TERMINAL EVALUATION

Project ID:	5558
Project Name:	Development and Implementation of a Sustainable Management Mechanism for POPs in the Caribbean
Countr(ies):	Regional, Antigua and Barbuda, Barbados, Belize, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadines, Suriname, Trinidad and Tobago
Implementing Agency:	UNIDO

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I. Overview

A. Description

Project name Development and Implementation of a Sustainable Management Mechanism for POPs in the Caribbean	
Country Regional, Antigua and Barbuda, Barbados, Belize, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadines, Suriname, Trinidad and Tobago	
GEF ID 5558	Implementing Agency UNIDO
Executing Entity Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean Region (BCRC-Caribbean)	
Trust Fund GET	Project Type FSP
Objective To enable the participating Caribbean countries to reduce and eliminate the threats of POPs	

B. Key Dates

CEO Endorsement/Approval 5/27/2015	Agency Approval 4/16/2015
Implementation Start 8/10/2015	First Disbursement 9/29/2015
Expected MTR 8/13/2019	MTR Submission 9/2/2025
Actual MTR 8/13/2019	Expected Completion 7/31/2023
Actual Completion 8/1/2023	Actual TE 3/1/2023
TE Submission 9/2/2025	Final Disbursement

C. Disbursements

Project Financing 9,678,705.00	Cumulative Disbursement 8,548,805.00

II. PROGRESS STATUS AND ISSUES

A. Main Terminal Evaluation Findings

The project sought to reduce the risks related to POPs in Antigua and Barbuda, Barbados, Belize, Saint Kitts and Nevis, Saint Lucia, Suriname, and Trinidad and Tobago by supporting systems for integrated chemicals management (ICM) in the region. The GEF approved the project in December 2015, and the project ended in December 2022 after a two-year extension. This was a sensible decision, allowing the project some time to achieve most of its outputs and to use surplus funds in demonstration projects selected by the countries2. The few outstanding outputs were expected to be completed by the end of the first quarter of 2023.

The project was implemented by UNIDO. The Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean Region (BCRC-CARIBBEAN) executed the regional activities, while UNIDO executed the technology demonstration activities. The project had five components:

 Creation of enabling mechanisms in the Caribbean for effective implementation of the Stockholm Convention on POPs.
 Reduction of u-POPs emissions by improving poor waste management practices at landfills.
 Assessment of potentially contaminated sites to determine the level of contamination by POPs and development of appropriate remediation strategies.
 Management and disposal of PCBs.
 Impact Monitoring and Evaluation.

Integrated chemicals management requires changes in the behaviour of multiple agents operating in different sectors and with diverse interests. Change in such a complex system can be expected to take place in temporal and spatial horizons that exceed the reach of any single project. Thus, meaningful behavioural and system change can only be expected years after a project ends. While it is not possible to assess a project's full effect on behavioural changes and the project's impact on the system, it is possible to explore the extent to which projects contribute to conditions that are likely to enable a development trajectory in the direction of such behaviours and impacts. The project is the first comprehensive initiative targeting root causes, contributing to reducing poor management and risks associated with toxic chemicals in the region, including POPs. The project contributed to advancing legal and institutional frameworks, improving information for decision-making, and raising awareness of the risks associated with POPs. The project developed a Regional Model Integrated Chemicals Management Act (ICM Act) that included a comprehensive legal and institutional framework that countries could use to develop or modify their legislation. In addition, to update legislation related to POPs management and the Stockholm Convention, the ICM Act also incorporated elements key to the Minamata Convention, thus helping countries to meet the relevant commitments. By December 2022, at project end, Antigua and Barbuda and Suriname had adopted new legislation. Most countries had presented a draft document for ministerial approval or had sent their documents for review and approval of the cabinet. Only Saint Lucia and Saint Vincent and the Grenadines had held the Act at the Ministers' office due to administrative factors but planned to follow up the process under the GEF Islands program.
Access to sound information is an essential condition for sound policy-making programming. All project activities had an important training component that included information that was often new for participants. Three major project activities that contribute to information and knowledge for decision-making are:
One, updating the Stockholm Convention National Implementation Plans (NIPs). Countries often reported that updating the NIP was very helpful as it helped countries meet some of their reporting requirements to the convention. They also found the information useful during the development of the ICM legal framework.
Two, inventories of contaminated sites and prioritization of sites for treatment. The inventories provided critical information for developing national waste management strategies in all participating countries.

