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CHEMICALS AND WASTE FOCAL AREA STUDY

(Prepared by the Independent Evaluation Office of the GEF)

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I. OBJECTIVES, METHODS, AND CONTEXT

1. Objectives

1. This study is the first comprehensive study of the Chemicals and Waste (CW) focal area undertaken by the Global Environment Facility's (GEF) Independent Evaluation Office (IEO),¹ encompassing the GEF's grant funding for activities focused on persistent organic pollutants (POPs), ozone depleting substances (ODS), mercury, and sound chemical management more generally. The GEF serves as the Financial Mechanism for the Stockholm Convention on Persistent Organic Pollutants and for the Minamata Convention on Mercury. The GEF has also assisted countries that are not eligible to receive funding through the financial mechanism for the Vienna Convention's Montreal Protocol on Substances that Deplete the Ozone Layer to meet their ODS phaseout obligations.

2. The purpose of this CW focal area study is to provide insights and lessons for the focal area going forward into the next replenishment cycle (GEF-7), based on evidence from an analysis of the CW portfolio's projects and terminal evaluations. The objectives of this study are to:

- (a) Assess the relevance of the CW strategy to the guidance of the conventions.
- (b) Present a synthesis of CW results and progress towards impacts.
- (c) Assess the approaches and mechanisms through which results have been achieved.
- (d) Assess efficiency and performance of the CW portfolio.
- (e) Identify lessons learned and scaling up opportunities for GEF-7.

2. Methods and Scope

3. To meet its objectives, the CW focal area study is responding to a set of key questions defined in its Terms of Reference (see Appendix A) through a mixed methods approach using both quantitative and qualitative analytical methods and tools. These methods include:

- (a) A synthesis of the major findings of evaluations of GEF CW activities.
- (b) A portfolio analysis based on data from the GEF's Project Management Information System (PMIS) and the IEO's annual performance reports (APRs);

¹ While chemicals and waste activities have undergone review as part of other GEF IEO evaluations, neither the GEF-5 Chemicals focal area nor the GEF-6 focal area have undergone a comprehensive focal area study. A Study of the Impacts of GEF Activities on Phase-Out of Ozone Depleting Substances was completed in 2000.

- (c) A review of all available terminal evaluations of GEF CW projects, focusing on progress toward impact, stakeholder engagement, private sector engagement, and country ownership.
- (d) Six case studies to investigate progress toward impact, as well as private sector engagement, transformational change, and the value of integrated or multi-focal area approaches.²
- (e) A review of quality at entry to assess coherence between GEF CW focal area strategy in the GEF-6 Programming Directions and CW projects that received at least PIF approval during GEF-6.
- (f) An expert review of the coherence of the GEF-6 CW focal area strategy with the guidance of the conventions, using a guidance-strategy mapping exercise, as an update to the Evaluation of the GEF Focal Area Strategies (2012).

4. Key informant interviews were also conducted with staff of the GEF Secretariat, Secretariats of relevant conventions (Stockholm, Minamata, Basel, and Rotterdam conventions), and implementing agencies involved in the CW focal area—United Nations Environment Programme (UNEP), United Nations Development Programme (UNDP), United Nations Industrial Development Organization (UNIDO), the World Bank, Food and Agriculture Organization (FAO), and the African Development Bank (AfDB). A full list of individuals consulted is provided in Appendix B.

3. Evolution of the CW Focal Area Strategies

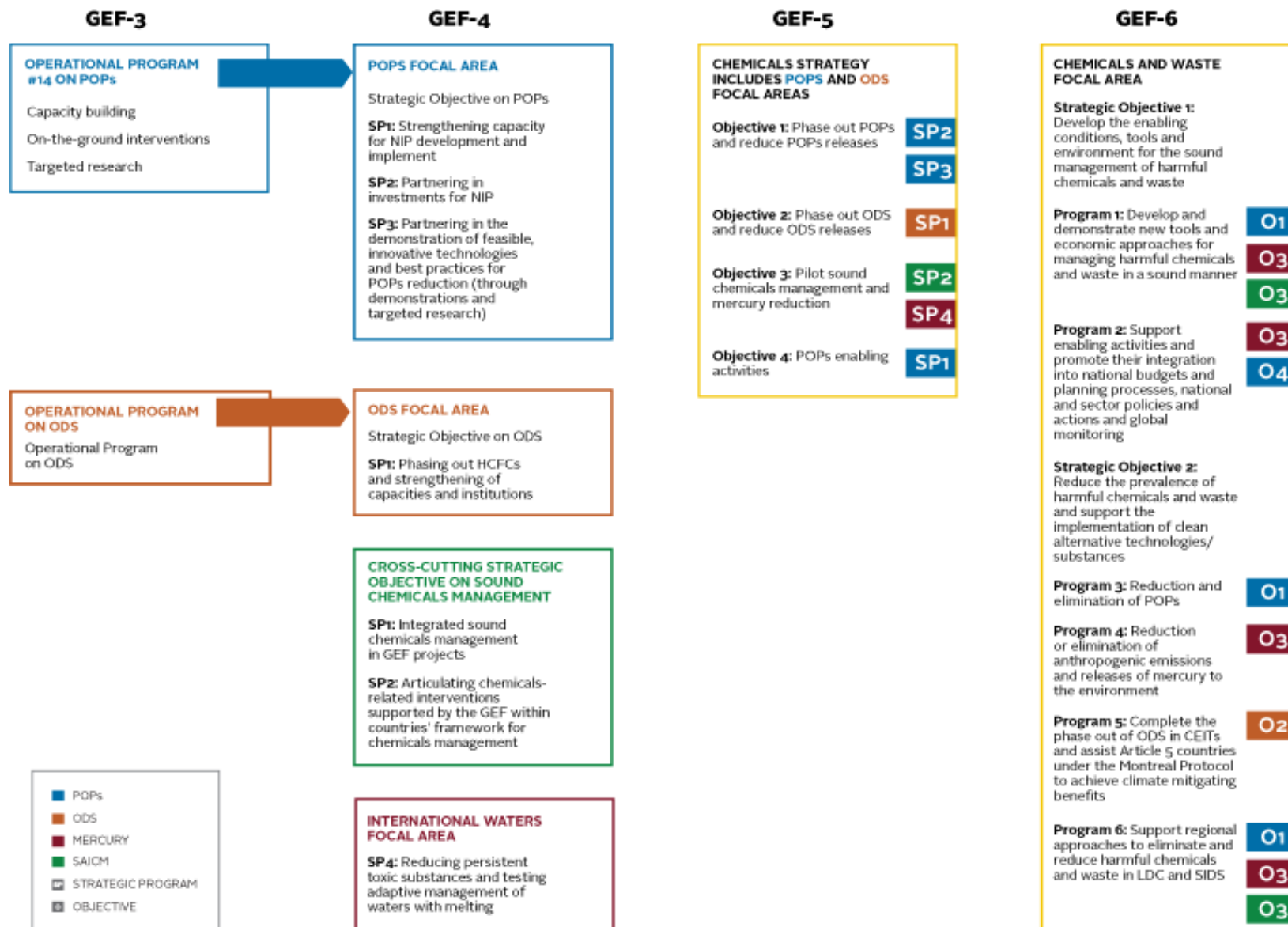
5. The organization of GEF support for chemicals and waste has significantly evolved since GEF-3, when a dedicated program for POPs was first introduced (see figure 1 below); ODS activities have been supported by the GEF since its first Operational Strategy in 1995. In GEF-4, separate focal areas for POPs and ODS were maintained, and support for sound chemicals management was made explicit for the first time through a cross-cutting strategic objective on sound chemicals management. Mercury was addressed to a limited extent by one of the strategic programs under the International Waters focal area. In GEF-5, a Chemicals Strategy offered a unifying framework for support for the POPs and ODS focal areas, as well as for sound

