequently one each year (July – December), as the annual PIR was being prepared (July – June).

105. Although the project had specific environment-related indicators and tracked them, the project design did not have any gender-related indicators (see discussions in Section 4.6). The project collected disaggregated data on participants in various training/workshops and meetings. The project also did not track or have any indicators to measure socio-economic results or contribution to social and economic sectors (e.g., health, drinking water and tourism).

M&E Implementation.

106. The M&E plan was appropriate, but the project results matrix was not updated or adjusted during the project's lifetime. However, some stakeholders mentioned that some activities had to be changed and budget lines modified. While the budget adjustments were approved, there was no indication of efforts to revise the results matrix regarding indicators or targets. Some examples of indicator issues were discussed earlier in M&E design.

107. Examples of either baseline and/or end-of-project target not adjusted despite changes in the scope of activities or what could be feasibly achieved during the project duration (taking into consideration all the risks) include:

- Indicators related to remediation of contaminated sites, the target was three, and it was long known that the project would conduct activities only in one site.

- An indicator of Output 4.2 has an end-of-project target to have 100 percent of national data on registration updated in the PSMS. However, the PSMS ceased to be operational shortly after the start of the project implementation.

- While a final KAP survey was indicated as an end-of-project target, there was no baseline KAP survey.

- Endorsement and adoption of legislation take time, and this was ambitious to plan to have results within a project timeframe (in 11 countries). Additionally, there was a delay in the start of activities for this output, and targets were not adjusted accordingly.

- Similarly, creating functional regional mechanisms covering 11 countries was seen as an ambitious target to be achieved within the project's life.

- Again, the indicator and target of a 20 percent reduction in HHPs or deregistering of HHPs could be seen as unrealistic given the advocacy efforts required to convince political and industry stakeholders in the project countries.[103]

[103] This was partly due to lack of resources (see paragraph 106) and partly to due to the lack understanding of the value and need of M&E and its role in adaptive management.

108. The project had a budget for Project Steering Committee (PSC) meetings and two evaluations (mid-term and final), but no budget was allocated for monitoring activities (under Component 6). The project had six PSCs. An additional person to support project management, follow-up/monitoring of activities and consultant deliverables would have helped, given the slow implementation throughout the project.[104]

109. For monitoring, the project was dependant on the Field Project and Monitoring Officers, who managed a portfolio of projects in SLC and FAO's FPMIS which largely tracked budget utilization and not progress on project results. It was noted that the Project Coordinator got access to FPMIS only in 2019. Even with access to FPMIS, the project team was not able to note and take action of low budget spending. From various discussions, it could be seen that monitoring was more "informal" and not systematic at the project team level. This has been highlighted by the low budget utilization and slow pace in the completion of activities.

110. The evaluation team noted that the project made some adjustments based on MTE (e.g., recruiting a communication person to the project team and a consultant/translator to support NPC and project activities in the Dominican Republic). At the same time, no actions were taken on three other recommendations of MTE.[105] The inadequacy of monitoring and its inability to inform project adjustments during implementation is highlighted because the project still needs time to complete its ongoing activities. There is still approximately USD 0.80 million balance with no commitment no concrete/confirmed plan to use.

Quality of M&E Implementation.

111. The Budget Holder, LTO (at SLC and HQ), and Funding Liaison Officer (FLO) all joined the project after the project was designed. The LTO (at SLC) was the only person in the Project Task Force project inception. The project received appropriate technical inputs as required from the LTO. The LTO and the Budget Holder also reviewed and provided inputs to the technical reports produced by consultants and contracted organizations. LTO, Budget Holder and FLO reviewed PIRs and six-monthly reports before being sent to GEF. Nevertheless, it was noted that there is a need to improve the rigour of review on PIRs.

112. The monitoring of the risks identified in the PRODOC was carried out through the PIRs and six-monthly reports. The risk rating was updated based on the situations presented in the reporting year and after the mid-term review. Two new risks were identified during project implementation related to insufficient action and support from national pesticide regulatory authorities for project implementation and delays in project implementation associated with the COVID-19 pandemic. The lack of inclusion of a

[104] Even when MTE was conducted which was 6-7 months before the original project end-date (September 2019) only 45 percent of the project budget was spent.

[105] No action was taken on Recommendations 3, 5 and 7 of MTE. It was noted all three recommendations were accepted and no additional finance was required to take action. The evaluation was not able to get a valid reply on why these recommendations were not addressed. Lack of action by the project team led to weak engagement of national stakeholders, overlap of two model legislations, and continued accumulation of obsolete pesticides.

new risk related to threats to human health and the environment due to the accumulation of additional stockpiles of obsolete pesticides in seven countries totalling 116 tons is noted. The inclusion of this risk would have helped to include mitigation actions to avoid re-accumulation, such as training campaigns to the private sector (formulators, retailers, distributors and importers) and farmers. This situation was partially included in the risk "lack of adequate storage for protected stocks." However, this has to be identified as an explicit risk and has not been noted in the 2020-2021 PIR. The risk mentioned above regarding the lack of storage remains an ongoing risk that has materialized due to the accumulation of additional obsolete pesticide stockpiles. Countries do not have specific storage facilities for new accumulations.

113. The project **M&E system** based on M&E design and quality of M&E implementation is **moderately unsatisfactory**.

3.5.2 Quality of Execution

114. It was appropriate that FAO implemented the project, as the region benefitted from FAO's also comparative advantage. FAO is the only UN agency that worked on the entire life-cycle management of pesticides.[106] FAO has a guiding document and mandate on pesticides since the 1980s that other UN agencies recognize. Since 1994, FAO has implemented projects on obsolete pesticides – and therefore brings more experience through various projects.

115. FAO was both the executing agency and the implementing agency for the GCP/SLC/204/GFF project (funded under GEF 5). However, the PRODOC mentions CGPC as the executing partner. During discussions, it was noted that CGPC had a limited role as an executing partner of the project. CGPC is made up of technical staff that do not have influence in decision-making at the national level. Also, CGPC does not have formal authority to enforce decisions made.

116. FAO was responsible for the appropriate use of funds, procurement and contracting for the project. There was an adequate separation between FAO's execution and implementing functions. Procurement of goods/services and recruitment of consultants were handled through SLC/HQ FAO processes.

117. The Project Coordinator technically reported to the LTO and administratively to the Budget Holder. The communication and collaboration with FAO staff in SLC were considered good and supportive. The project team's interactions with the four FAO Country Offices, if any, were primarily limited to the FAORs.

118. Component 1 was also coordinated from the HQ to identify and contract contractors for the shipment of obsolete pesticides and PCBs. External stakeholders appreciated the quality of implementation; however, there were delays in completing project activities due to internal and external factors. Some of the project activities which are still ongoing may require time beyond the project end date. As discussed, earlier

[106] WHO looks at health related aspects of pesticides and UNEP looks at environmental aspects.

budget utilization has been slow/low and corrective actions could have been taken earlier (as at the time of the evaluation, the project still had 19.4 percent of the GEF allocation unspent and not committed).

119. Procurement process delays affected the implementation of the project (e.g., tender to contracting of Polyeco SA took ten months, and changing the LOA of AGRIVLAOR to a contract took about a year). Results-based planning is evident to a large extent; however, there is scope to improve the results-focus in implementation beyond activity completion.

120. Although the project spent 346 percent on project management (refer to Figure 6), the project could have had more people. Based on MTE recommendation, a national consultant was hired in the Dominican Republic, who also doubled as a translator when the project team met. This proved advantageous and efficient, as the NPC was not proficient in English, and the project team could not communicate in Spanish. Also, the hierarchical level of NPC in the Dominican Republic meant the person neither had the authority to communicate with other ministries directly nor had direct access to influence decision-makers.

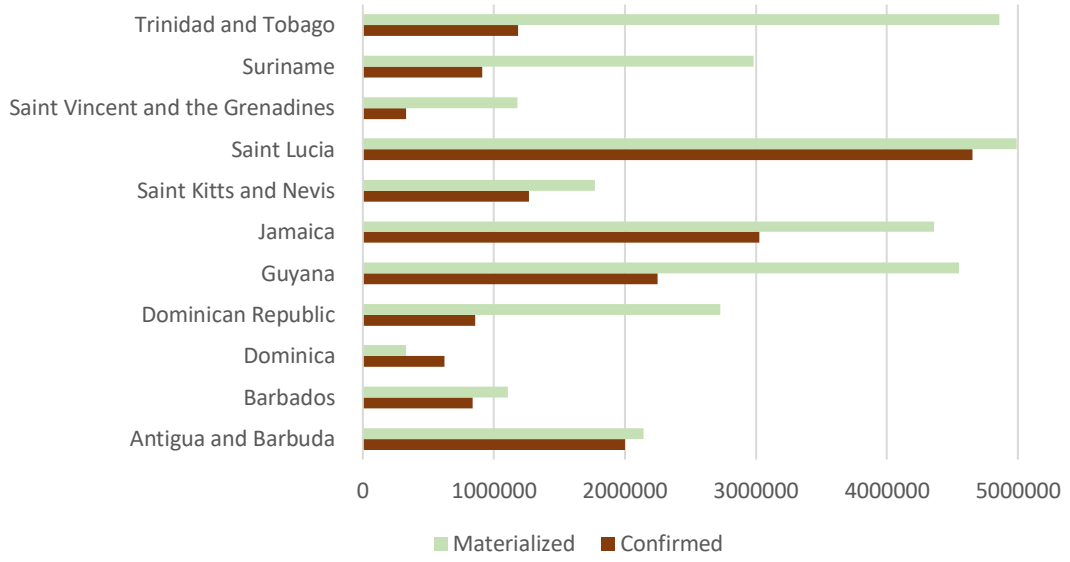
3.5.3 Financial management and mobilization of expected co-financing

Finding 10. Overall, the project was successful in the mobilization of co-financing. This was largely due to Governments exceeding their confirmed amounts. However, regional/international institutions failed to meet their commitments.

121. As of June 2021, the project reported co-financing materialized as USD 37.63 million (against the confirmed co-financing of USD 26.37 million in the PRODOC). Although MTE envisaged uncertainty in materialization, the project did well and overall, the materialization was 143 percent (as of June 2021), compared to 44 percent materialized in June 2018.