Three, the Regional Information System (RIS). The RIS was intended to address the lack of easily available information on POPs in the region and was expected to assist countries in capturing, maintaining up-to-date data, and analyzing POPs conditions to inform the management of toxic chemicals. The RIS was designed to facilitate information to the Stockholm Convention, and it includes Geographic Information System features that allow easier communication with policymakers and the public. At the time of the evaluation, the RIS was designed but few countries had uploaded information; follow-up training to countries was scheduled for the first quarter of 2023. The project demonstrated state-of-the-art technologies and approaches to eliminate or prevent POPs and improve land fill waste management and practices. Demonstrations of technology and landfill management directly resulted in the safe disposal or prevention of POPs in the region, such as the disposal of known PCBs and the reduction of u-POPs by promoting waste separation and preventing landfill fires.
In Antigua and Barbuda and Belize, the project made direct contributions to the additional reduction of POPs by safely disposing of more than 1.87 tons of equipment contaminated with PCBs and 1.14 tons of PCB oil-contaminated equipment, while in Santa Lucia and Suriname, no devices were considered contaminated and to be disposed of. The disposal of PCB-contaminated devices and oil for Barbados, Belize, Suriname, and Trinidad and Tobago, along with other devices for Antigua & Barbuda and Belize, was previously carried out in the framework of a dedicated FAO project. The introduction of autoclaves to treat medical waste is also highly likely to contribute to a lasting reduction of POPs, avoiding using incinerators with poor technology. Belize, Antigua and Barbuda3, Saint Kitts and Nevis, and Trinidad and Tobago have constructed the facilities to house the autoclaves, have 1) defined the institutions responsible for the operation of the facilities, 2) undertaken systems and protocols for collection of waste from hospitals and laboratories, and 3) only lacked electrical connections to begin operations.
Most countries also benefited from improved waste management practices either for their landfill or waste separation initiatives. The calculated u-POPs reduction is almost the same as projected in the project design (13.34 gTEQ/a). However, a new assessment of the emissions at the baseline scenario was carried out (giving higher values), showing the reduction of emissions foreseen for the Ornamibo landfill was significantly lower than projected due to the decision of the government of Suriname to postpone the renovation and upgrade works. In conclusion, the project's main contributions have been on the legal and institutional frameworks, awareness raising, and technology. Also, capacity development and information activities supported the project work in these three domains. Much less was accomplished on financing, which affected progress in the adoption of technology and placed significant constraints on the functioning of institutions and the ongoing support for awareness raising. Access to financing was not included as a component in the project design. In addition, low budgets hamper public sector investment and action in the field of POPs management, while chemical manufacturers, distributors, farmers, and other stakeholders do not see added value in incorporating environmental sustainability into their actions and activities. Yet the project accomplishments took place in a very challenging context of low country financing and weak and low staffing in national partner institutions. While work remains to be done to achieve a sustained development trajectory towards sound ICM in the Caribbean, the project has made important contributions to strengthening BCRC-CARIBBEAN as a regional mechanism for continuity and supporting countries in ICM development efforts. Strongly supported by the countries, BCRC-CARIBBEAN is well positioned to tap into technical knowledge and funding from GEF, such as the GEF Islands program and other programs, which will continue to build on the accomplishments of this project.

The evaluation makes the following four recommendations, all of which apply to UNIDO's future operations. Still, they also apply to the follow-up projects approved under the GEF Islands program.

1. To BCRC-CARIBBEAN: Further strengthen the results monitoring capacities of BCRC-CARIBBEAN, in order to provide an overall picture of progress to outcomes and contributions while supporting strategic discussions in the PSC.

2. To BCRC-CARIBBEAN: In the new projects, BCRC-CARIBBEAN should ensure that training activities more fully consider country conditions in the planning and implementation. Training workshops should continue to be conducted by trainers with competency in technical knowledge and supplemented by competency in training methods for easy transfer of knowledge.

3. To BCRC-CARIBBEAN: More aggressively engage private sector operators in the new GEF projects. Given that this project made progress in advancing mechanisms for sustainable management of POPs in the Caribbean, it is crucial that subsequent follow-up support work more closely with private-sector operators that directly managed many of the activities pertaining to toxic chemicals and POPs.

4. To UNIDO and BCRC-CARIBBEAN: should give more attention to ensuring the synchronization of project implementation cycles with country absorption capacities. It is important for donors, implementers, and executors to make the necessary provisions to adapt the implementation cycles to the evolving in-country absorptive capabilities through the implementation of appropriate and systematic M&E and analysis of factors affecting the attainment of results.

There are some lessons learnt from this project:

1. Regional activities, while appropriate to initiate processes in Small Island Developing States (SIDS), require follow-up and country-level support.
2. The regional mechanism is an effective approach to address challenges in supporting SIDS, as it can help establish a network across countries while buildingin-country capacity as well as developing and testing cost-effective approaches in response to country needs.
3. Address social and equity considerations in the planning and implementation of POPs management by, for example, considering people living around the landfills who often complement their income with the collection of metals or plastics that can be sold in the market.