² Case studies are based on desk analysis and limited interviews with project proponents. Four closed projects were selected based on recentness of project completion (no earlier than 2011), representation across different chemicals (i.e., POPs versus ODS), evidence of private sector engagement, evidence of policy/regulatory outcomes, and representation across project size, single versus multi-country projects, lead implementing agencies, and regions. Because no multi-focal area projects with CW components have closed and been subject to terminal evaluations, two active multi-focal area projects were selected as case studies based on maturity in terms of implementation status, single versus multi-country projects, and coverage of industrial parks and gold.

chemicals management and mercury. For GEF-6, the GEF Fifth Assembly created a single CW Focal Area—replacing the POPs and ODS focal areas.

6. The GEF-6 CW Focal Area Strategy addresses similar core issues as GEF-5, in a slightly more elaborated configuration. The GEF-6 Strategy shows increased attention to mercury, covered under four of its six programs, consistent with the Minamata Convention’s progress toward coming into force. Program 1 puts renewed emphasis on developing and demonstrating new tools and approaches—a priority that was identified in GEF-4, but given reduced attention in the GEF-5 Strategy. Program 6 provides new, explicit support for regional approaches in least developed countries (LDCs) and small island developing states (SIDS).

Exhibit 1: Evolution of GEF Support for Chemicals and Waste

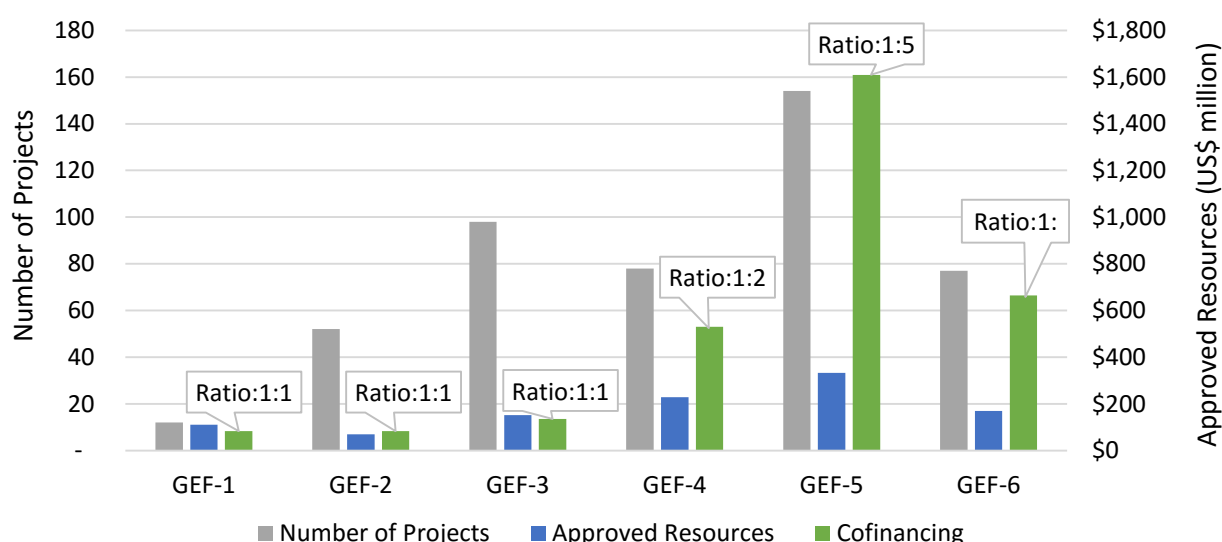


II. FINDINGS

1. Analysis of GEF Chemicals and Waste Portfolio

7. From its inception through July 20, 2016, the GEF has approved US\$1.1 billion in grant funding to 482 chemicals and waste projects, with an additional US\$3.1 billion via cofinancing.³ GEF funding for chemicals and waste has grown significantly since the pilot phase, as shown in Exhibit 2 below. The ratio of cofinancing to GEF funding has also steadily increased over the GEF phases.