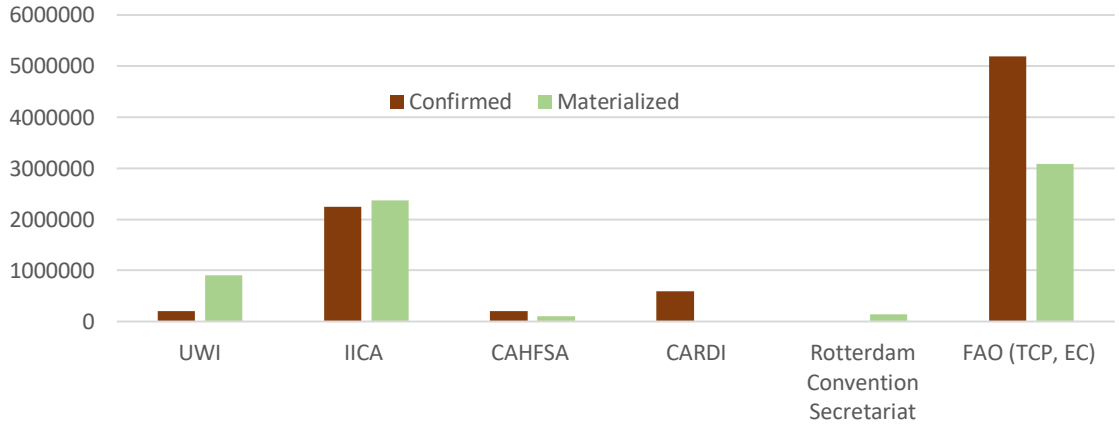
122. Except for Dominica (54 percent), all the countries exceeded the confirmed co-financing amount. At the same time, while UWI and IICA met their confirmed co-financing targets, FAO and CARDI did not (Figure 8 and Appendix 3). While the co-financing materialized from Governments was 173 percent, it was only 79 percent for the regional institutions and international organizations. Also, co-financing was materialized from Rotterdam Convention Secretariat and PAN-UK (a non-governmental organization), which were not initially envisaged in the PRODOC. On the other hand, co-financing confirmed from CARDI did not materialize (Figure 9).

Figure 8. Co-financing confirmed versus materialized - Government



Source: PIR 2020-2021 draft (refer to Appendix 3 for details).

Figure 9. Co-financing confirmed versus materialized – Regional Institutions and International Organizations



Source: PIR 2020-2021 draft (refer to Appendix 3 for details)

123. During discussions with stakeholders, it was reported that initially, there were some challenges and lack of understanding in reporting co-financing; however, during 2017 guidelines for reporting given by the project to countries and a webinar done during the Project Steering Committee (PSC) meeting in June 2018 helped the reporting. As well, a decision at COTED during its October 2018 meeting, at the request of CGPC, also facilitated materialization of co-financing – "*COTED agreed that Ministers of Agriculture and Health of the participating countries, where possible, should support the*

priorities and objectives of the project and provide co-finance (in-kind), as needed, for submission to GEF and facilitate continued project implementation."

124. In-kind contributions reported for co-financing included personnel time, use of facilities, transportation/logistics, and national level sub-committee meetings related to project activities. The partners administered Co-financing. The co-financing materialized was in-kind for all (government and organizations/institutions) except for FAO, IICA, and Rotterdam Convention, which consisted of in-kind and grant.

125. Finalization management and mobilization of **co-financing** were found to be **satisfactory.**

3.5.4 Project partnerships and stakeholder engagement (including the degree of ownership of project results by stakeholders)

Finding 11. Stakeholder engagement was very good at the regional level but could have been better at the national level (including the private and farmers/community organizations).

126. The project brought together stakeholders at the regional level. The engagement of stakeholders through CGPC meant that CGPC evolved from being an information-sharing organization to a hub with diverse project activities. Also, the project was able to garner interest in COTED and CARICOM to get the model pesticide legislation through the CARICOM approval process.

127. The project has effectively strengthened CGPC by ensuring it has a regional body, CAHFSA (a technical arm of COTED), as the secretariat. CAHFSA became the secretariat for CGPC in 2019 (an unintended positive result). This enabled CGPC to have better regional linkages and status. The project has been able to present and get consensus in CGPC meetings, bringing diverse stakeholders from all project countries, including the regulatory bodies. The project has been able to get the model legislation to go through the CARICOM process to give it more legitimacy. Instead of creating a separate structure or mechanism, the project worked through and with existing institutional arrangements (e.g., the pesticide control boards) in the countries, enhancing collaboration.

128. On the other hand, the intended collaboration with CARDI fell through due to a change of top-level personnel and also because the project team and CARDI were not able to agree on financial aspects to carry out the activities. As a result, CARDI was not part of the implementation of project activities, although its representatives participated in few events and/or provided information when requested. Overall, it was a missed opportunity for the project, as CARDI is the agricultural research arm of CARICOM and

is always invited to COTED meetings.[107] The partnership with UWI proved to be successful.

129. The PRODOC envisaged the collaboration with BCRC/UNIDO project GEF 5558 for the disposal of PCBs.[108] However, there was a lack of direct communication between the project team and the BCRC team in Trinidad and Tobago. The BCRC team's linkage to the project team was through FAO HQ or the company (POYECO) working on PCBs disposal in the four countries.[109] The GEF 5558 developed a model chemicals bill. There was no interaction between the FAO/project team and the BCRC team on the ground about their respective model legislations. They also did not share the model bills. As informed during interviews, both BCRC and the FAO project team got a copy of each other's model legislation through counterparts in the country.[110]

130. However, at the country level, stakeholder engagement could have been better. In some countries, the interest waned after the obsolete pesticide disposal activity was completed (e.g., the Dominican Republic). The NPCs were part of PCB. However, The NPCs did not use the existing structure to regularly report on the progress of the report or to coordinate actions among different ministries and sectors. It must be noted the connections (with the countries) were through the NPCs, and the level of engagement depended on the interest, time and commitment of NPCs. Additionally, engagement at the national level was primarily with technical stakeholders and not with policy-makers.

131. Nevertheless, the project was presented to policy-makers and decision-makers at COTED/CARICOM meetings at the regional level. Besides the disposal of obsolete pesticides that enabled diverse stakeholder involvement and engagement at the national level, most project activities were in only one or two countries. Some countries felt less engaged (after Component 1 activities). Overall, the project activities, as relevant, were appreciated by governments and well received by the project countries.

132. The engagement of farmers and farmer groups could have been better. For example, the planned engagement with the Caribbean Farmers Network did not materialize as the organization was dissolved. The evaluation team did not note any direct engagement of community-based organizations. The potential for engaging the agricultural extension services in each country to support/educate farmers was not tapped. Nonetheless, a few farmers were involved in the pilot on pesticide containers in one district in Suriname and also during the field trials on alternatives to HHPs in Jamaica and Trinidad and Tobago.

133. The private sector representatives participated in some events. The project's private sector engagement largely came through CGPC. However, in some project countries

[107] CARDI is an autonomous regional body with diplomatic status and gets its core budget from CARICOM. CARDI has offices in all CARICOM countries.
[108] Also, MTE Recommendation 5.
[109] The project team only interacted directly with POLYECO and the NPCs in the countries, while BCRC interacted with FAO HQ about contracting of the company.
[110] It was noted that the model chemical legislation was completed before the model pesticide legislation.

(e.g., Barbados, Guyana, and Jamaica), diverse stakeholders (including private sector actors and CSOs) met to discuss the potential to dispose of empty containers;[111] however, further activities have been put on hold due to COVID-19 restrictions. In addition, it was noted there were no FAO guidelines for the project team on engaging with the private sector.

134. Partnerships and **stakeholder engagement** were **found to be moderately satisfactory.**

3.5.5 Knowledge management, communication and public awareness

Finding 12. Communication improved after the recruitment of a communication person. However, several knowledge products are yet to be finalized for dissemination. The project could have done better to increase visibility and communication.

135. The project's knowledge management approach was through sharing existing FAO products/tools (e.g., FAO Pesticides Tool Kit) sharing draft knowledge products (reports, manuals including model draft legislation) by external organizations/consultants and the UWI that worked on project activities.

136. The project developed a draft communication strategy in the latter half of 2019[112] which led to more focused efforts to improve communication. The communication person joined the team in February 2020 and helped finalize the communication strategy. The newsletter was a positive aspect of the project to inform on the project's progress in a user-friendly way, which was made more attractive with testimonials from women leaders and links to other communication materials. Discussions during this evaluation with various stakeholders indicated appreciation for the informative newsletter; however, it was noted that there had been no strategy to distribute it as some stakeholders were not aware of it, and others mentioned that they did not distribute it further and stated that it was a weakness on their part.

137. Key highlights of communication aspects included:

- Four newsletters produced (each one emailed to 200+ stakeholders) with a total of 2000+ downloads from the ISSUU website;
- Social media presence (50 Tweets FAO SLC has 881 followers and FAO Dominican Republic 3 926 and with a Flickr and YouTube channel)
- Print and digital material produced on triple rinse and translated – 3;
- Print and digital material produced on PPE – 4;
- Videos produced on project activities/components – 4; and
- Press releases made – 10.

[111] Engagement in the countries depended on the interest and initiative of NPCs.
[112] This was drafted by gender consultant hired short-term after the MTE.

138. Regarding the communication material on triple rinsing, its content is clear, and it has been distributed to all participating countries. It has been widely disseminated in events such as the Barbados Agrofest 2019 and the Pesticide Awareness Week. However, the effectiveness of this material is uncertain due to the lack of a communication strategy and campaign. According to interviews and document review, various communication efforts in different intensities have been used over the past 10 years to encourage farmers to triple rinse pesticide containers in participating countries. In addition, the FAO project GCP/INT/063/EC- "Clean-up of obsolete pesticides, Pesticides Management and Sustainable Pest Management" developed and distributed communication material on triple rinse. Under this scenario, it was necessary to carry out a diagnosis on the level of knowledge and adoption of this technique by farmers and to identify the gaps and design a communication campaign to fill them and strengthen previous efforts. On the other hand, no communication tools have been elaborated to promote previous IPM efforts to reduce the use of HHPs, although this was required by Component 5.

139. Most stakeholders, during discussions, indicated that communications and visibility could have been better. This was also reflected in the survey responses - about 50 percent of respondents indicating that the communication and visibility of the project have not been adequate (as against only 35 percent that it was sufficient). FAORs and FAO staff in the countries, where applicable, and GEF focal points could have been better informed on the project activities periodically.

140. Furthermore, shared results of field trials and pilot activities through workshops (e.g., remediation of contaminated sites and field trials on alternatives) were well attended (520 participants – 60.2 percent men and 39.8 percent women in 25 workshops).

141. During discussions with external stakeholders (even at the national level), many of them have not seen final products or reports. Interviews with the project team noted that there is still a lot of work on various knowledge products, including finalizing/making the technical reports user appropriate, finalizing the manuals, upgrading the reports to make them informative for decision-making, translation of various finalized knowledge products.

142. Before the end of the project, it is critical to make the various knowledge products available not only on the FAO website and repository but also on other partner websites, including partner websites (e.g., CAHFSA, CARDI, relevant ministries in the project countries, etc.). However, as noted earlier, the project is not yet ready to publish in print and on websites. It also has to go through the FAO process for publication. Overall, the project's knowledge management approach could have been more strategic and systematic (staggered during the project's life instead of finalizing everything at the end of the project).

143. Knowledge management and communication were found to **be moderately unsatisfactory.**

3.6 Gender

Finding 13. Attention to gender aspects and perspectives improved in the last two years of the project. However, overall, the gender consideration could have been better taken into account in project design and implementation.

144. The PRODOC did not consider the inclusion of gender aspects in project design and implementation.[113] Both internal and external stakeholders agreed that gender aspects were not given any serious consideration at the time of the project design. It was highlighted that FAO Gender Policy came in 2012, and structures were put in place to ensure gender mainstreaming only in 2014. Also, the International Code of Conduct on Pesticides by FAO and WHO, which highlights reduction of risk in countries with a focus on vulnerable groups such as pregnant and nursing women, came only in 2014. However, until pointed out by MTE in 2019, the project had not made any conscious efforts to include gender perspectives in its implementation or gender-appropriate language in its knowledge and communication products. It was noted that the project collected disaggregated data on participants in its activities such as in training, workshops and meetings.