PROJECT EVALUATION RATINGS[4]		
#	Evaluation criteria	Rating
A	**Impact (progress toward impact)**	**5**
B	**Project design**	
1	• Overall design	5
2	• Logframe	5
C	**Project performance**	
1	• Relevance	5
2	• Coherence	5
3	• Effectiveness	5
4	• Efficiency	5
5	• Sustainability of benefits	5
D	**Cross-cutting performance criteria**	
1	• Gender mainstreaming	5
2	• M&E: ✓ M&E design ✓ M&E implementation	5
3	• Results-based Management (RBM)	5
E	**Performance of partners**	
1	• UNIDO	5
2	• National counterparts	5
3	• Donor	5
F	**Overall assessment**	5

B. Stakeholder Engagement

The project document identifies the government execution partners in each country as the key stakeholders for the project. Nevertheless, after the midterm, in response to the midterm review (MTR), the project made more systematic use of the project working groups (PWG) in each country, which typically included representatives from different sectoral ministries. Some also included representatives of the private and non-governmental sectors, such as utility companies, other private entities, and universities.

Low engagement of the private sector. The project mostly focused on the strengthening of public sector institutions; most members of PWCs were also representatives from public institutions.20 Two project components with a promising collaboration with the private sector were PCBs disposal and operation of the autoclaves. In Antigua, a key factor in PCBs was the collaboration of the two electricity supply companies. The Antigua Public Utilities Company assisted in identifying older transformers and contaminated equipment.

There is a national commitment to identify, test and dispose of all PCBs on the island. The West Indian Oil Company collaborated with the project and the Department of Analytical Services to provide a stockpile of mercury waste and devices. In Belize, the government is also exploring Public Private Partnership options to operate the medical waste treatment facility. While some stakeholders believe that the project could have worked more with the private sector, it is also important to point out that the project made efforts to engage with the private sector which did not work out as intended. One example is the case in Belize where the government reported that the private company initially identified to operate the autoclave was installing a polluting incinerator, which is contrary to this project's objectives. The government thus looked for an alternative partner and settled for decentralized public agency. In this context it is also important to stress the significance of the project contributions the strengthening public sector institutions, regulations and a regional mechanism which provide conditions for a more effective public sector agents' engagement with private sector agents. This is an aspect in which the project helped built conditions on which the GEF Islands Caribbean project and other GEF support can build on.

Stakeholders reported that the utility of training and the quality of the training workshops varied. Several stakeholders indicated that the workshops on the Stockholm Convention were very helpful in understanding the country's commitments to the convention. Similarly, stakeholders reported benefits from their engagement in the inventory of toxic sites and PCBs. Typically, there was the feeling that face-to-face and "hands-on" workshops were much more useful than remote workshops. Train the Trainer workshops seemed not to have worked as planned; while it is possible that workshop attendees shared their knowledge informally with some colleagues, the Evaluation Team found no evidence that workshops were replicated in each country. The Midterm Review mentioned shortcomings of some of the training workshops: while trainers were competent in their technical fields, the information shared did not fully transfer into participants' knowledge and understanding. Yet, the selection of staff participating in workshops was also a factor that affected the efficacy of the workshops. The country partners nominated participants. Sometimes they selected persons with no background to understand the technical material.

The project design is rated satisfactory because it adopted a comprehensive approach that allowed countries to move in several ICM aspects simultaneously. Yet, more time to allow for country processes and internalization of project outcomes was needed. The MTR points out that while the project was quite comprehensive and included activities that addressed multiple conditions to enable ICM in the region, it was also output driven when taking into account the human and financial capacities of the counterparts in the eight Caribbean countries. The project consisted of a broad range of activities to be undertaken in a relatively short period in the context of time-consuming administrative rules and the government's approval process. While agreeing with the comprehensive treatment of POPs management, there is a sense among stakeholders that there was much emphasis on the production of outputs and that activities had to be rushed. For example, the project was programmed to identify contaminated sites (inventory) for three months. This was too short of a time as many organizations had to first understand the information that was requested and then had to organize a series of tasks. In the opinion of some of the stakeholders, this activity should have lasted at least six months. While agreeing that the project outputs have been of high quality, country partners also reported that project outputs require time to be internalized into their institutions. For example, the Model ICM Act was reported to be one of the region's most important contributions to the project. Still, it has also required time to conduct a deep analysis and considerable tailoring by the countries. For some country partners, the transition from the GEF POPs to GEF Islands-Caribbean has also been challenging because while they are still trying to absorb GEF POPs, they feel it is unlikely that they will have the time or resources to match the pace of the new project. Notwithstanding the comments of the MTR and the stakeholders, it is important to point out that the objectives of the project required a comprehensive approach and the implementation of

concurrent activities. While more time would have improved the absorption of project outcomes by the participating institution the trade-offs made in adopting the comprehensive approach paid off for the countries.