Exhibit 2: Number of Projects, Approved Resources, and Cofinancing by GEF Phase



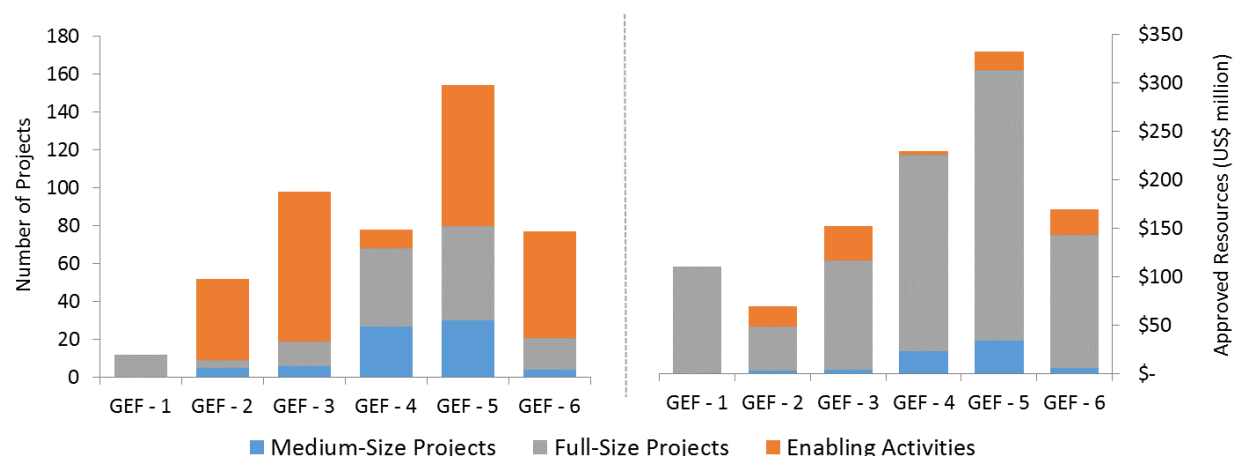
8. **Project Modality.** By number of projects, enabling activities represent the majority of GEF chemicals and waste projects (56 percent), followed by full-size projects (29 percent) and medium-size projects (15 percent), from GEF inception through July 20, 2016. By funding, FSPs have dominated, accounting for 83 percent of GEF funding to CW projects. Exhibit 3 shows the evolving number of projects and approved resources by modality during each GEF phase.

9. In GEF-2 and -3, significant numbers of EAs were undertaken to support early action on the implementation of the Stockholm Convention and the preparation of National Implementation Plans (NIPs). With the completion of the NIPs, the portfolio shifted toward implementation in GEF-4. In GEF-5, the number of enabling activities increased again, as nearly

³ Based on data in the GEF Project Management and Information System (PMIS) as of July 20, 2016. The analysis that follows includes all projects that have received at least PIF approval or are further along in the project cycle. Excludes cancelled and parent projects. Includes funding channeled through former POPs and ODS focal areas. Does not include Multi Focal Area projects with chemicals and waste components. Funding and cofinancing levels are those amounts indicated at project approval or endorsement.

60 countries reviewed and updated their NIPs and 14 countries prepared their Minamata Convention initial assessments (MIAs). In GEF-6, the balance has shifted toward MIAs, with fewer countries preparing National Action Plans for mercury and updating their NIPs.

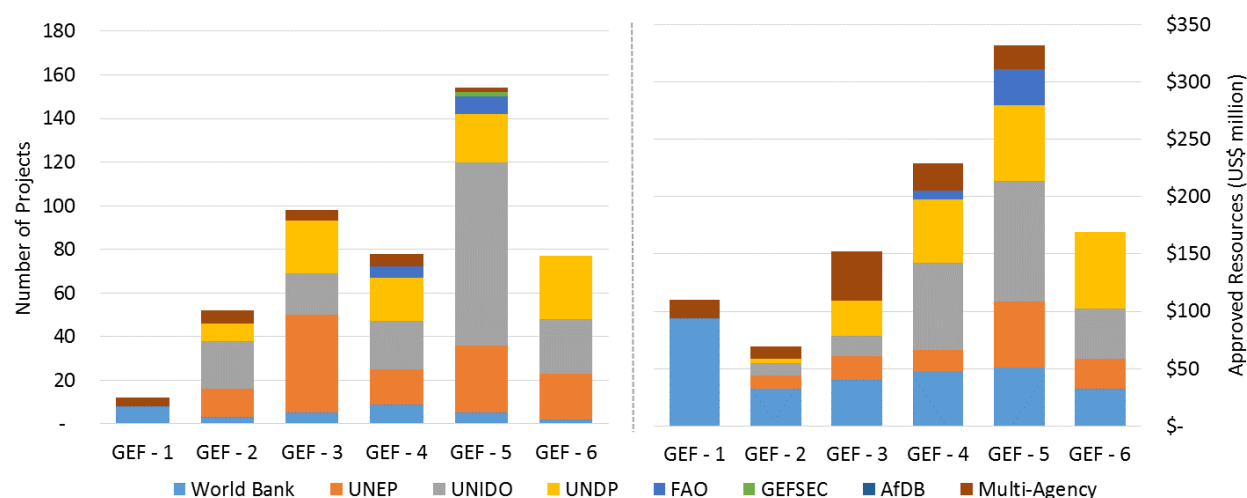
Exhibit 3: Number of Projects and Approved Resources by Modality and GEF Phase



10. **Agency.** By number of projects, UNIDO has implemented the largest share of projects (36 percent), given the prevalence of enabling activities in their portfolio (68 percent), followed by UNEP with 27 percent. By funding, the World Bank has received the largest share of approved GEF resources (28 percent)—attributed to the dominance of full-size projects in their portfolio (82 percent of projects and 98 percent of approved resources)—followed by UNIDO with 23 percent of approved resources. Exhibit 4 shows the number of projects and approved resources by agency during each GEF phase.