145. Since the MTE, the project has made a more focused effort to ensure gender aspects are being addressed/incorporated to the extent feasible. The project hired a communication consultant with gender expertise, and this has helped the project to improve the language in the project documents/products. The newsletters had focused attention on gender with testimonials from women leaders.[114] The more recent work carried out by PAN-UK and AGRIVALOR ensured that gender perspectives and aspects were covered. It was also noted that gender perspectives were incorporated in drafting the legislation, and inputs from the FAO gender person were considered.

146. The project team included one male and two women. Five of the eleven NPCs were women. The LTOs, in SLC and FAO Rome, for the project were also women. Several consultants who conducted various studies were women. More than 50 percent of the stakeholders interviewed at regional and national stakeholders and survey respondents at the national level were women.

147. Overall, after improvements were made, the FAO gender marker applicable for the project was noted as G1 – the project addresses gender equality only in some cases.

148. The incorporation of **gender** aspects **was** considered **moderately unsatisfactory**.

[113] Key FAO stakeholders emphasized that incorporating gender was not mandatory at the time project design; however, it highlighted the neglect of gender aspects during the project design, and inception phase and the lack of understanding/importance of the key role of women play in farming and farm activities/pesticide value chain in the Caribbean.

[114] The newsletter also included articles and links to information on gender. The 12th Virtual Meeting of the CGPC in December in 2019 included a presentation on gender in pesticides management, presented by the Gender Officer from FAO Regional Office, Chile.

3.7 Other sections based on the main evaluation questions/areas of analysis

Minority groups, including indigenous peoples, disadvantaged, vulnerable and people with disabilities, and youth

149. One contaminated site was found in Suriname, located near an indigenous community. However, it was noted that the site was not selected because of remoteness and access issues due to COVID-19 restrictions. In Dominica, a site was located for a pilot study on pesticide container management network in the Kalinago Territory Reserve (home to indigenous Kainago population). The extension service of MOA consulted the leaders to request permission to undertake the study. However, no activity has been carried out due to the COVID-19 situation.

150. While there is no evidence of project work targeting or involving people with disabilities, it was noted during discussions, few young researchers and students were involved in the field trials conducted on alternatives to HHP.

Environmental and Social Safeguards (ESS) risk classification and risk-mitigation provisions identified at the project's formulation stage

Finding 14. No risks foreseen in the Environmental and Social Management Plan have materialized because the proposed mitigation measures have been effectively implemented. According to PIR 2019-2020, the project risk classification as category B is still valid.

151. According to the Environmental Impact Assessment -Guidelines for FAO field projects, the Project was classified as Category B, which means that the Project should not entail significant (or potentially irreversible) negative environmental (and associated social) impacts, but may still have adverse effects which can be mitigated with suitable preventive actions. In response to this classification, an environmental analysis of the potential effects was carried out, and the Environmental and Social Management Plan (ESMP) was elaborated.

152. The ESMP identified the risks and impacts of each component, finding the main impacts in Components 1 and 2. The main impacts of Component 1 could occur during the removal of obsolete stockpiles, which implied the disruption of existing environmental balances and entailed potential risks to both the workers who would handle these chemicals and the environment. Therefore, the ESMP proposed as a mitigation measure the use of the FAO Environmental Management Toolkit (EMTK) guidelines on inventory, safeguarding, transport, storage, packaging, export and destruction to avoid, in particular, the spillage of obsolete pesticides during repackaging and exposure of workers, as well as to prevent any traffic accidents during the transport of obsolete pesticides. Thus, these guidelines were applied during the management of obsolete pesticide stockpiles in the eleven participating countries. In particular, Environmental Assessments (EA) and Environmental Management Plans

(EMP) were prepared in accordance with the EMTK guidelines for all participating countries. The EMPs were implemented by the international contractor responsible for disposing of obsolete stockpiles and the national authorities involved in the phase-out. According to interviews with National Project Coordinators, government stakeholders in some countries and the international contractor, no incidents occurred during removing obsolete stockpiles. Currently, the collection and repackaging of PCB stockpiles are ongoing, and so far, no incidents have been recorded.

153. For Component 2, the ESPM identified the risk of disturbance of contaminants during the pilot on specific remediation strategies for contaminated soils, which would increase surface contaminant concentrations. Following the implementation of the remediation strategies at the Suriname pilot site, an increase in Endrin, Endrin-Ketone and Dieldrin levels was identified mainly in month eight for some samples. However, considering the low level of contamination and the multiple variables that can affect the measured concentration of pollutants in the soil (i.e., biochemical processes inherent to the degradation of the contaminants and also sample handling, transport conditions, variability because different people may take the samples, etc.), it is not possible to state that this risk has materialized. Furthermore, the site is cordoned off to prevent access by outsiders. However, the proximity of the groundwater to the contaminated soil should trigger the analysis to determine whether this groundwater is a potential source of contamination for the community.

154. Another potential unintended negative effect identified in the ESMP is the increase in illegal pesticide use due to project activities aimed at reducing the availability of the most hazardous and problematic pesticides (Component 4). As mentioned in the Chapter on Effectiveness, the Project did not achieve the goal of promoting the deregistration of hazardous products or reducing the number of registered HHPs.

155. The Environmental and Social Risk classification status has only been reported in the PIR 2019-2020, which states that the project risk classification as category B is still valid, which is explained considering that mitigation measures have been implemented.

4. Conclusions and recommendations

4.1 Conclusions

Conclusion 1. Overall, the project kick-started various activities covering pesticide life-cycle management in the region and has facilitated various key elements to move forward. Nevertheless, it is at a very early stage, and a lot of continued support is required through one or more projects to continue/strengthen various project components.

156. The project was the first of its kind in the region, encompassing various aspects of pesticide lifecycle management. Several regional institutions and national governments have been exposed to and have learned about several aspects. However, continued support and hand-holding would be required to build on this initial work and complete project activities as envisaged in the Project Document.

Conclusion 2. The project and its components/activities were relevant to priorities/plans and strategies at various levels and organizations/institutions. However, the project results matrix could have been better adjusted/adapted to reality and changed contexts during the project's life.

157. The project was designed four years before its start, and the project was implemented for six years. Context and focus changed over the period. Therefore, it was important to adapt and adjust the project activities to achieve the intended results (outcomes and outputs), but this was not done, which affected the achievement of results.

Conclusion 3. Disposal of obsolete pesticides was a key activity of the project, and all project countries were directly involved and benefitted from it. However, in all other project component activities, most countries were only informed (shared document) and/or invited to participate in workshops (partially affected by COVID-19 restrictions and insufficient capacity in some countries).

158. Additionally, regionalism versus national sovereignty could affect the creation of effective regional mechanisms (e.g., regional pesticide registration mechanism).

Conclusion 4. The slow pace and non-completion of activities have hindered the project in achieving intended objectives and outcomes

159. The disposal of obsolete pesticides was the highlight achievement of the project; however, all components have ongoing activities that are not completed yet, which affected the assessment of effectiveness. Also, there is a potential overlap between model pesticide legislation (GEF 5407) and chemical legislation (GEF 5558) in some countries.[115]

Conclusion 5. The project structure was not strategically and appropriately envisioned and therefore not staffed adequately to implement a complex project covering 11

[115] In some project countries, pesticides and chemicals are under one Act. Also, some of the project countries have both model legislations (the one from BCRC on chemicals and the one from this FAO-GEF project on pesticides).

countries. This affected project management, monitoring, timely completion of activities, knowledge products, communication and budget utilization.

160. It was ambitious to expect a two-person team (Project Coordinator and a Project Assistant to manage a complex project with six components, 14 outputs, and multiple activities covering 11 project countries. This was reflected in the delay in completion of activities and about 20 percent of funding unspent. It also affected various aspects of the project, such as monitoring and communication.

Conclusion 6. Sustainability is an issue in terms of continuity of activities/benefits of the project (including scaling up or replication) with financial, institutional and governance, social-political and environmental risks likely to affect the project.

161. With activities on several components still ongoing, and with neither essential systems, structures and mechanisms nor exit strategies in place at the regional or national levels to address sustainability concerns of project results and benefits. Legislation approval at the regional level and subsequent adoption of selected or all aspects of the legislation at the national level will be critical for the sustainability of several elements in the lifecycle management of pesticides at the national and regional level (including sustainable financing mechanisms).

Conclusion 7. Stakeholder engagement was good at the regional level but less successful as it went down to national and sub-national/community levels.

162. At the national level, the project depended on the NPC's time and commitment. The hierarchy (level) of the NPC also determined the ability to interact formally/engage with stakeholders in other ministries and with decision-makers within the country. Private sector engagement was primarily at the CGPC level and was not involved as required at the ground level.

Conclusion 8. Although the incorporation of gender aspects improved after MTE, in general, gender mainstreaming was limited and weak.

163. The recruitment of a communication person with gender expertise helped with the review of documents for gender language and improved the focus on gender perspectives in various project activities and communications (e.g., surveys and newsletters).

Conclusion 9. The project was successful in the materialization of co-financing (143 percent of the initial commitment).

164. The perceived relevance of project activities, guidance from the project on co-financing and encouragement from COTED facilitated co-financing from Governments. Co-financing from Governments exceeded confirmed amounts. However, this was all in-kind, and there was no cash co-financing from the participating Governments.

Conclusion 9. Knowledge management and communication were not systematic, and these have largely been done towards the end of the project.

165. Several knowledge products are still a work-in-progress and/or at the draft stage. Some of the technical reports also need to be made user-friendly by the appropriate audience in the field. In addition, the lack of a dedicated communication person in the project team until 2019 affected communication and visibility.

4.2 Recommendations

Recommendation 1. To FAO and GEF: Get/grant no-cost extension for six to nine months to ensure completion of ongoing/pending activities and prepare a sustainable financing strategy/plan to which the project countries should commit.

166. The project still has ongoing activities such as the disposal of PCBs, remediation of contaminated soils, and work on pesticide container management. The additional time could also be used to finalize and translate several knowledge products and publish them. The time should also be used to collaboratively prepare a sustainable financing strategy/plan with each regional institution and project country. No new activity (not planned originally) should be taken up.

Timeframe: In the next six to nine months, starting immediately.

Recommendation 2. To GEF project formulators and FAO: In project design and implementation of regional projects in the Caribbean, differences in contextual realities and capacities/resources among larger islands, land-based countries and smaller islands should be taken into account in the project strategy to ensure no country is left behind.

167. Plan and implement pilot and training activities in countries with lower capacities or select countries in each category. Also, facilitate the involvement of large islands/project countries to share their experience and information to ensure fluent exchange of knowledge. Also, spread project activities among various countries, instead of focusing on two or three countries, when there are 11 project countries.