During project preparation, UNIDO carried out a detailed analysis that identified the specific country Stockholm Convention NIP priorities the project would address. Country partners reported that while the project implementation process was highly demanding, the project outputs were mostly of high quality and very relevant. During the evaluation project, stakeholders indicated that the project results remained highly relevant (updated POPs information, legal reforms, and awareness-raising). Country stakeholders also reported that an important result of this project is that countries have, for the first time, developed a reliable picture of the state of POPs and can report to the Stockholm Convention reliable information on their POPs conditions. The project has also supported countries in making progress on their commitments to the Basel Convention on the Control of Transboundary Movement of Hazardous Waste and their Disposal and the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade.

C. Gender Equality

This evaluation assessed the project performance on gender and youth as indicated in the UNIDO Policy on gender equality and the empowerment of women of April 2009 and revised in March 2015 and again in 2019. Mainstreaming a gender perspective, according to UNIDO, is fundamental to sustainable growth and poverty reduction and has important implications for women and men in any planned action, including legislation, policies, or programs. The UNIDO Policy on gender equality and the empowerment of women and its addendum provide the overall guidelines for establishing a gender mainstreaming strategy and action plans to guide the process of addressing gender issues in the Organization's industrial development interventions. The UNIDO Policy refers to the equal rights, responsibilities, and opportunities of women and men and girls and boys. Equality does not suggest that women and men become 'the same' but that women's and men's rights, responsibilities, and opportunities do not depend on whether they are born male or female. Gender equality implies that the interests, needs, and priorities of both women and men are considered. It is, therefore, not a 'women's issue'. On the contrary, it concerns and should fully engage both men and women and is a precondition for and an indicator of sustainable people-centered development. Empowerment of women signifies women gaining power and control over their own lives. It involves awareness-raising, building self-confidence, expanding choices, and increasing access to and control over resources and actions to transform the structures and institutions that reinforce and perpetuate gender discrimination and inequality.

The project's gender marker was assigned as 1 at approval, meaning that the project was expected to have limited contribution to gender equality15. Nevertheless, the project document identified gender balance in opportunities and positions of decision-making as an important aspect of the project. The project sought and achieved gender balance in aspects related to decision-making by ensuring gender parity in the composition of the project execution team, the project steering committee, and the country working committees and by engaging women and men in the planning and execution of public awareness events and other decision making roles in the project. While consultants, particularly those in technical areas, were mostly men, the project management unit was formed mostly by women. The Project Steering Committee was formed by 17 females and 9 males. In contrast, the Country Working Committees were formed by 50 females and 54 males (Table 5 and table 6). Training is often associated with opportunities for professional development. The project carried out 21 workshops on multiple topics. Participants in these workshops included 285 females and 270 males.16

Table 5: Gender composition within the Project Steering Committee 2017-2022 PSC Male Female

Table 5: Gender composition within the Project Steering Committee 2017-2022

PSC	Male	Female
UNIDO	1	1
Antigua and Barbuda	1	2
Barbados	1	2
Belize	2	0
Saint Kitts and Nevis	2	1
Saint Lucia	0	2
Saint Vincent and the Grenadines	0	1
Suriname	1	2
Trinidad and Tobago	1	2
BCRC	0	4
Total	**9**	**17**

Table 6: Gender distribution among Project Working Committees in the project countries 2017-2022

PWC	Male	Female
Antigua and Barbuda	12	12
Barbados	5	6
Belize	8	2
Saint Kitts and Nevis	12	7
Saint Lucia	8	6
Saint Vincent and the Grenadines	6	5
Suriname	1	7
Trinidad and Tobago	2	5
Total	**54**	**50**

Project activity 1.2.6: Develop gender sensitive public awareness/public education materials on POPs was the only project activity that specifically referenced the promotion and empowerment of women or gender equality. Gender consideration was included in the Regional POPs Communications Strategy, with gender-specific messaging included throughout the products developed. Yet, an opportunity was missed to fully convey messaging on the effects of POPs on human health and any specific effects of exposure on women.

The project document (2015) addressed the important gender issues mentioned above. The project document also established the link between health benefits by reducing the human exposure to POPs and PCBs and the POP campaigns also addressed some gender issues. Beyond this the project did not have any specific activities that addressed women's role in waste management, separation, and disposal and in the implementation of the three demonstration/pilot sites, which are core project activities. Nevertheless, the project focused mostly on support that is more of a foundational nature (such as regulations, plans and capacities) and that provide a condition that future projects can build on. Moreover, the gender related topics have been identified and are addressed in the GEF Islands-Caribbean project.

D. Knowledge Management

2.2.4 Information and Knowledge for decision-making

Access to sound information is an important condition for sound policy-making programming. All project activities involved important training elements, which included information often new to participants. Three major project activities focused on information to support policymaking and planning.
Stockholm Convention National Implementation Plans (NIPs).