11. In the earlier GEF phases, a number of single-country, ODS phase-out projects were conducted by multi-agency teams (primarily UNDP/UNEP). In the later GEF phases, multi-agency projects have tended to be regional projects—including capacity strengthening and technical assistance for implementing the NIPs in African LDCs and SIDS (UNEP/UNIDO).

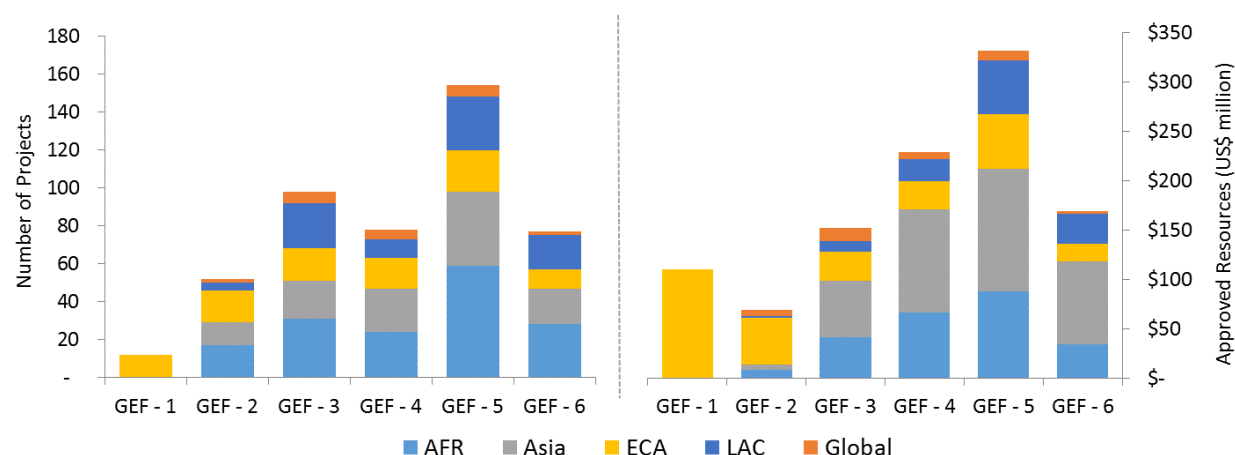
Exhibit 4: Number of Projects and Approved Resources by Agency and GEF Phase



12. **Region.** Asia, with 35 percent of approved GEF resources, accounts for the largest share of funding by region, followed by Eastern Europe and Central Asia (ECA) with 28 percent, Africa with 22 percent, and Latin America and the Caribbean with 11 percent. Global projects account for the remaining 4 percent of approved resources for CW projects. The large share of GEF resources by Asia can be attributed to the allocation of projects and funding to China, representing 6 percent of projects and 25 percent of funding for single country projects. Exhibit 5 shows the number of projects and approved resources by region during each GEF phase.

13. Approximately 30 percent of the CW funding was allocated to multi country projects in GEF-3, GEF-4, and GEF-5. So far in GEF-6, a slightly lower percentage of approved funding has been directed at multi-country projects (14 percent), but that balance could shift in the latter half of this GEF period.

Exhibit 5: Number of Projects and Approved Resources by Agency and GEF Phase



14. **Country Conditions.** Approximately 31 percent of single country chemicals and waste projects approved since GEF inception were implemented in LDCs and SIDS. UNIDO is the implementing agency with the highest share of single country projects in LDCs and SIDS (46 percent), followed by UNEP with 31 percent. In terms of funding, GEF support for LDCs and SIDS has fluctuated over time, representing 10 percent of approved CW resources in GEF-2 and GEF-3, 4 percent in GEF-4, 6 percent in GEF-5, and 4 percent thus far in GEF-6. Among single country projects that are in LDCs and SIDS, more than half are National Implementation Plans (NIPs) or Artisanal and Small Scale Gold Mining (AGSM) National Action Plans (NAPs). Only 10 percent are implementation projects.

15. Multi-country chemicals and waste projects have also included support for LDCs and SIDS. Approximately 60 percent of multi country projects have included support for at least one LDC and/or SIDS country. Many of these projects have specifically focused on African LDCs, representing more than 40 percent of multi country CW projects that include support for LDCs and SIDS. For example, projects with GEF IDs 3942, 3968, and 3969 include NIPs support to 24 African LDCs. In the GEF-6 CW Strategy, Program 6 is dedicated to supporting regional approaches in LDCs and SIDS.

16. **Multi Focal Area Projects.** Eleven multi focal area (MFA) projects with chemicals and waste components have been approved since GEF inception; nine of those projects were approved in GEF-5 and GEF-6. No MFA projects have been completed; four are under implementation. The proportion of chemicals and waste resources in MFA projects represents 7 percent of approved resources from GEF inception through July 20, 2016. The proportion of resources has generally increased across GEF periods, representing 0 percent in the pilot phase through GEF-3, 12 percent in GEF-4, 8 percent in GEF-5, and 10 percent thus far in GEF-6. MFA

projects also represent just 2 percent of the total number of approved projects in the chemicals and waste portfolio.