168. Use existing national structures (e.g., pesticide control boards, committees, etc.) to engage, inform national stakeholders, and enable collaborations. Identify and communicate clearly the benefits from the regional project for each country. Regional project design/implementation should ensure the engagement of diverse national stakeholders in (beyond participating in events) and not only NPCs.

Timeframe: All future project designs

Recommendation 3. To FAO – Prepare a sustainability and exit strategy for each regional/national institution and each project country collaboratively, and include the following:

169. State the role of FAO in supporting/facilitating through TCPs, and/or linkages with GEF, and other projects to continue/strengthen activities on one or more components of the project, in the future (for at least the next four to five years);

170. Define FAO's role to be played in continuing activities on regional mechanisms, regional legislation etc., and

171. Detail a feasible system/mechanisms or structures (with roles and responsibilities identified) required at the country level to inventory/collect and store obsolete pesticide in a central location, prevent accumulation of obsolete pesticides, collection and disposal of pesticide empty container management, sustainable financing, increased use of alternatives to HHPs, and adoption of legislation at the national level.

Timeframe: In the next six to nine months, starting immediately.

Recommendation 4. To FAO: Projects should revisit the project results matrix (initially prepared at project design) and revise them periodically (e.g., at inception and or during MTE) as required/relevant and report accordingly.

172. There is a lead time of two to four years to develop the GEF proposal, get approval from GEF and start implementation.[116] During this period, context, priorities, and governments might have changed. Additionally, the projects take four to five years to implement. Therefore, it is appropriate to revisit and tweak the results matrix (e.g., during the inception phase or after MTE) to ensure meaningful and efficient implementation and M&E. PIR reporting should be realistic and aligned to the activities and indicators including the revised one.

Timeframe: All future projects

Recommendation 5 to FAO: Follow-up on the approval of the pesticide legislation.

173. FAO must follow up directly with CARICOM and through COTED and CAHFSA to facilitate that the regional model pesticide legislation goes through the approval process and the approved legislation is sent to member states. FAO can work through CAHFSA to encourage project countries to adapt/adopt the model legislation on pesticides at the country level and avoid any overlap with model regulation on chemicals[117] that is being reviewed by some project countries.

Timeframe: In the next six to nine months.

Recommendation 6 to FAO: Explore the possibility to create sub-regional mechanisms for pesticide registration and/or common inspection and control of imported pesticides, as feasible, before scaling up at the regional level.

174. With regional versus national sovereignty and countries following diverse systems (British, Spanish and Dutch), it may be easier to create a sub-regional mechanism for similar profile countries. For example, the nine OECS countries are similar smaller islands, English speaking and constrained by resources, capacities and structure.

[116] It was informed that in GEF 7, the lead time was only 15 to 18 months from PIF to PRODOC to inception and is likely to be the same in GEF 8.

[117] Model legislation on chemicals drafted by GEF 5558 does not exclude pesticides and thus it creates an overlap.

Timeframe: In the next 1 to 3 years.

Recommendation 7 to FAO and GEF: Support countries to establish a sustainable national mechanism for collection and disposal of obsolete pesticides and empty pesticide containers management.

175. Through future projects, FAO should train countries in preventing the accumulation of obsolete pesticides and create a national mechanism for collection and disposal.[118] For empty pesticide container management, FAO should facilitate establishing a national mechanism involving the environment, health, and agriculture ministries.

Timeframe: In the next 1 to 3 years.

Recommendation 8. to FAO and GEF - Private sector engagement should be a priority, specifically in the empty pesticide container management and promote alternatives to HHPs.

176. Have a clear engagement strategy and involve the private sector from project design and/or inception, as feasible. The private sector would bring unique skill sets/perspectives and add value, including co-financing.

Timeframe: All similar future projects.

[118] In the current project the training was only about managing existing stockpiles of obsolete pesticides.

5. Lessons learned

177. An appropriate project structure is essential for effective and efficient project management, follow-up, communication and monitoring. Lack of it affected project implementation, M&E and adaptive management.

178. It is important for countries to accurately inventory obsolete pesticides and related hazardous waste to avoid stockpiles remaining in their countries due to the contractors for disposal can only take the quantity of stockpiles agreed upon in its contract. It will also help to ensure that the contractors can be adequately informed to mobilize required equipment for safeguarding, repacking and export the hazardous material to disposal facilities after obtaining necessary permits. It will avoid delays due to the time required to get revised/additional permits due to rerouting shipments.

179. Training countries only in the disposal of existing stockpiles and not training them in preventing future accumulation, and disposal of obsolete pesticide and not creating national systems and structures for safe storage and disposal of obsolete pesticides has led to accumulation in many countries.

180. At the country level, without the Involvement of agricultural extension services and the private sector, promoting the use of alternatives to HHP at the farm level and establishment of a sustainable empty container management system (including educating farmers on triple rinsing of containers) is not feasible.

181. Good understanding of the processes and political nuances in creating regional mechanisms (e.g., regional pesticide registration mechanism, common regional inspection and control of imported pesticides) at the project design/inception phase is critical to assess the feasibility and the reasonable time required to establish a sustainable regional mechanism within the project life.

182. If project activities completed do not lead to planned outputs, intended outcomes cannot be achieved as seen in this project. In addition, without SMART indicators, the project team was not able to monitor progress efficiently.

183. Sharing information and collaboration between the FAO project team and the BCRC team at the ground level could have helped the timely disposal of PCBs without loss of inventories and avoided the development of overlapping model legislations on pesticides and chemicals.

6. Appendices

Appendix 1 – GEF Rating table

Appendix 2 - Rating scheme

Appendix 3 – Co-financing table

Appendix 4 – Results matrix showing achievements and Evaluation Team comments

Appendix 5 – List of people interviewed

Appendix 6 – List of documents consulted

Appendix 7 - List of Annexes

Appendix 1. GEF Evaluation Criteria Rating Table

GEF criteria/sub-criteria	Rating [119]	Summary comments
A. STRATEGIC RELEVANCE		
A1. Overall strategic relevance	S	Overall, strategic relevance was evident from several institutions and stakeholders participating in the project's design. This also ensured that the project actions were aligned to national and regional needs and priorities.
A1.1. Alignment with GEF and FAO strategic priorities	S	The Project components and activities contribute to FAO's Strategic Objective 2 on increasing agricultural production sustainably. The project was also aligned and contributed to implementing GEF 5 – Chemical Strategy (CHEM-1) Outcome 1.4 on POPs sound management and elimination.
A1.2. Relevance to national, regional and global priorities and beneficiary needs	S	The Project was aligned and relevant to national plans and strategies. It was also aligned to regional plans/strategies and global priorities.
A1.3. Complementarity with existing interventions	MU	The Project was complementary and had overlapping activities with GEF 5558 project implemented by BCRC. The Project also included funds to dispose of 100 MT of PCBs from GEF 5558; however, due to various issues (e.g., identification of contractor, contracting process and COVID-19), it was delayed till the end of the project to do the shipping. Additionally, GEF 5558 developed model legislation on chemicals at the same time this project developed the model legislation on pesticides. However, there was no communication/interaction or sharing between the two projects with reference to the development of the model legislation; therefore, there is an overlap between the two models.
B. EFFECTIVENESS		
B1. Overall assessment of project results	MU	The main accomplishment of the Project was the disposal of obsolete pesticides. The PCB disposal was still ongoing during the TE. However, since their removal, obsolete pesticides have been accumulating in the countries due to a lack of long-term systems/mechanisms and structures. All other outcomes remained unachieved or are still at early stages of progress towards outcomes.
B1.1 Delivery of project outputs	MU	Several outputs have not been completed yet and are still ongoing. This is indicated by low budget utilization (only 68 percent).
B1.2 Progress towards outcomes[120] and project objectives	MU	While the disposal of obsolete pesticides contributes to the project objectives, the project made very low progress on other outcomes, which affected the overall project objective.
- Outcome 1	MS	The collection, repackaging and shipment of 319 MT of obsolete pesticides remains the most significant achievement of the project. However, the shipment of 74.1 MT of PCBs has been delayed but is now ongoing.
- Outcome 2	MU	Remediation of one contaminated site was done (pilot activities). However, the project has not been successful in ensuring capacity development and knowledge transfer in all project countries equitably.

[119] See rating scheme in Appendix 2 of the document..

[120] Assessment and ratings by individual outcomes may be undertaken if there is added value.

		The project site has also not been handed over to the national authorities yet. COVID-19 affected some activities.
- Outcome 3	U	Although a pilot was completed in one district in Suriname, none of the project countries have established a national pesticide container management system (including Suriname).
- Outcome 4	U	The model legislation is yet to be approved at CARICOM, although it is in the process. The intended common tools and regional processes/mechanisms, and sustainable financing have not been delivered.
- Outcome 5	MU	The results from the pilot on alternatives to HHP are encouraging; however, some alternatives are not ready for scaling-up, replication or commercialization. Activities are still ongoing.
- Overall rating of progress towards achieving objectives/ outcomes	MU	With several activities still ongoing on various Components, intended outcomes have not been achieved. Also, no mechanism/process has been in place to prevent the new accumulation of POPs in the countries.
B1.3 Likelihood of impact	MU	The Project made a start to promoting the lifecycle management of pesticides in the Caribbean. However, with many project activities still ongoing and several outcomes not achieved, it is too early to envision the likelihood of impact. The project requires further support and encouragement to be able to have a lasting impact.
C. EFFICIENCY		
C1. Efficiency[121]	MU	Timeliness was a significant issue for the project. Many activities were delayed and affected budget utilization. This hindered the Project in achieving its intended outcomes and is reflected in the need for another six to nine months extension until December 2021 (an overall extension of 27 months).
D. SUSTAINABILITY OF PROJECT OUTCOMES		
D1. Overall likelihood of risks to sustainability	U	Overall, sustainability is at risk with project activities still ongoing and no clear exit strategies in place yet. As a result, there is uncertainty in scaling up and replication. Fundamental to many Components and specifically for sustainable financing is the approval and adoption of model legislation in the countries and regionally.
D1.1. Financial risks	U	CGPC is not financially sustainable to take up activities. The model legislation is not approved yet, and no sustainable financing mechanism has been put in place by the Project to ensure lifecycle management of pesticides in the region.
D1.2. Socio-political risks	MU	Regionalism versus sovereignty is a key issue to establish regional mechanisms. Even if CARICOM adopts the model legislation, it cannot be enforced at the country level. Not ensuring the linkage of lifecycle management of pesticides with key socio-economic activities will affect the government prioritization. There are disparities in capacity and resources among the countries (e.g., larger islands vs. smaller islands).
D1.3. Institutional and governance risks	MU	CAHFSA taking over as the Secretariat for CGPC is a positive factor. However, acceptance by technical people in the country does not mean it is acceptable at the country's ministerial or cabinet level. Cooperation/coordination mechanisms among ministries within a country have not been put in place/strengthened by the Project.
D1.4. Environmental risks	ML	Elimination of obsolete pesticides has been carried out. PCBs destruction and remediation of contaminated sites are still ongoing.

[121] Includes cost efficiency and timeliness.