Article 7 of the Stockholm Convention specifies that parties to the convention must submit a plan to implement its obligations, which should be linked to their national sustainable development strategy. In addition to presenting plans to meet their commitments to the convention, the NIPs present information on the condition of POPs in the countries. As indicated by the MTR, the countries have made little progress in implementing their NIPs. Moreover, the information in the NIPs was very outdated as most NIPs had been developed in the early to mid-2000s. By December 2022, when the evaluation took place, all eight participating countries had updated their NIP with the support of the project, five had summited their NIPs to the Stockholm Convention, and only two (Antigua and Barbuda and Barbados) were waiting for the Project Working Committee to approve the document prior to submitting it to the Stockholm Convention. While some of the countries were initially unhappy with the quality of NIPs summited by the consultants, they were satisfied with the outputs once BCRC-CARIBBEAN directly assisted countries in developing the NIPs. Countries often reported that the updating of the NIP was very helpful as it helped countries meet some of their reporting requirements to the convention. They also found the information useful during the development of the ICM legal framework.

Inventories of contaminated sites and prioritization of sites for treatment

This project activity intended to fill in an information gap regarding the existence of POPs and sites contaminated with toxic chemicals. The report on contaminated sites was completed and is available for five countries. By December 2023, three countries (Barbados, Belize, and Saint Lucia) had completed the inventory and site identification. In the remaining five countries (Antigua and Barbuda, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Suriname, and Trinidad and Tobago), the report was drafted and was being reviewed by the PWC. This exercise was carried out mostly by consultants with the help of country staff, including training workshops in each country. Country stakeholders reported that the information was very useful in identifying priority sites. Several Country Project Coordinators also found the GIS maps developed by the project particularly effective in communicating with policymakers. In Barbados, the inventory was linked to training on the Stockholm Convention and with the participation of officers from several ministries. This helped to develop a better understanding of the country's commitments to the Convention. Also, a local NGO (Blue Green Initiative) was hired to gather data, which helped create country capacities. The inventories

and prioritization of contaminated sites provided important information in developing national waste management strategies in all participating countries.

Regional Information System (RIS)
The RIS was intended to address the lack of easily available information on POPs in the region and was expected to assist countries in capturing, maintaining up-to-date data, and analyzing POPs conditions to inform the management of toxic chemicals. The RIS was designed to facilitate information to the Stockholm Convention, and it includes GIS features that allow easier communication with policymakers and the public. In addition to the POPs covered by the Stockholm Convention, the RIS will cover other chemicals that countries need to monitor to provide a comprehensive tool for ICM. The system was also developed to control the level of access to different stakeholders to guarantee the data's integrity while making information available to the public.
The system will be maintained and managed by the BCRC-CARIBBEAN as a service to the countries. At the same time, countries will be responsible for feeding information into the system. BCRC-CARIBBEAN will also be responsible for ensuring the quality of the data. BCRC-CARIBBEAN hired consultants to develop a RIS operational manual and conduct remote training for country stakeholders responsible for using the system. The system also has online links that explain the various functions and information entries. Countries appreciate that the RIS introduced measurement and reporting systems and has helped standardize information management to report and compare across countries and time.

By the date of this evaluation in December 2022, the RIS was set up, but few countries had uploaded information – in the interviews, only Trinidad and Tobago reported that an agency had been assigned the responsibility for uploading the information. Stakeholders reported that while they see the potential utility of the RIS, most do not sufficiently understand how to operate it. They attribute this to the limitations of the training they received, which was conducted remotely due to the COVID-19 travel restrictions. Another factor at play is that the RIS was mostly developed in the project's last phase, and the training time was short and did not have “hands-on” learning opportunities. However, in Trinidad and Tobago, where it was possible to carry out face-to-face training, the Institute of Marine Affairs (IMA) was responsible for uploading the information to the RIS and has developed sufficient capacity to navigate and manage the platform. The country project coordinator also indicated that the RIS is a useful tool for monitoring data to implement the countries’ Waste Management Rules. BCRC-Caribbean is aware of this situation. To resolve this, it has scheduled more in-depth training using remote small group hands-on workshops for the first quarter of 2023.

2.2.5 Public awareness campaigns
Awareness of the risks or benefits of a situation or event can provide powerful motives for behavioural change. While awareness does not require a deep technical knowledge of how dangers and opportunities come about, it does require an acknowledgment that a situation or event has consequences that affect the self, other people, or the environment. The promotion of awareness is also important because it can contribute to public support of policies and regulations that imply trade-offs in the use of public resources. The project carried out the Stopping the POPs campaign to inform the public about risky behaviours related to POPs, such as burning trash or inappropriate handling of PCBs.

Stopping the POPs was a campaign coordinated by the eight participating countries and supported by a strategy, training, and materials developed by BCRC-Caribbean. Country strategies identified the main POPs problem, audiences to be targeted, communication strategies to reach such audiences, capacities or resources to carry out the campaigning, and main barriers. The strategies also identified other country partners. Countries were supported to use multiple media to reach different populations by using a range of approaches that included spots on the television and radio, development of posters and talks at events, engagement of teachers and students, and social media. The project also developed a toolkit that countries used in planning their campaigns. Given COVID-19, much of the campaigns took place through the media and the web.