17. **Cofinancing.** As shown in Exhibit 2 above, cofinancing ratios have steadily increased for chemicals and waste activities over time, reaching a high of 1:5 in GEF-5. Recipient country governments are the largest source of cofinancing for CW projects (40 percent), followed by the private sector (30 percent) and GEF Agencies (10 percent).⁴ NGOs, multilateral and bilateral agencies, beneficiaries, donor agencies, and others account for the remaining 20 percent. Cofinancing by government agencies, the private sector, and the GEF Agency have generally increased over the GEF replenishment periods, while cofinancing by others has remained the same or decreased over time. In-kind contributions and grants represent 73 percent of the types of cofinancing received. Loans, guarantees, and equity account for the remaining 27 percent.

18. Cofinancing fully materialized in 56 percent of the 54 completed CW projects with terminal evaluations. The median project ratio of actual cofinancing to promised cofinancing was 1.02, while the average ratio was 1.59. The median project ratio of promised cofinancing to GEF grant and median project ratio of realized cofinancing to GEF grant were 1.04 and 1.07, respectively.

2. Review of Existing Evaluative Evidence

19. The review below summarizes the major findings and conclusions of previous evaluations conducted by the GEF IEO. The review focuses on evidence-based conclusions reached by previous evaluations regarding results/impact and relevance to the conventions. These evaluations include the Third, Fourth, and Fifth Overall Performance Evaluations (OPS3, OPS4, and OPS5), as well as an impact evaluation of the ODS phaseout in countries with economies in transition (CEITs), completed in 2010. The Stockholm Convention Secretariat has also undertaken three reviews of the GEF as its Financial Mechanism, most recently in 2012. No other stand-alone evaluations of GEF CW activities have been conducted by the Agencies or other organizations, to the knowledge of the evaluation team. As mentioned above, this study constitutes the first comprehensive evaluation of the CW focal area.

A. OPS3 (2006): *Progressing Toward Environmental Results*

20. **ODS.** OPS3 found that the GEF had been highly successful in eliminating consumption (that is, production, exports, and imports) and emissions of ODS in CEITs, with more than 99

⁴ Based on PMIS data through November 9, 2016, provided by the GEF Secretariat on November 16, 2016. Data are planned cofinancing at time of appraisal. Cofinancing amounts for projects with the statuses dropped, cancelled, CEO PIF rejection, rejected, withdrawn, and not recommended were excluded from the analysis.

percent of the agreed phaseout having been accomplished. The study recommended that the GEF continue to coordinate with the Multilateral Fund of the Montreal Protocol regarding the future phaseout of hydrochlorofluorocarbons (HCFCs) and funding eligibility issues.

21. **POPs.** OPS3 found that the GEF was responsive to the priorities of the Stockholm Convention and had made significant progress in implementing convention guidance through the funding of NIPs in more than 100 countries. Some concerns were expressed regarding the quality and consistency of the NIPs across countries. Moving toward implementation, OPS3 noted that the nature of chemicals management was likely to allow for a clear results chain, particularly if the proper steps were taken up front to identify human health and environmental baselines. Additional opportunities around cross-focal area synergies were also identified.

B. ODS Impact Evaluation and OPS4 (2010): Progress toward Impact

22. **ODS.** An impact evaluation and OPS4 found that GEF support for the ODS phaseout in CEITs has made a contribution toward global environmental benefits. In particular, legislative and policy changes supporting ODS phaseout provided a foundation for success and ensured sustainability. Private sector commitment to the ODS phaseout was also a critical driver for the success of GEF investments in CEITs. The studies found that illegal trade threatened to undermine gains in ODS reduction. In addition, the national ozone units ceased to function in some CEITs after GEF support ended, which could prevent measures from being put in place to address remaining threats to the ozone layer.

23. **POPs.** OPS4 found that the GEF has been responsive to guidance from the Stockholm Convention Conference of the Parties (COP) and is moving into the next phase of support by funding the implementation of NIPs. Because only two projects had been completed and undergone terminal evaluations at the time of OPS4, it was not possible to draw substantive conclusions. However, the study identified examples of weak support and participation by broader stakeholder groups, as well as lack of buy-in by the key industrial producer sectors.

C. Third Review of the Financial Mechanism of the Stockholm Convention (2012)

24. This review found that the GEF—as the primary entity entrusted with the operation of the financial mechanism—has continued to be largely responsive to the COP by incorporating guidance into the GEF-5 Chemicals strategy and in project approvals. Project approvals show that the GEF has approved resources during GEF-4 and GEF-5 for specific priorities requested in COP guidance including elimination of dichloro-diphenyl-trichloroethane (DDT), demonstration of best available techniques and best environmental practices (BAT/BEP), support of the global monitoring program, capacity development in LDCs, and NIP updates.

D. OPS5 (2014): At the Crossroads for Higher Impact

25. OPS5 found that the small number of completed POPs and ODS projects made it premature to draw focal area-specific conclusions. For information purposes, the study showed that two of nine POPs projects reviewed (13 percent), and all five ODS projects reviewed reported reduced environmental stress. In 60 percent of ODS projects, most or some broader adoption initiatives were implemented or adopted, compared to 11 percent for POPs projects. OPS5 also noted that the ODS focal area has decreasing needs, whereas the new role of the GEF vis-à-vis the Minamata Convention requires new resources.

III. ASSESSMENT

1. Relevance

26. The GEF's strategy and programming in chemicals and waste have been largely coherent with the relevant guidance issued by the two conventions for which the GEF serves as Financial Mechanism: The Stockholm Convention on Persistent Organic Pollutants and the Minamata Convention on Mercury.

A. Stockholm Convention

1. Coherence of the Focal Area Strategy

27. The GEF-6 CW Focal Area Strategy is largely responsive to relevant guidance from the Stockholm Convention.⁵ A guidance-strategy mapping analysis was conducted to inform this assessment; for the detailed results of this analysis, please see Appendix C.