		However, there is an accumulation of obsolete pesticides, including POPs in seven countries. Reduction in HHPs is not evident.
D2. Catalysis and replication	MU	The replication and scaling up of the pilot activities (e.g., remediation of contaminated sites, empty pesticide container management, alternatives to HHPs, regional registration working group) are not evident/systematically planned yet. The model legislation is not approved and has not yet been adopted in any country.
E. FACTORS AFFECTING PERFORMANCE		
E1. Project design and readiness[122]	MS	The Project start was delayed by six months due to the delay in hiring the Project Coordinator. Also, the significant delay between the design phase and the start of the project led to a change of key individuals in key partners/organizations, which impacted readiness (e.g., CARDI) Results matrix design shows some inconsistencies among its elements.
E2. Quality of project implementation	MU	Project oversight has not been effective. The project structure and staffing did not have enough capacity to manage a complex multi-country regional project,
E2.1 Quality of project implementation by FAO (BH, LTO, PTF, etc.)	MU	The Project received technical inputs on project outputs produced by consultants/contractors, which was reviewed by FAO (LTO, BH, PTF). However, the project implementation was affected by the project structure and staffing that did not have enough capacity to manage a complex multi-country regional project. The Project oversight through PIR reviews and field visits has had limitations. The plan to use the unspent budget was not developed until June 2021.
E2.1 Project oversight (PSC, project working group, etc.)	MU	Although the PSC met six times, the Project oversight was not effective. It did not provide critical direction while the project was falling behind on the completion of activities and budget utilization. Neither was there any concrete plan until June 2021 on ways to use the unspent budget.
E3. Quality of project execution For DEX projects: Project Management Unit/BH; For OPIM projects: Executing Agency	MU	The Project was not adequately structured to carry out regional coordination of a multi-component complex project covering 11 countries. Also, the project was not staffed appropriately and adequately, which affected the project management, monitoring, stakeholders' engagement, timely completion of activities, knowledge products, communication and budget utilization.
E4. Financial management and co-financing	S	Overall, the Project exceeded the targeted co-financing amount. This was primarily due to co-financing from Governments far exceeding their respective commitments, although the co-financing from the Government was in-kind. On the other hand, the regional and international institutions fell short of their commitment.
E5. Project partnerships and stakeholder engagement	MS	The Project brought together diverse stakeholders at the regional level. However, partnerships and stakeholder engagement were weak at the national level due to a lack of focused efforts (project activities/mechanisms) to involve stakeholders (besides attendance at events). In addition, there was no detailed stakeholder engagement plan for the project to involve stakeholders at the national level.
E6. Communication, knowledge management and knowledge products	MU	Although communication improved with the hiring of a communication person in 2020, the overall visibility of the Project has still been low. Various project knowledge products have not yet been finalized for publishing and dissemination. Several of the reports are technical in nature and not ready for use by people in the field.

[122] This refers to factors affecting the project's ability to start as expected, such as the presence of sufficient capacity among executing partners at project launch.

E7. Overall quality of M&E	MU	The project monitoring was weak, as evidenced by delays in the completion of activities and low budget utilization throughout the project lifetime. MTE was commissioned only a few months before the original Project end date (September 2019).
E7.1 M&E design	MS	The PRODOC met the GEF requirement of preparing a budgeted M&E plan which includes delivery of reports to FAO & GEF. It also had a provisional work plan by outputs and its activities. However, targets and indicators had issues and were not appropriate for the planned outputs and outcomes.
E7.2 M&E plan implementation (including financial and human resources)	MU	The results matrix was not updated during the Project's lifetime. Under Component 6 there was a budget allocated for M&E, but there was no system or mechanism to systematically follow-up and monitor activities. In addition, the project structure lacked human resources to ensure appropriate and adequate M&E.
E8. Overall assessment of factors affecting performance	MU	The M&E system was weak and inadequate, and partnership and stakeholder engagement at national levels were inadequate. The project lacked visibility and communication, and knowledge management was insufficient and inefficient. However, the Project did well in mobilizing co-financing from Governments.
F. CROSS-CUTTING CONCERNS		
F1. Gender and other equity dimensions	MU	Gender and other equity issues were not part of the project design/PRODOC. Although attention to gender aspects in the last 18 months improved, overall, it was limited.
F2. Human rights issues/Indigenous Peoples	UA	Specific attention to human rights and indigenous issues was not evident in the project design and implementation.
F2. Environmental and social safeguards	S	The Project ensured adequate safeguarding as a key priority in safeguarding contaminated sites and storing and disposing of POPs. No reports on incidents affecting the environment and people's health have been reported due to project activities.
Overall project rating	**MU**	**The Project has not achieved the intended results (outcomes and outputs) despite having an adequate budget. It also did not consider addressing various factors affecting performance, including weak M&E and national stakeholder engagement. The sustainability of project results is at high risk on various counts. In addition, the project was complex, with multiple components covering 11 countries, and was not staffed appropriately and adequately.**

Appendix 2- Rating Scheme[123]

PROJECT RESULTS AND OUTCOMES

Project outcomes are rated based on the extent to which project objectives were achieved. A six-point rating scale is used to assess overall outcomes:

Rating	***Description***
Highly Satisfactory (HS)	*"Level of outcomes achieved clearly exceeds expectations and/or there were no short comings."*
Satisfactory (S)	*"Level of outcomes achieved was as expected and/or there were no or minor short comings."*
Moderately Satisfactory (MS)	*"Level of outcomes achieved more or less as expected and/or there were moderate short comings."*
Moderately Unsatisfactory (MU)	*"Level of outcomes achieved somewhat lower than expected and/or there wee significant shortcomings."*
Unsatisfactory (U)	*"Level of outcomes achieved substantially lower than expected and/or there were major short comings."*
Highly Unsatisfactory (HU)	*"Only a negligible level of outcomes achieved and/or there were severe short comings."*
Unable to Assess (UA)	*The available information does not allow an assessment of the level of outcome achievements.*

During project implementation, the results framework of some projects may have been modified. In cases where modifications in the project impact, outcomes and outputs have not scaled down their overall scope, the evaluator should assess outcome achievements based on the revised results framework. In instances where the scope of the project objectives and outcomes has been scaled down, the magnitude of and necessity for downscaling is taken into account and despite achievement of results as per the revised results framework, where appropriate, a lower outcome effectiveness rating may be given.

PROJECT IMPLEMENTATION AND EXECUTION

Quality of implementation and of execution will be rated separately. Quality of implementation pertains to the role and responsibilities discharged by the GEF Agencies that have direct access to GEF resources. Quality of Execution pertains to the roles and responsibilities discharged by the country or regional counterparts that received GEF funds from the GEF Agencies and executed the funded activities on ground. The performance will be rated on a six-point scale:

Rating	***Description***
Highly Satisfactory (HS)	*There were no shortcomings and quality of **implementation** or **execution** exceeded expectations.*
Satisfactory (S)	*There were no or minor shortcomings and quality of **implementation** or **execution** meets expectations.*
Moderately Satisfactory (MS)	*There were some shortcomings and quality of **implementation** or **execution** more or less meets expectations.*

[123] See instructions provided in Appendix 2: Rating Scales in the "Guidelines for GEF Agencies in Conducting Terminal Evaluations for Full-sized Project", April 2017.

Rating	***Description***
Moderately Unsatisfactory (MU)	*There were significant shortcomings and quality of **implementation** or **execution** somewhat lower than expected.*
Unsatisfactory (U)	*There were major shortcomings and quality of implementation substantially lower than expected.*
Highly Unsatisfactory (HU)	*There were severe shortcomings in quality of **implementation** or **execution**.*
Unable to Assess (UA)	*The available information does not allow an assessment of the quality of **implementation** or **execution**.*

MONITORING AND EVALUATION

Quality of project M&E will be assessed in terms of:

- Design
- Implementation

SUSTAINABILITY

The sustainability will be assessed taking into account the risks related to financial, socio-political, institutional, and environmental sustainability of project outcomes. The evaluator may also take other risks into account that may affect sustainability. The overall sustainability will be assessed using a four-point scale:

Rating	***Description***
Likely (L)	*There is little or no risk to sustainability.*
Moderately Likely (ML)	*There are moderate risks to sustainability.*
Moderately Unlikely (MU)	*There are significant risks to sustainability.*
Unlikely (U)	*There are severe risks to sustainability.*
Unable to Assess (UA)	*Unable to assess the expected incidence and magnitude of risks to sustainability.*

Appendix 3 - GEF Co-financing Table

Name of the Co-financer	Co-financer type[124]	Type of co-financing[125]	Co-financing at project start (Amount confirmed at GEF CEO endorsement/approval by the project design team) (in USD)			Materialized Co-financing at project end (June 30, 2021) (in USD)		
			In-kind	**Cash**	**Total**	**In-kind**	**Cash**	**Total**
Antigua and Barbuda	Government	In-kind	2 000 000		2 000 000	2 142 705		2 142 705
Barbados	Government	In-kind	837 594		837 594	1 107 969		1 107 969
Dominica	Government	In-kind	621 151		621 151	332 347		332 347
Dominican Republic	Government	In-kind	857 944		857 944	2 728 108		2 728 108
Guyana	Government	In-kind	2 250 000		2 250 000	4 550 646		4 550 646
Jamaica	Government	In-kind	3 026 000		3 026 000	4 357 615		4 357 615
Saint Kitts and Nevis	Government	In-kind	1 267 537		1 267 537	1 770 000*		1 770 000*
Saint Lucia	Government	In-kind	4 651 419		4 651 419	4 991 952		4 991 952
Saint Vincent and Grenadines	Government	In-kind	330 246		330 246	1 177 510		1 177 510
Suriname	Government	In-kind	909 987		909 987	2 983 614		2 983 614
Trinidad and Tobago	Government	In-kind	1 184 510		1 184 510	4 859 405		4 859 405

[124] Examples of categories include: local, provincial or national government; semi-government autonomous institutions; private sector; multilateral or bilateral organizations; educational and research institutions; Non-Profit organizations; Civil Society Organizations; foundations; beneficiaries; GEF agencies; and others (please explain).

[125] Grants; loans; equity participation by beneficiaries (individuals) in form of cash; guarantees; in-kind or material contributions; and others (please explain).

Name of the Co-financer	Co-financer type[124]	Type of co-financing[125]	Co-financing at project start (Amount confirmed at GEF CEO endorsement/approval by the project design team) (in USD)			Materialized Co-financing at project end (June 30, 2021) (in USD)		
			In-kind	**Cash**	**Total**	**In-kind**	**Cash**	**Total**
University of the West Indies	Regional University	In-kind			200 000			905 760
IICA	Regional Organization	In-Kind, grant‡‡			2 250 000			2 372 240
CAHFSA	Regional Organization	In Kind			200 000			108 079
CARDI	Regional Organization	In-kind			591 242			-
Rotterdam Convention Secretariat	International Organization	In-kind, grant‡‡			-			140 745
FAO (TCP, EC)	International Organization	In-kind, grant‡‡			5 191 109			3 085 173†
PAN-UK	NGO	In-kind			-			20,544 ‡
Grand Total (in USD)					26 368 739			37 493 667

† FAO HQ has not updated its figures

‡ PAN-UK has not updated its figures

‡‡The breakdown of in-kind and grant/cash was not made available.