The evidence so far indicates that the materials developed and the strategies carried out for the Stopping the POPs campaign are helping overcome the technical barriers inherent to communication about POPs. The project contracted Knowledge, Attitude, and Practice (KAP) surveys before and after the campaign. By the time the evaluation took place in December 2022, the public awareness campaigns had been completed in Belize, Saint Kitts and Nevis, Saint Vincent and the Grenadines, and Trinidad and Tobago. The KAP Survey campaigns in these four countries concluded a 30% improvement in POPs awareness. The project also programmed post-campaign KAP surveys for the remaining four countries.
Despite the challenges of implementing the campaigns during the COVID-19 lockdowns, this project component is perhaps the component where country stakeholders reported the most enthusiasm and potential for follow-up. While respondents indicated they did not have the resources to continue the comprehensive approach followed during the campaign, respondents from most countries indicated that they were planning to continue on aspects of public awareness within their means.

In Antigua and Barbuda, for example, the public awareness campaign is considered a major success of the project as it largely introduced POPs to the population. The Communications Officer, Department of Analytics, met with heads of secondary schools on the island to integrate information on POPs into the school curriculum. At the time of the evaluation, there was also an initiative under discussion to integrate messaging on POPs into the curriculum at the Antiguan State College's environmental program. Similarly, respondents in Barbados reported that the awareness-raising campaign had been very important in moving the overall national agenda on POPs forward. The plan is to continue at a less intense pace as there are limited financial resources and the staff in the responsible government office in Antigua and Barbuda is very limited. In Trinidad and Tobago, the campaign focused on the risks associated with POPs and produced several materials to target specific populations. The Environmental Management Authority (EMA) has included funding in its 2023 budget to work with the Public Education and Communications Unit to include, in 2023, POPs materials in the school curriculum and in the Eco-Clubs established in most primary and secondary schools.

2.2.6. Broader adoption

Sustaining a development trajectory towards sound POPs and Chemicals management in the region

By the end of the project in December 2022, the project had achieved or was on its way to achieving all of its outputs by the end of the first quarter of 2023. In general, stakeholders reported that the project provided extensive information on POPs, much of which was new and which they found very valuable. While they benefited by developing a better understanding and awareness of the risks and implications of POPs, they reported that they could not act on all the information. Some recommendations could not be implemented because of a lack of equipment or because of competing priorities. Yet, stakeholders reported that they would consider putting into action recommendations and knowledge gained when opportunities arise, for example, when requesting equipment or introducing changes in waste management.

Thus, by the end of the project, the broad adoption of technologies and behavioural change had not occurred. Nor was there a redirection of the country's development trajectory towards ICM. The key enabling conditions for change were not sufficiently mature. But when considering the country conditions at project entry, it is unrealistic to expect otherwise. Given the temporal mismatch between the project duration, the complexity of waste management systems, and the time required for systems to change, there is a need to put in place mechanisms to continue to support countries to maintain and accelerate the trajectory toward ICM. For example, while the Model ICM Act was an important contribution to the region, there is still a need to enhance further and implement legal frameworks on toxic chemicals as countries still need to develop regulations and standards. Similarly, the awareness-raising achievements of the "Stopping the POPs" campaign still needed to be replicated and mainstreamed by integrating some aspects into the schools' curricula or by applying new methods and reactivating institutional links developed during the campaigns.