28. In GEF-6, the CW Strategy includes support for long-standing funding priorities such as NIPs and the newer timebound priorities agreed at the 6th Conference of the Parties, including polychlorinated biphenyls (PCBs), newly listed POPs, DDT, and BAT for new sources. Support for Stockholm Convention regional centers—which was identified as a gap in the GEF-5 Chemicals Focal Area Strategy—is explicitly encouraged in the GEF-6 Strategy (see text box).

29. Some gaps and concerns were identified through consultation with the Stockholm Convention Secretariat and through mapping of the GEF-6 CW Strategy to relevant guidance from the Stockholm Convention. These include:

- (a) GEF support for information exchange in general and the Clearing-House Mechanism in particular was requested by COP-4. CHEM-1 of the GEF-5 Strategy and Program 6 of

⁵ This assessment provides an update to the analysis of convention guidance provided in *Technical Paper 5: Chemicals* prepared as part of the *Evaluation of the GEF Focal Area Studies* (2012) in support of OPS5.

the GEF-6 Strategy allow for programming on awareness raising on chemicals, although neither the GEF-5 nor the GEF-6 Focal Area Strategies explicitly address activities on information exchange mechanisms and the Clearing-House Mechanism. In its report to the Sixth COP, the GEF Secretariat noted that information generation, management, and exchange cuts across all objectives and outcomes in the GEF-5 Strategy, with some projects including specific information dissemination components. The report also indicated that standalone information exchange activities could be supported within the GEF's mandate (objective 1, outcome 5 of the GEF-5 Strategy).

- (b) Although the GEF-6 Strategy addresses priority funding areas identified in COP guidance, the Strategy does not indicate priority for countries that have not yet received funding for implementation of activities in NIPs, as was requested by COP-5 (Decision SC-5/23), although the GEF Secretariat considers this priority in proposing projects to the annual work program. (See also Section 3 on the transparency of the project approval process.)

GEF Engagement with Stockholm Convention Regional Centers

This study identified ten projects approved in GEF-5 and -6 that are expected to be executed by or in partnership with Stockholm Convention Regional Centres.^a Nine of the 10 are regional projects, and nine are implemented by UNEP, and one by UNIDO. Four projects are in LAC and will be executed by the joint Stockholm and Basel Regional Center in Uruguay; five projects in Africa will be executed by the Africa Institute (a joint Stockholm and Basel Regional Center); one project in Asia will be executed by the Stockholm Convention Regional Centre for Capacity-building and the Transfer of Technology in Asia and the Pacific (SCRCAP)/Basel Convention Regional Centre for Asia and the Pacific (BCRC Beijing).

Interviews noted the potential for the centres to support regional delivery of GEF activities, but also identified some challenges in this regard. The Stockholm Convention Secretariat identified GEF delivery through regional centres as an area for improvement. GEF agencies reported some reluctance from recipient country governments to work with the centres, given perceived capacity limitations. In particular, mismatched or underdeveloped skills for executing GEF projects was seen as a limiting factor for engaging with regional centres; while some centres may function effectively as information providers, they may not meet criteria for technical expertise and financial management that are applied by the GEF implementing agencies in selecting executing agencies.

^a GEF IDs 4881, 5148, 5494, 5532, 5554, 5879, 9080, 9185, 9276, and 9494.

2. Coherence of GEF-6 Programming and Review of Quality at Entry

30. A quality at entry mapping exercise was conducted to look at the coherence between the GEF-6 CW Strategy and the 25 CW projects that have received at least PIF approval during GEF-6. Overall, the strategic fit of project concepts approved in GEF-6 to the GEF-6 Focal Area Strategy is clear, and all relevant CW projects support one or more of the funding priorities given by the Stockholm Convention COP. Specifically:

- (a) With regard to the **timebound priorities**, eight approved GEF-6 CW projects support the elimination and management of equipment containing PCBs, four support the elimination or restriction of newly listed POPs, and eight support the use of BAT for new sources.
- (b) Three of the 33 countries supported by project concepts approved in GEF-6 have **not before received GEF funding for implementation of activities in NIPs implementation** (Montenegro, Gabon, and Paraguay).⁶
- (c) One project concept has been approved to support **capacity building for the POPs Global Monitoring Plan** in the Pacific region.
- (d) Six EAs have been approved to **review and update NIPs** in six countries (out of 56 EAs approved thus far in GEF-6).

31. Some gaps and concerns were identified through consultation with the Stockholm Convention Secretariat and through mapping of approved projects in GEF-6 to relevant guidance from the Stockholm Convention. These include:

- (a) None of the project concepts approved in GEF-6 yet support the elimination or restriction of DDT.
- (b) The Stockholm Convention Secretariat noted that GEF-6 programming has been coherent with the timebound priorities, but not necessarily in an appropriately balanced way: specifically, more emphasis on unintentional POPs (UPOPs) and less on legacy POPs is noted. This de-emphasis may make it difficult for the GEF to meet its corporate global environmental benefits targets of 80,000 tons of POPs disposed. Projects to reduce emissions of UPOPs also received the largest share of resources in GEF-5, targeting sectors such as municipal wastes, health care wastes, e-wastes, and the manufacture of pulp and paper.
- (c) The Stockholm Convention Secretariat noted that updating NIPs has not been sufficiently covered by GEF programming, including in GEF-6. Prior to COP-5 (2010), the GEF funded the preparation of the initial NIPs in 138 countries, with grant funding totaling US\$68 million. Signatories were required to review and update their NIPs within two years after the entry into force of the COP-5 amendments listing nine additional POPs (August 2012). Since then, EAs to review and update NIPs have been

⁶ In GEF-6, approved CW POPs projects are in Colombia, China, the Pacific region (Fiji, Kiribati, Marshall Islands, Niue, Palau, Solomon Islands, Tuvalu, Vanuatu, Samoa), Belarus, Montenegro, Philippines, Honduras, Africa region (Ethiopia, Gabon, Kenya, Madagascar, Mali, Senegal, Tanzania, Zambia, Zimbabwe), Jordan, Ecuador, Mexico, Thailand, Georgia, Cameroon, Nigeria, Paraguay, and Vietnam.

approved in 61 countries, with grant funding totaling about US\$11.5 million; initial NIPs have also been approved in four new countries.⁷ In total, 10 countries supported by the GEF have transmitted updated NIPs addressing the new POPs to the Stockholm Convention Secretariat.