Appendix 4 – Results matrix

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
Outcome 1: Known stocks of POPs, other obsolete pesticide and PCB stocks in 11 countries in the region disposed of in an environmentally sound manner.	Tonnes of hazardous wastes destroyed in an environmentally sound manner	210.4 tonnes safeguarded by FAO EC project in JAM, SUR, TRI, (GCP/INT/063/EC), including 12 tonnes safeguarded and awaiting export from STL	Inventories completed and confirmed, contract agreed and safeguarding completed	300 tonnes of Obsolete Pesticides (OP) and 100 tons of PCBs destroyed	75%	319 tonnes of obsolete pesticides were eliminated in the United Kingdom during the year 1 of the project. The elimination was carried out by Veolia and a certificate of destruction was provided. The elimination of PCBs stocks has had significant delays as it was expected to be carried out together with obsolete pesticides. According to the project team, a total of 54 tons of PCBs was exported from Suriname, Trinidad and Tobago, Antigua and Barbuda and Barbados. However, certificates of destruction are not yet available as proof that the target has been achieved.
Output 1.1: Regional risk reduction and disposal strategy for sound management of obsolete and POPs pesticides completed including EAs and EMPs for all sites.	Number of EAs and EMPs finalized and approved by countries	PSMS inventories for 10 countries (not DOM). Environmental assessment of all locations during PPG phase (99 sites)	11 EAs and 44 EMPs, updated for 11 countries, adopted	11 EAs and 44 EMPs, updated for 11 countries, adopted	100%	10 EAs and 10 EMPs were updated, and 1 EA and 1 EMP was elaborated for the Dominican Republic. All of them were submitted to project countries. There seems to be an error in the target of this output as it stated 44 EMPs but there are only 11 participating countries.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
Output 1.2: Safeguarding, centralization and destruction of obsolete pesticides and PCBs	Number of staff trained and with field experience of safeguarding obsolete wastes	16 national staff (ANT - 1; BAR -1; JAM 2; SUR 3; STV 2; (Grenada 2); LCA 1 and TTO 4) trained (TRI, Dec 2013) 4 assisted contractors in TRI, SUR, JAM under supervision by FAO.	11 government staff involved in repackaging field operations	11 government staff involved in repackaging field operations	100%	There is no complete list of government participants trained, but officials from the 11 project countries during interviews confirmed the training given by Veolia. Four countries also received training on safeguarding PCBs stocks from Polyeco. There is evidence of the training given to the Dominican Republic, where 15 officials were trained on the safeguarding of obsolete pesticides. Therefore, the final target has been achieved.
	Number of tonnes of wastes a) safeguarded and b) destroyed	210.4 tonnes safeguarded: (JAM 28t, STL 12t, SUR 94.2t, TRI 76.2t) Exact stocks of PCBs not known but will be inventoried in BCRC project	a) 300+ tonnes of OP safeguarded in 11 countries	b) 300 tonnes of OPs and 100 tonnes of PCBs from 11 countries destroyed	75%	See comments to Outcome 1.
Outcome 2: Capacity improved in the region to identify and remediate contaminated sites through the availability of regionally appropriate tools	a) Number of staff trained in identification and implementation of strategies for remediation of pesticides and POPs contaminated soils	PSMS includes five locations with contaminated soil	Training of at least 22 staff completed		100%	According to the information available, 5 training courses were held on the remediation of soil contaminated by pesticides. A total of 110 people were trained, but there is only an attendance list that includes 62 government staff.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
and strategies for identification, characterisation and remediation of pesticide and POPs-contaminated soil	b) number of priority sites selected and for which a strategy and EMP is developed		Three priority sites selected		100%	One priority site was selected for which a strategy and EMP was developed. Although the Project assessed other sites, the levels of contamination were low, and therefore the sites were not suitable for remediation.
	c) % reduction in contamination levels in high priority sites where remediation has started	JAM project on organic and inorganic contaminated land		Min 50% reduction in contamination levels in three priority sites	100%	In total 54 points were monitored every two months in the site selected in Suriname. 63% of the sampled points show a 78% reduction in their contamination level. The reduction range is from 8% to 100%. 15% of the sampled points show an increase in their contamination level ranging from a slight increase of 1% to 43 times their initial concentration. 13% of the sampled points showed no contamination level, and 9% of the sampled points showed variability in their concentrations. Levels of pollution were also measured in plants.

Output 2.1 Capacity of national authorities to identify, characterize and remediate contaminated sites is increased and lessons learned shared	a) Number of staff trained and average score in training evaluation demonstrating capacity to assess and remediate sites		a) 22 staff trained with at least 75% correct score in end of training evaluation	a) 22 staff trained with at least 75% correct score in end of training evaluation	75%	According to the available information, the following trainings have been provided: -Practical training in pesticides-contaminated site characterization and soils sampling (5 participants, 2 female) in Suriname. 25 – 29 June, 2017 -Practical training in pesticides-contaminated site characterization and soils sampling (4 participants, 2 female) 2 – 5 July, 2017, St Kitts and Nevis -Training of technicians in pesticides-contaminated soil sampling methodologies. Trinidad and Tobago. Four male technicians participated in the training exercise. 20 September, 2018. -According to the PIR 2019, a 2- day training on the application of remediation interventions to the trial plot was held in March 2020, where 35 persons (24 Female), from Suriname including personnel from Pesticides Division, Extension, Environment, University lecturers and students and the Cabinet of the President Environment Coordination, participated. -Virtual Workshop on Bioremediation of Pesticides Contaminated Soils, held on March, 10 2021; 62 participants. People from 17 countries participated, including the 11 project countries and Bahamas, Belize, Caiman Islands, Grenada, Haiti, and Anguilla. UWI and FAO staff also participated. According to this information, 110 people were trained. The evaluation team only had access to the list of participants of the virtual workshop, in

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
						which 62 government officials were identified. 7 additional students were also trained. This workshop alone meets and exceeds the target of trained staff. However, the skills acquired were not evaluated in any training.
	b) Guidance manuals published		b) Guidance manuals published	b) Guidance manuals published	85%	The *Guidelines for the remediation of pesticide-contaminated soils using low-cost technologies: a case study in the Caribbean* were developed. The Guidelines include the different phases applied during the pilot in Suriname. As it only includes one case study, its content is still very theoretical. The Guidelines have not yet been published.
	c) Number of site case studies shared	There is no awareness or sharing of contaminated site experience in the region		c) 3 site case studies prepared	50%	There is a consultancy report on the remediation of contaminated sites in the Caribbean prepared by Dr. Eudoxie of the University of the Indies; however, there is no formal document describing the Suriname case study that can be shared. It is expected that the publication will be done in the final phase of the project.
	d) Number of government staff among which case studies are shared			d) Case studies shared with at least 18 government staff (2 per country)	100%	The case study was shared at the Virtual Workshop on Bioremediation of Pesticides Contaminated Soils, held on March 10 2021; 62 participants (including government staff)

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
Output 2.2 Low cost remediation strategies and locally available technologies and tools developed for identification, characterization and remediation of contaminated sites and incorporated in EMPs for specific sites	Number of detailed site remediation strategies and EMPs complete	Based on PSMS ranking, SUR, DMI and STK currently identified for pilots	3 remediation strategies and EMPs developed	3 remediation strategies and EMPs developed	100%	An Environmental Management Plan for Obsolete Pesticide Contaminated Site in Suriname was prepared. It contains the risk assessment, the risk management strategy and the environmental monitoring. Although the Project assessed other sites, the levels of contamination were low, and therefore the sites were not suitable for remediation.
Output 2.3 Demonstration of appropriate remediation strategies at three high priority pilot sites	% reduction in contamination levels	No remediation has been undertaken on pesticide contaminated sites, although some capacity for organic and inorganic pollution exists in TRI	Baseline contamination established in 3 pilot sites	Min 50% reduction in contamination	100%	See comments to item "C" of Outcome 2.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
Outcome 3: Risks to the environment and human health from empty pesticide containers reduced through establishing and enhancing container management systems at national level	a) 50% of farmers triple rinse containers at the end of their life	No data available – previous awareness-raising campaigns were not evaluated in terms of behaviours	Baseline data collected from 11 countries	50% of surveyed farmers triple rinse	0%	According to the information available, there was no strategy or specific activities to measure this indicator. A baseline was not created to know at the beginning of the project what percentage of producers were triple rinsing empty pesticide containers in the 11 participating countries. This could have been done through a KAP survey applied to a selected group of producers in each country. Nor was a specific awareness campaign designed to encourage triple rinsing in those countries, which would have been expected to be addressed to the selected group of producers. Nor was a final survey considered to measure a possible change in the behaviour of producers as a result of the awareness campaign, leading to a possible increase in the percentage of producers who carry out triple rinsing. Therefore, this goal was not met. The activities carried out by the project focused on gathering useful information for the establishment of schemes for the management of empty pesticide containers. This is the case of the two surveys conducted by PAN-UK in Antigua and Barbuda and Suriname and the information requested directly from the countries on the quantity and type of pesticide containers imported.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
	b) Number of countries with data accessible by regulators on empty pesticide containers	Limited facilities for plastic waste management, with some recycling in BRB, TRI, JAM and GUY	Presentation of at least 4 options at regional stakeholder meeting	Centralized data on containers collected in at least 2 countries	0%	There is no centralized data on containers collected in at least 2 countries. It is expected that, through the work with AGRIVALOR, which began in early 2021, a diagnosis will be made of the empty pesticide containers generated in Guyana, Dominica and Barbados, to then issue recommendations on the best way to manage them.
Output 3.1 Pesticide container management options identified and assessed and stakeholders engaged	Number of pesticide container management options identified	PPG study highlighted 3 possible case studies (TRI, STL, BAR)	Presentation of at least 4 options at regional stakeholder meeting	Presentation of at least 4 options at regional stakeholder meeting	25%	A scheme for the management of empty pesticide containers has been designed and implemented in Suriname. AGRIVALOR is expected to propose management recommendations for three other countries: Guyana, Dominica and Barbados. Therefore, there is currently only one option that is already being implemented and presented. The three new options will be presented at the final results workshop of the project.
Output 3.2 Container management networks established and pesticide user practices improved	a) Number of countries with stakeholder networks	3: distributors or landfill operators accept containers in STV, GUY and TRI		Networks in 2 countries	50%	Container management network established in Suriname and stakeholders engaged. Other countries were also interested in creating a network (i.e., Barbados and Jamaica), but the pandemic stopped the work. Now it is unlikely that they will be able to do so in the time remaining for the project.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
	b) Number of countries where communication campaigns have been successfully implemented	Communication since 2011 on triple rinsing using flyers, 12 month calendars and short video. Draft communication strategy available (annex)	Delivery of communication campaign in 4 countries	Communications in 11 countries	50%	A communication campaign was not designed specifically for the management of empty pesticide containers, but triple rinse posters, leaflets and videos were produced and distributed in Suriname and Antigua and Barbuda. A toolkit on how to apply a survey to collect information from farmers concerning pesticides and empty pesticide containers was elaborated by PAN-UK and shared with project countries.
Outcome 4: Common tools and processes adopted and financed by Caribbean countries for regionally harmonized	a) Number of countries adopting new and harmonized regulations	National legislation diverse but most countries have no detailed regulations to support legislation	Model harmonized pesticide regulations developed and endorsed by the Ministers of Agriculture at COTED	At least 5 countries have begun the process of adopting new regulations	20%	According to the interviews, Suriname has already started the adoption of a new law, which merge the old law and the model legislation. Approval of the National Assembly is pending. The other 10 countries have not started the adoption process yet.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
pesticide registration and control	b) Number of regional registration recommendations voluntarily adopted by national registration bodies	Each country responsible for its own evaluations with no access to regional technical expertise or assistance	Regional training on evaluation; country data in PSMS Evaluation working group established and procedures agreed	Recommendations on at least 5 pesticides	140%	A Regional pilot Technical Working Group (TWG) was formed through LoA with the Caribbean Agricultural Health and Food Safety Agency (CAHFSA) to consider applications for pesticides registration using the FAO Pesticide Registration Toolkit. The TWG met three times (once in person and twice virtually) and evaluated seven pesticide registration applications. Recommendations were made for 7 pesticide products. Furthermore, the TWG issued general recommendations on the establishment of a Regional technical working group to evaluate applications for pesticide registration and designed a uniform registration form and checklist.
	c) Budget available for regional pesticide management	CGPC programmes and events supported by FAO and other donor contribution		A decreasing contribution from 80% to 20% at project end, of CGPC, costs provided through in a sustainable manner from member countries	0%	It was not possible to design and implement a mechanism for CGPC member countries to find a sustainable way to cover the costs of their participation in the group. Circumstantially, the COVID 19 pandemic led to virtual meetings, which is now being considered as an alternative to reduce participation costs. As a co-benefit of the Project, the CGPC resides within CAHFSA. This alliance should further catalyze resource mobilization in the future, but so far, no contribution to the CGPC has materialized.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
Output 4.1: Model harmonized regulations on pesticide life cycle management provided to countries for national review and adoption	a) baseline regulatory gap analysis and tailored FAO model regulation tailored available for the countries	Some countries have regulations on registration, labelling, or storage. Not all countries data was available ANT – 0, BAR – 2, DOM – 2, GUY – 1, JAM – 1, STK – 2, STL – 2, TRI - 5 126	a) Regional consultation and adjustment of model regulation.	a) Regional consultation and adjustment of model regulation.	80%	A model legislation has been developed taking into account the legal system of English-speaking countries. Therefore, the project hired another legal consultancy to adjust the model to the Dutch legal system. Currently, the model is also being translated and adjusted to the legal system of the Dominican Republic. English-speaking countries are also reviewing the model internally to determine the level of changes that would need to be made, taking into account existing national pesticide regulation. Since there is a proposal for a general chemicals law developed under another GEF project (project 5558), some countries are also looking at how to merge these two pieces of legislation, as there was no interaction between these two GEF projects, and the chemicals law also includes pesticides.
	b) Policy brief(s) on container management		b) Policy brief(s) on container management regulatory needs.	b) Policy brief(s) on container management regulatory needs.	0%	No policy brief has been prepared. These will be developed when the consultancy with AGRIVALOR is completed.