Regional mechanisms to catalyze mainstreaming, replication, and broader adoption
Two promising mechanisms in place will continue to cultivate the enabling conditions for ICM. One such mechanism is the BCRC- Caribbean which the project strengthened to continue to support country capacities to manage toxic chemicals in the region. During the project, the organization established administrative systems, instituted an annual auditing process, and grew from a staff of 4 persons to 14, often recruiting staff from the region and developing internal capacities that helped reduce hiring international consultants. BCRC-Caribbean developed capabilities to achieve economies of scale and help countries overcome fiscal and capacity constraints by coordinating regional training and developing models and handbooks that country officers could adapt. Given the multiple responsibilities of country project coordinators, BCRC- Caribbean played a key role in capturing country officers' attention and keeping countries engaged. BCRC-Caribbean emerged as a reputable organization that is well-positioned as a regional catalyst for ICM. County stakeholders interviewed across the region indicated that BCRC- Caribbean has the knowledge of the conditions in the region and the links with governments and across ministries that can help countries address challenges such as ICM. BCRC-Caribbean's reputation and credibility are also extended to other international organizations and conventions which have partnered with BCRC- Caribbean for the execution of a growing number of activities related to toxic chemicals in the region. Similarly, BCRC has been proposed as the regional representative of the Rotterdam Convention in the Caribbean.
The second important mechanism to continue to support the enabling conditions and broader adoption of ICM in the region is the approval of two GEF projects that will be executed by BCRC-Caribbean. The first is the GEF project 10279 which is s part of the program Implementing Sustainable Low and Non-chemicals Development in Small Island Developing States (ISLANDS) (implemented by UNEP and FAO and focused on the Caribbean). This project will be executed by BCRC-Caribbean and provide support to build on the accomplishments of this project, as well as of other projects in the region. The GEF Islands- Caribbean project plans to continue to address legislative and regulatory gaps related to waste flows of electrical and electronic equipment, End of Life Vehicles, mercury-added products and plastics, and to further coordinate pesticide sand POPs legislation. Building on the approach introduced by this project, the GEF Islands project intends to continue to develop a regional model that promotes harmonization of the national efforts across the region while also allowing individual countries to customize the model policies and regulations to enhance their existing framework. The new project will also support BCRC to continue developing tools and to build country capacities to promote public awareness and improve waste management through waste source segregation, improved hazardous waste storage, and introduce the treatment of plastics (PVCs) in the management of medical waste. The GEF Islands- Caribbean also proposes to replicate successful initiatives of this project, such as the promotion of firefighting foams carried out in Saint Lucia.
The second project, recently approved in 2021, is the Inter-American Development Bank (IDB) implemented "child" GEF 10258 Islands-Caribbean Incubator Facility project. The project will address financial conditions, which represent a major constraint to broader adoption. The delivery of outcomes will be addressed in a follow-up phase which is also part of the GEF Islands Program. Effective interagency coordination will be a key factor to ensure that the UNEP and FAO implemented GEF project 10279 and the IDB-implemented project will be mutually supportive.
While this evaluation does not intend to pass judgment on these two projects, the mention of these two projects is appropriate to this evaluation because this project GEF 5558 set the stage for these two projects by making important contributions to ICM in the countries and supporting the strengthening of BCRC. This combined approach that links continuity in financing with project execution that strengthens a catalyst organization is a proven strategy to accelerate a given development trajectory. Particularly important is strengthening the capacities and reputation of the catalytic organization. This GEF strategy has yielded important results in other GEF-supported regional and national initiatives. One example is the support provided by the GEF for nearly three decades to manage the South China Sea and the Seas of East Asia.13 Another example is the strengthening of the protected areas system in Mexico.

6.3. Lessons learned

There are some lessons that could be learnt from this project:

Regional activities, while appropriate to initiate processes in Small Island Developing States (SIDS), require follow-up and country-level support. Regional programs make good sense for small countries that share similar challenges as in the case of the Caribbean countries. Nevertheless, country institutions in the region are typically understaffed to meet their multiple responsibilities. In the case of highly technical interventions such as those related to the management of POPs, it is also likely that country counterpart organizations lack the range of expertise needed. Thus, while regional programs can help to initiate and kick start national processes to ensure country uptake (by supporting studies, priority setting and action plans, models, handbooks, etc.), it is also important to follow up by supporting deeper processes at the national level. For example, the project support to the strengthening of legal and institutional frameworks by developing the regional Model ICM Act, the Act required considerable work and expertise to adapt to country conditions. Similarly, in the case of the NIPs, governments will require country-level technical assistance and, most importantly, financial support to prevent a lack of action in NIP implementation (as was the case with earlier NIPs).

The regional mechanism is an effective approach to address challenges in supporting SIDS. The project's main objective was to develop a mechanism to support the management of POPs in the Caribbean. This included the strengthening of BCRC-Caribbean to become a facilitator and service provider to the partner states. The project helped BCRC-Caribbean develop its administration systems and audit procedures and during the project helped build staff capacities to support member countries. CBRC-Caribbean is now a highly regarded organization that has strong country support and is financed by multiple organizations. While BCRC-Caribbean is a key component of the regional mechanism, another important component is the establishment of a network across the eight countries for mutual support and exchange of expertise. The project also developed and tested cost-effective approaches to address country needs which could be further developed and strengthened. The regional mechanism is thus a model that can be adapted and tested in other regions concerning Small Island States and Less Developed Countries.

Address social and equity considerations in the planning and implementation of POPs management. While the project document linked the elimination of POP's with the reduction of health risks and project implementation incorporated some gender aspects of POPs management, few project activities directly addressed equity considerations related to the sound management of POPs. Yet equity considerations can be closely related to technologies well suited for POPs reduction in developing countries. Effective and sustainable approaches to reduce u-POPs, especially from open burning, need to consider social conditions. Such approaches are particularly applicable when considering people living around the landfills who often complement their income with the collection of metals or plastics that can be sold in the market. Allowing picking of plastics is a typical example of waste segregation that can be useful to reduce the potential sources of u-POPs, of waste that is burnt. Picking of metal is a practice that is often accompanied by burning electrical wire and other materials to render the metal in a condition that can be sold. Yet even though the burning of waste is known to be one of the main generators of u-POPs, during the evaluation staff in several landfills reported that they have a policy of not engaging waste pickers. Only the landfill visited in Antigua included an activity financed by the GEF Small Grants Program to work with pickers; this included introducing technology for the safe extraction of copper from wires and other recycling activities carried out by an independent entrepreneur. In other landfills, operators indicated that pickers were discouraged from entering the landfill because of safety precautions and the runaway fires sometimes caused by metal extraction. The Antigua example illustrates that landfills can establish partnerships to incorporate equity considerations by establishing alliances with entrepreneurs or non-governmental organizations that can promote approaches that prevent u-POPs while opening up new opportunities for the disadvantaged.