B. Minamata Convention

32. This study finds that the GEF-6 CW Focal Area Strategy is responsive to the guidance from the Minamata Convention, including support for enabling activities under Program 2 (MIAs and AGSM NAPs) and for early implementation activities under Program 4. Mercury activities are also supported under Programs 1 and 6. Early guidance issued to the GEF from the Minamata Convention has been quite broad, given the focus on preparing and establishing the GEF as the financial mechanism. The Minamata Convention Secretariat noted that guidance from the first Conference of the Parties, currently in draft form, is likely to be more specific.

33. Interviewees praised the GEF's support for ratification and early implementation of the Minamata Convention. In GEF-5 and -6, the GEF has approved 11 NAPs in 18 countries primarily in Africa and Latin America and the Caribbean (LAC), and 46 MIAs in 77 countries. Among these countries, 18 have accepted or ratified the convention.⁸

34. The GEF has significantly increased its support for mercury-related initiatives in GEF-6 by allocating US\$141 million, a nearly ten-fold gain on the approximately \$12.7 million that the GEF approved for 20 mercury projects (6 FSPs and 14 MSPs) during GEF-5. Of the six mercury-related GEF-6 project concepts that have been approved, two projects support capacity strengthening for mercury management, two support the reduction of mercury releases through the introduction of either green chemistry or BEP/BAT, and two support both capacity strengthening and emission reductions. Although none of the projects in the GEF-6 cohort reviewed for this study address mercury use to process gold, four gold MSPs were approved in GEF-5 and in October 2016, the GEF Council approved a global program—Global Opportunities for Long-term Development (GOLD) of the Artisanal and Small Scale Gold Mining Sector—to inform miners in Colombia, Guyana, Peru, Kenya, Burkina Faso, Philippines, Indonesia, and Mongolia and to design and deploy ways in which they can get loans to switch from mercury-based extraction techniques to cleaner and more efficient ones. Regulations and policies will also be strengthened and mercury-free mining communities connected to global markets and associated supply chains.

⁷ Bosnia-Herzegovina, Namibia, Myanmar, and Maldives

⁸As of October 12, 2016. Bolivia, Botswana, Chad, China, Djibouti, Gabon, Guinea, Guyana, Lesotho, Madagascar, Mali, Mexico, Mongolia, Panama, Peru Senegal, Swaziland, Zambia.

C. Relevance to Other Conventions, Initiatives, and Focal Areas

35. Coordination to enhance synergies with countries' responses to multilateral environmental agreements addressing chemicals issues for which the GEF is not a financial mechanism (including the Strategic Approach to International Chemicals Management [SAICM] and the Basel and Rotterdam conventions) began to be encouraged in GEF-4, as **Error!** **Reference source not found.** above illustrates.

36. **SAICM.** SAICM has had a small funding envelope since GEF-5 for activities that address SAICM's global priorities while generating global environmental benefits. According to the SAICM Secretariat, a coherent vision for those resources has been lacking until very recently.⁹ Moving forward in GEF-6, instead of approving individual projects, the SAICM Secretariat is working with UNEP and UNIDO to develop a strategic set-aside program as a US\$12 million FSP at the global and regional level, aiming to address emerging policy issues and benefit all countries rather than individual countries that apply to the SAICM window.

37. The majority of approved CW projects in GEF-6 also generally support the overall objective of SAICM to achieve the sound management of chemicals throughout their life cycle, with 11 of these projects addressing emerging policy issues identified by the International Conference on Chemicals Management (ICCM), including chemicals in products, hazardous substance within the life cycle of electrical and electronic products, and highly hazardous pesticides. Two projects have also been approved to support the promotion of green chemistry.

38. **Basel and Rotterdam Conventions.** GEF-funded activities that are also relevant to the Basel and Rotterdam conventions include those that promote environmentally sound management of POPs waste, minimization of waste to reduce emissions of UPOPs, and strengthening legal and regulatory national frameworks to facilitate environmentally sound management of POPs and related waste. An initial exercise identified 36 GEF-funded activities—with grant funding totaling US\$187 million and nearly \$730 million in cofinancing—that address the priorities of Basel, Minamata, Rotterdam, and Stockholm conventions in a joint manner.

39. **Montreal Protocol.** None of the GEF-6 project concepts reviewed indicated co-benefits or relevance for the Montreal Protocol. Interviews suggested that while collection and co-incineration of POPs and ODS may represent a significant joint opportunity, it has not yet taken hold, partly because of lack of incentives and potentially knowledge gaps. The terminal

⁹ In the absence of formal guidance from the SAICM ICCM to the GEF, the GEF Secretariat has full discretion on the use of those resources.

evaluation review (see Section B) indicated that some methyl bromide has been collected and incinerated in conjunction with obsolete pesticides projects.

40. **Sustainable Development Goals.** With a broad focus on chemicals and waste management, all approved CW projects support in some capacity achievement of the Sustainable Development Goals adopted by world leaders in September 2015 at the UN Sustainable Development Summit in New York. Most notably, the focal area projects support the achievement of targets 3.9 to *“by 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination”* under Goal 3 and target 12.4 to *“by 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment”* under Goal 12. Many projects may also contribute to Goal 7 on energy access, Goal 9 on built infrastructure and industrialization, and Goal 11 on sustainable cities.