[126] Numbers of regulations currently available on pesticide life cycle management based on Legal Report, Schedule 1 – Pesticide Laws Examined. Not all countries were able to submit detailed information on their legal status for this review, so the baseline will be updated at project inception.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
Output 4.2: Regionally harmonized pesticide registration mechanisms developed and piloted	a) Number of registrars trained and capacity improved	PSMS training in EC project Registration Toolkit developed by FAO	a) 24 registrar/ equivalent staff trained in pesticide evaluation	a) 24 registrar/ equivalent staff trained in pesticide evaluation	167%	Two training workshops on FAO Pesticides Registration Toolkit were delivered: • 7-11 February 2017, held in Trinidad and Tobago. 23 people trained from 14 Caribbean countries. • 4 – 9 February 2019, held in Trinidad and Tobago. 17 participants from The Bahamas, Jamaica, St Kitts and Nevis, St Vincent and the Grenadines, Guyana, Suriname and Trinidad and Tobago. A total of 40 people were trained; thus, the goal was exceeded.
	b) % national data on registration inserted in PSMS		b) 100% of national data on registrations inserted into PSMS	b) 100% of national data on registrations inserted into PSMS	Level of achievement cannot be measured	The Pesticide Stock Management System (PSMS) exits but is on hold with the IT department of FAO. It will be revitalized with the Locust group, and data is available upon request. However, no Project information was inserted into the System. Lists of pesticides registered in Guyana, St. Lucia, Dominica, Barbados, St. Vincent and the Grenadines, Suriname, Antigua and Barbuda, Trinidad and Tobago and Jamaica are available on the CAHFSA website. The lists are in pdf format and include the name of the product. Most lists also include the active ingredient, manufacturer or toxicity category.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
	c) Number of pesticide dossiers evaluated by regional working group	Proposal for a regional registration procedure under CGPC recognized by COTED/CARICOM	Working procedures for the operation of the regional working group agreed	Working group reviews and provides recommendations for at least 5 products	140%	See comments provided to item "b" of outcome 4.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
Output 4.3: A common system for inspection and control of imported pesticides established to prevent illegal trafficking of POPs	a) Number of inspectors increased scoring at least 75% in end of training evaluations	Import permits required but inspection and custom officers in ports are not able to identify registered or banned products	a) 11 inspectors trained on FAO Inspection manual (M/F) scoring at least 75% in end of training evaluations	a) 11 inspectors trained on FAO Inspection manual (M/F) scoring at least 75% in end of training evaluations	11 inspectors trained: Achievement 1000% Scoring at least 75% in end of training evaluations: 100%	6 training workshops on the draft regional pesticide inspectors' manual were delivered: • 17-18 February 2020. St Kitts and Nevis. 14 participants • 20 – 21 February 2020. Antigua and Barbuda. 14 participants • 24 – 25 February 2020. Saint Lucia. 17 participants • 27 - 28 February 2020. Saint Vincent and the Grenadines. 24 participants • 2 – 3 March 2020. Dominica. 22 participants • 9 – 11 March 2020. Barbados. 18 participants. Participants were from Guyana, Jamaica, Suriname, Trinidad and Tobago, Dominican Republic and Barbados A total of 109 people were trained. In the national workshops, pre- and post-workshop surveys were conducted, in which participants carried out a self-assessment of their level of knowledge on the main topics covered during training. The overall average self-assessment score for all topics following the workshop was 3.8 out of 5, up from 2.4 before the workshop. There is no evidence of the evaluation carried out to the participants of the regional training workshop.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
	b) Number of countries exchanging information among their inspector authorities		b) Information exchange between different inspectors in at least 4 countries	b) Information exchange between different inspectors in at least 4 countries	0%	A platform for the exchange of information was developed but was not used by the inspectors; thus, it is no longer in use. According to the Project, a CGPC's website is currently under preparation and will be linked to the CAHFSA website.
Output 4.4: Sustainable financing identified and committed for regional pesticide lifecycle management	Number of recommendations for increased budget allocations for pesticide management	CGPC relies on FAO/donor funds for its functions Only Jamaica and Guyana charge fees for services offered by the National Authority.	Findings presented at relevant regional workshops with decision-makers and industry	At least 1 recommendation submitted by CGPC for consideration to line ministry	50%	A cost recovery analysis of pesticide regulatory authorities was conducted using electronic questionnaires, which were sent out to stakeholders in project participating countries. Followed by visits to 4 project countries for face-to-face meetings with stakeholders. Report produced and shared with countries. During the interviews, few National Project Coordinators recalled the study. According to the interviews, the study needs to be strengthened. After that, the CGPC will submit its recommendations for consideration to the line ministry.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
Outcome 5: Alternatives to conventional chemical pesticides up-scaled and use of highly hazardous pesticides reduced	a) Reduction in number of registrations of HHP or products that cause health or environmental problems	An initial review of countries identified 54 priority active ingredients (HHPs or problems documented in use)	Registers reviewed to identify HHP in all countries; data collected on health and environmental impacts	At least 4 products de-registered and an overall 20% reduction in number of registered HHPs	0%	Through training on the use of the FAO registration toolkit, five project countries were able to identify Highly Hazardous Pesticides (HHPs) in their list of registered pesticides. According to the Project, the Dominican Republic, Trinidad and Tobago, Dominica, Saint Lucia and Saint Vincent and the Grenadines, and Guyana reported the prohibition of specific HHPs. However, these HHPs remain on the lists of pesticides registered on the CAHFSA website. The evaluation team needs to have evidence of actions taken by countries to ban or restrict the use of HHPs in order to consider that the target has been achieved.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
Output 5.1 HHP use and risk reduction plan developed for the region	Regional HHP use and risk reduction plan	Will be set during KAP surveys in Year 1 (see Component 3).	HHP use and risk reduction plan presented in national workshops and follow up actions for its implementation agreed	HHP use and risk reduction plan presented in national workshops and follow up actions for its implementation agreed	30%	PAN-UK elaborated a Caribbean HHP Risk Reduction Plan through consultations with stakeholders across the region and studies carried out as part of the project. The priorities identified at the regional and national level were endorsed by the Caribbean Group of Pesticide Control Boards on 3rd March 2021. Therefore, the Plan has been presented at the regional level but not at the national level, and no follow-up actions have been agreed upon for its implementation. Although the priorities identified are valid, there is a lack of a more strategic analysis of these priorities to show the relationships and possible dependencies that exist between them and, on the basis of these relationships, plan their attention over time. It would also have been very important to analyze the context and identify which resources would be indispensable for their attention. The document is not a plan *per se* but a list of identified priorities.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
Output 5.2 Alternatives to HHP field tested and demonstrated	a) Number of field trials or demonstrations	A number of alternatives have been tested but may not cover all the globally available options.	a) Partner entities establish 1 field tests and training for alternatives to HHP	a) Partner entities establish 2 field tests and training for alternatives to HHP	200%	The University of West Indies carried out 4 field trials. Two trials were conducted in Jamaica, where field test biopesticides to pesticides against insect pests in pak choy and calalloo were carried out. The other two trials were conducted in Trinidad and Tobago. The trials focused on testing biopesticides for disease control in tomato and pepper crops. Two training workshops on Alternatives to hazardous pesticides in vegetable disease management were held, one on March 27, 2019 and the other on July 24, 2019. Three regional Webinars / Stakeholder engagements were conducted in Trinidad and Tobago, Jamaica and The Bahamas to promote IPM and demonstrate results of completed field trials. The webinar in Jamaica also presented the results of a survey on empty pesticide container management and, along with the one in Trinidad and Tobago, presented the results of testing a phone app under development to report on acute pesticide poisoning incidents among farmers

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
	b) Demonstrated maintenance or increase in yields in field testing of alternatives		b) Yields maintained or increased	b) Yields maintained or increased	100%	The results of the trials in pak choy and callaloo crops indicate no significant difference in the harvested yield in the trials but a benefit to human health and the environment due to the use of biopesticides. The results of the trials in tomato and pepper crops showed an increase in yield from the use of the biopesticides additionally. Thus, UWI plans to register the biopesticide, which could replace Mancozeb, which is a chemical fungicide. This biopesticide could work better as an element of Integrated Pest Management.