III. Core Indicators

Indicator 9 Chemicals of global concern and their waste reduced

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
0.00	0.00	0.00	58.20

Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)

POPs type	Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
Polychlorinated biphenyls (PCB)				58.20

Indicator 9.2 Quantity of mercury reduced (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.3 Hydrochloroflurocarbons (HCFC) Reduced/Phased out (metric tons)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.4 Number of countries with legislation and policy implemented to control chemicals and waste (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
			8

Indicator 9.5 Number of low-chemical/non-chemical systems implemented, particularly in food production, manufacturing and cities (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 9.6 POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.7 Highly Hazardous Pesticides eliminated

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.8 Avoided residual plastic waste

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 10 Persistent organic pollutants to air reduced

Grams of toxic equivalent gTEQ (Expected at PIF)	Grams of toxic equivalent gTEQ (Expected at CEO Endorsement)	Grams of toxic equivalent gTEQ (Achieved at MTR)	Grams of toxic equivalent gTEQ (Achieved at TE)
			13.92

Indicator 10.1 Number of countries with legislation and policy implemented to control emissions of POPs to air (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 10.2 Number of emission control technologies/practices implemented (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
			4

IV: Co Financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Anticipated at CEO($)	Materialized at MTR($)	Materialized at TE($)

Recipient Country Government	Sustainable Development & Environment (SDE)	In-kind	Recurrent expenditures	195,274.00	289,816.00	1,225,793.00
Recipient Country Government	St Kitts and Nevis SWMC	In-kind	Recurrent expenditures	1,037,036.00		1,791,176.00
Recipient Country Government	Min of Health, Wellness and Env, SVG	In-kind	Recurrent expenditures	176,294.00	68,381.00	85,728.00
Recipient Country Government	Directorate of Environment, Surinae	In-kind	Recurrent expenditures	389,000.00		334,795.00
Multilateral	BCRC-Caribbean	Grant	Investment mobilized	250,000.00	8,825.00	84,259.00
Recipient Country Government	Min of Env and Water, Trinidad and Tobago	In-kind	Recurrent expenditures	16,055.00		162,100.00
Recipient Country Government	NSWM, Antigua and Barbuda	In-kind	Recurrent expenditures	5,600,000.00	3,360,000.00	2,330,110.00
Recipient Country Government	Min of Environment, Drainage, Barbados	In-kind	Recurrent expenditures	60,000.00	896,266.00	646,181.00
Recipient Country Government	Ministry of Forestry, Belize	In-kind	Recurrent expenditures	1,762,000.00	197,517.00	700,130.00
Recipient Country Government	SWMA, Belize	In-kind	Recurrent expenditures	300,000.00	1,662,056.00	
GEF Agency	UNIDO	Grant	Investment mobilized	178,000.00	33,752.00	
GEF Agency	UNIDO	In-kind	Recurrent expenditures	250,000.00	250,000.00	
Multilateral	BCRC-Caribbean	In-kind	Recurrent expenditures	800,000.00	1,147,890.00	1,339,204.00

Recipient Country Government	Ministry of Agriculture, Suriname	In-kind	Recurrent expenditures	68,062.00	78,641.00	
Recipient Country Government	Solid Waste Management Company Limited	In-kind	Recurrent expenditures	10,012,382.00	16,391.00	52,510.00
Private Sector	Greening the Caribbean, St Lucia	Grant	Investment mobilized	30,000.00	26,584.00	27,453.00
Recipient Country Government	Department of Environment, Antigua and Barbuda	In-kind	Recurrent expenditures			250,746.00
Total Co-financing				**21,124,103.00**	**7,669,097.00**	**330,709.00**

Comments

Expected co-financing at approval was USD 20,471,154. The reported realized co-financing was just under half at USD 9,030,185 (Annex G). This is because USD10,012,382 of co-financing was not realized as the Solid Waste Management Company Limited in Trinidad and Tobago decided not to open a new landfill for which the project was to collaborate.

V: ENVIRONMENTAL AND SOCIAL SAFEGUARDS

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
		Not available at this stage	Not available at this stage

Measures to address identified risks and impacts

VI. ANNEX

Uploaded Document

Document Category	Title
M and E Document	Terminal Evaluation report Caribbean POPs