Project Strategy	Indicator	Baseline Level	Midterm Target	End-of-project Target	Level of achievement	Evaluation team comments
Output 5.3 Promote previous IPM and support farmers and home gardeners to reduce use of HHPs	Number of communications tools developed and awareness of IPM	Little policy support or outreach e.g. cost benefit analysis available for STL only	Produce communications tools	Final KAP survey	0%	For a KAP survey to be useful, it is essential to apply it at the beginning and at the end of an intervention to determine whether the intervention generated changes in the level of knowledge, attitude or practices of the target population. In this case, a design problem is identified for this product since it only considers the application of a KAP survey at the end of the intervention. In addition to this design problem, it was found that a KAP survey was designed and applied in two districts of Barbados with the objective of generating information on pesticide use conditions, identifying risky practices and exposure routes, as well as collecting information on pesticide poisoning incidents. This objective is not congruent with the focus of this product which seeks to reduce the use of HHPs through the promotion of IPM. In this sense, the KAP survey should have focused on knowing the level of knowledge of farmers about HHPs and IPM (e.g., whether farmers take into account the level of toxicity when buying a pesticide or about the barriers to apply IPM) and based on this, elaborate communication materials to fill the information gaps and try to change or improve their practices or attitudes.

Appendix 5 – List of people interviewed

	First Name	Last Name	Position	Organization/Location
FAO staff				
1	Renata	Clarke	SRO Coordinator	FAO SLC, Barbados
2	Estelle	Paige	Programme Officer	FAO SLC, Barbados
3	Guy	Mathurin	Project Coordinator	FAO, SLC Barbados
4	Hartley	Springer	Project Assistant	FAO SLC, Barbados
5	Anthony	Kellman	Programme and Monitoring Officer	FAO SLC, Barbados
6	Firhaana	Bulbulia	Communication Consultant	FAO SLC, Barbados
7	Vyjayanthi	Lopez	Lead Technical Officer	FAO SLC, Barbados
8	Doris	Howell	IT Support	FAO SLC, Barbados
9	Luisa	Ozuna	Project National Consultant	Dominican Republic
10	Carolina	Ivanovic	Gender Consultant	FAO RLC, Chile
11	Carmen	Bullon	Legal Officer	LEGN, FAO, Rome
12	Oxana	Perminova	Lead Technical Unit	NSP, FAO, Rome
13	Hernan	Gonzalez	Project Liaison Officer	OCB, FAO, Rome
14	Gillian	Smith	FAOR	FAO Guyana
15	Rodrigo	Castaneda	FAOR	Dominican Republic
16	Reuben	Robertson	FAOR	FAO Trinidad and Tobago
17	Christine	Fuell	Coordinator	Rotterdam Convention Secretariat, FAO, Rome
Government/National stakeholders				
18	Anika	Aska	FAO National Correspondent	Ministry of Agriculture, Antigua and Barbuda
19	Gregory	Bailey	NPC/Director of Agriculture	Ministry of Agriculture and Fisheries, Antigua and Barbuda
20	Ato	Lewis	Environmental Investigator/Data Manager	Department of Environment, Ministry of Health, Well Being and Environment, Antigua and Barbuda

	First Name	Last Name	Position	Organization/Location
21	Jason	Williams	Senior Environment Manager	Department of Environment, Ministry of Health, Well Being and Environment, Antigua and Barbuda
22	Malverne	Spencer	Director of Analytical Services/Chair of PTCB	Ministry of Agriculture, Antigua and Barbuda
23	Genia	Oxley	NPC/Registrar of PCB	Ministry of Agriculture and Food Security, Barbados
24	Sandy	Miller	Safety and Health Officer	Labour Department, Barbados
25	Lisa	Senhouse	Deputy Director	Ministry of Environment, Barbados
26	Anna Mary	Seraphine-Alexander	NPC/Secretary of PCB	Ministry of Blue and Green Economy, Agriculture, and Food Security Dominica
27	Jose	Manuel Asiatico	NPC/Technician in Agronomy Unit	Pesticide Registration Office, Ministry of Agriculture, Dominican Republic
28	Milagros	De Camps	Vice Minister of Environment and GEF Focal Point	Ministry of Environment and Natural Resources, Dominican Republic
29	Rosa	Otero	Technical Specialist	Ministry of Environment and Natural Resources, Dominican Republic
30	Wilson	Tejeda	Technical Specialist	Ministry of Environment and Natural Resources, Dominican Republic
31	Elsa	Ferrera	Technical Specialist	Ministry of Environment and Natural Resources, Dominican Republic
32	Trecia	David Garnath	NPC/Registrar	Pesticide and Toxic Chemicals Control Board, Guyana
33	Bhavina	Pooran	TWG Member and Inspector	Pesticide and Toxic Chemicals Control Board, Guyana
34	Tamara	Morrison	NPC/Registrar of PCB	Ministry of Health, Jamaica

	First Name	Last Name	Position	Organization/Location
35	Marina	Young	Principal Director	Technical Services, Rural Agricultural development Authority, Jamaica
36	Melvin	James	NPC/Director of Agriculture	Ministry of Agriculture, Saint Kitts and Nevis
37	Quincy	Edwards	Analytical & Environmental Chemist	Saint. Kitts and Nevis
38	Cletus	Alexander	NPC/Crop Protection Officer	Ministry of Agriculture, Fisheries Food Production, Saint Lucia
39	Leshan	Monrose	FAO National Correspondent (Former OECS-FAO Liaison Officer)	Saint Lucia
40	Samantha	Justin	GEF Focal Point	Department of Sustainable Development, Saint Lucia
41	Rafique	Bailey	NPC	Ministry of Agriculture, Fisheries, Rural Transformation Industry and Labour, Saint Vincent and Grenadines
42	Coleen	Philips	FAO National Correspondent	Saint Vincent and Grenadines
43	Carmen	Van Dijk	NPC/Head of Pesticide Division	Ministry of Agriculture and Food Security, Suriname
44	Ivette	Patterson	GEF Operational Focal Point/Legal and Policy Advisor	Ministry of Spatial Planning and Environment, Suriname
45	Vanessa	Sabajo	GEF Operational Focal Point/Environmental Policy Advisor	Ministry of Spatial Planning and Environment, Suriname
46	Hasmat	Ali	NPC/Registrar PCB	Ministry of Health, Trinidad and Tobago
47	Hayden	Romano	GEF Focal Point	Environmental Management Authority, Trinidad and Tobago

	First Name	Last Name	Position	Organization/Location
Regional stakeholders				
48	Gregory	Robin	Former Jamaica representative	CARDI, Jamaica
49	Malcolm	Wallace	Operations Officer (Former CARICOM-FAO Liaison Officer)	Caribbean Development Bank, Barbados
50	Therese	Yarde	Facilitator/ Trainer	Independent Environment Consultant
51	Jewel	Batchasingh	Director	Basel Convention Regional Centre, Trinidad and Tobago
52	Asif	Khan	Project Execution Officer	Basel Convention Regional Centre, Trinidad and Tobago
53	Rachel	Ramsey	Project Execution Officer	Basel Convention Regional Centre, Trinidad and Tobago
54	Maurissa	Charles	Project Execution Officer	Basel Convention Regional Centre, Trinidad and Tobago
55	Janet	Lawrence	Agricultural Health and Food Safety and Quality Officer	Inter-American Institute for Cooperation on Agriculture, Costa Rica
56	Shaun	Baugh	Programme Manager	CARICOM, Trinidad and Tobago
57	Gaius	Eudoxie	Deputy Dean Outreach	Faculty of Food and Agriculture, UWI, Trinidad and Tobago
58	Dwight	Robinson	Head of Dept.	Dept. of Life Sciences. UWI, Jamaica
59	Duraisamy	Saravankumar	Professor of Plant Pathology	Faculty of Food and Agriculture, UWI, Trinidad and Tobago
60	Augustus	Thomas	Investigating Scientist	UWI, Trinidad and Tobago
61	Machel	Emmanuel	Investing Scientist	UWI, Jamaica
62	Juliet	Goldsmith	Plant Health Specialist	CAHFSA, Suriname
63	Annika	Minot	Plant Health Scientist	CARDI, Cayman Islands

	First Name	Last Name	Position	Organization/Location
64	Miriam	Ochaeta Serrut	Former CGPC Chairperson/Registrar	PCB. Belize
Private sector and others				
65	Joe	Pires	Managing Director	Caribbean Chemicals, Trinidad and Tobago
66	Jesse	Jarvis	Agronmist	Caribbean Chemicals, Trinidad and Tobago
67	Rayard	Khan	Research Manager	MAFAS Ltd., Trinidad and Tobago
68	Kostas	Tsirkos	Head of Project Tender Management	POLYECO SA, Greece
69	Natasa	Fatourou	Licensing Manager	POLYECO SA, Greece
70	Marie-Beatrice	Galan	Manager	AGRIVALOR, Guadeloupe
71	Sheila	Willis	Head of International Programs	PAN-UK, United Kingdom
72	Stephanie	Williamson	Scientist	PAN-UK, United Kingdom
73	Alex	Stuart	International Project Manager	PAN-UK, United Kingdom
74	Debbie	Rhynd	Health and Safety Officer	Sustainable Recycling Centre, Barbados
75	Leith	Watson	Commercial Manager	VEOLIA, United Kingdom
76	Florian	Mitchel	General Manager	Dominica Solid Waste Management Corporation, Dominica
77	Harold	Van der Valk	Developer and Trainer	Netherlands
78	Mark	Davis	Former FAO staff	Edinburgh University, United Kingdom
79	Lisa	Mustor	Asst. VP – Head of Agriculture Division	Massy Trading, Barbados
80	Toni	Manning	Quality Manager	McBride, Barbados
81	Jeet	Ramjattan	Extension Officer/Farmer	Trinidad and Tobago

	First Name	Last Name	Position	Organization/Location
82	Raymond	Macoon	Farmer	Trinidad and Tobago
83	Toni	Manning	Manager	McBride, Barbados
84	Wayne	Ramgoolam	Managing Director	Occumed Ltd., Trinidad and Tobago
85	Lydia	Elliot	Legal Consultant	Saint Lucia
86	Fabiano	De Andrade Correa	Legal Consultant	Brazil
87	Hugo	Inniss	Financial Consultant	United Kingdom
88	Tatiana	Terekhova	Programme Management Officer	Secretariat of Basel, Rotterdam and Stockholm Convention, Geneva
89	Jose	Tschen	Inspector	DUWEST, Guatemala
90	Seynabou	Diagne	Scientific Evaluator	Pesticide Regulatory Agency, Health Canada, Canada
91	Nadia	McDonald	Former student	UWI, Trinidad and Tobago
92	Azir	Hosein	Farmer	Trinidad and Tobago
93	Raymond	Macroon	Farmer	Trinidad and Tobago

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Appendix 7 - List of Annexes

Annexes are available at http://www.fao.org/evaluation/en/

Annex 1. Evaluation matrix

Annex 2. Key survey results