41. **Other Focal Areas.** Four CW projects under GEF-6 are multi-focal area projects; these include cross-focal area collaborations with climate change, international waters, and biodiversity. In addition, a number of other approved CW projects anticipate benefits for other focal areas. Specifically, six projects identify reductions of greenhouse gas (GHG) emissions as an anticipated outcome.

D. Continuing Relevance of the Chemicals and Waste Focal Area and Lessons Learned for GEF-7

42. The analysis of the evolution of the CW strategy over time concludes that the focal area has evolved well through the GEF-4, GEF-5, and GEF-6 phases to expand to cover new global priorities such as mercury and to embrace synergies between chemicals issues. The approval of several integrated projects addressing multiple chemicals issues are evidence of the benefits of a consolidated CW focal area. So far under GEF-6, three projects have been approved that target emission reductions of both POPs and mercury. For example, an FSP in Colombia seeks to introduce BAT/BEP to reduce release of mercury and UOPs from healthcare waste, the processing of waste electrical and electronic equipment, secondary metal processing, and biomass burning.

43. The focal area has been coherent with the guidance of the conventions for which it is the financial mechanism, as well as jointly supportive of the goals of related multilateral environmental agreements, including SAICM, the Basel and Rotterdam conventions, and the Montreal Protocol. The quality at entry review of project concepts approved thus far in GEF-6

suggests that the focal area is largely responsive to the GEF-6 programming directions, although some re-balancing may be needed among funding priorities.

44. Moving into GEF-7, the CW focal area continues to be highly relevant. It is contributing to eliminating the use of PCBs in equipment and the environmentally sound management of PCB-containing liquids and equipment, eliminating the production and use of newly listed POPs, including perfluorooctanesulfonic acid (PFOS), reducing POPs and mercury releases from production processes, e-waste and healthcare waste management, and biomass burning, reducing artisanal and small-scale miners' use of mercury to process gold (the largest single global use of mercury), and supporting sustainable urban development and green growth. Ambitious SDG targets related to the environmentally sound management of chemicals and waste make the CW focal area of increasing relevance and importance. The recent adoption of the Kigali Amendments to the Montreal Protocol, which will substantially reduce emissions of hydrofluorocarbons (HFCs), gives new relevance to the CW's ODS program and offers opportunities for multifocal area collaborations with the climate change focal area.

45. Stakeholder interviews suggested some lessons learned regarding the formulation and implementation of the GEF-6 Focal Area Strategy that may be relevant for planning for GEF-7 replenishment cycle.

- (a) While some multi-chemical projects have been approved in GEF-6, an ongoing challenge identified by multiple interviewees is a deficiency of incentives or sometimes scope to combine chemicals-related issues to promote sector-wide approaches (e.g., to update legislation to fully address chemicals and waste, rather than just PCBs, or to address solid waste management more broadly, rather than just POPs waste). This challenge can affect the GEF's ability to scale-up its interventions; broader institutional infrastructure may be needed to support hazardous waste or chemicals management. This challenge also can affect the GEF's ability to attract cofinancing or mainstream into larger investment projects (e.g., if co-financers are looking at a wider scope and unwilling to go through the GEF project cycle to obtain resources that are relevant to part of a bigger project).
- (b) Another challenge has been balancing hard outcome targets (tonnes of POPs and mercury disposed) against the importance of soft activities and outcomes, such as support for developing policy and regulatory frameworks and institutional strengthening. Many interviewees noted the lessons learned from the Montreal Protocol in terms of the value of strong regulatory regimes to support ODS phaseout and ensure that the private sector continues to implement the best practices that individual projects demonstrate. A related challenge is the trade-off sometimes

between hard outcome targets and political realities; for example, tackling the biggest problem sites to meet Convention targets versus prioritizing countries that may not have yet received funding for their NIP or funding lower tonnage projects in Africa.

2. Results

A. Key Trends in Performance

46. This study looked at 54 completed chemicals and waste projects with terminal evaluation, representing US\$269 million in GEF funding and US\$272 million in realized cofinancing. These projects include 16 ODS focal area projects and 36 POPs projects.¹⁰ GEF-4 projects represent the largest share of completed projects (43 percent), followed by GEF-3 projects (26 percent), GEF-2 projects (20 percent), GEF-1 projects (9 percent), and GEF-5 projects (2 percent).

1. Outcome Achievement

47. Seventy-eight percent of CW projects (accounting for 81 percent of GEF funding) have overall outcome ratings in the satisfactory range. This performance is similar to ratings reported across all focal areas in the Annual Performance Report 2015 (APR 2015). POPs projects had slightly higher success rates (78 percent) than ODS focal area projects (75 percent). Seventy-nine percent of national projects and 80 percent of global projects have satisfactory outcomes, compared to 70 percent of regional projects. Projects executed by government agencies had stronger performance on average (82 percent satisfactory) than those executed by multilateral organizations (68 percent).¹¹ Success rates were higher in Asia (91 percent) and ECA (79 percent), and lower in LAC (67 percent) and Africa (50 percent). Outcome ratings have improved over time; 83 percent of GEF-4 projects have satisfactory outcomes, compared to 60 percent in GEF-1.

48. Exhibit 6 shows outcome ratings by lead implementing agency.¹² Although these data show a larger share of UNDP-led projects with less satisfactory outcomes, that result is largely driven by four GEF-1 and -2 ODS projects in Latvia, Azerbaijan, Turkmenistan, and Kazakhstan that were implemented jointly by UNDP and UNEP. Among GEF-3 and -4 projects, the World

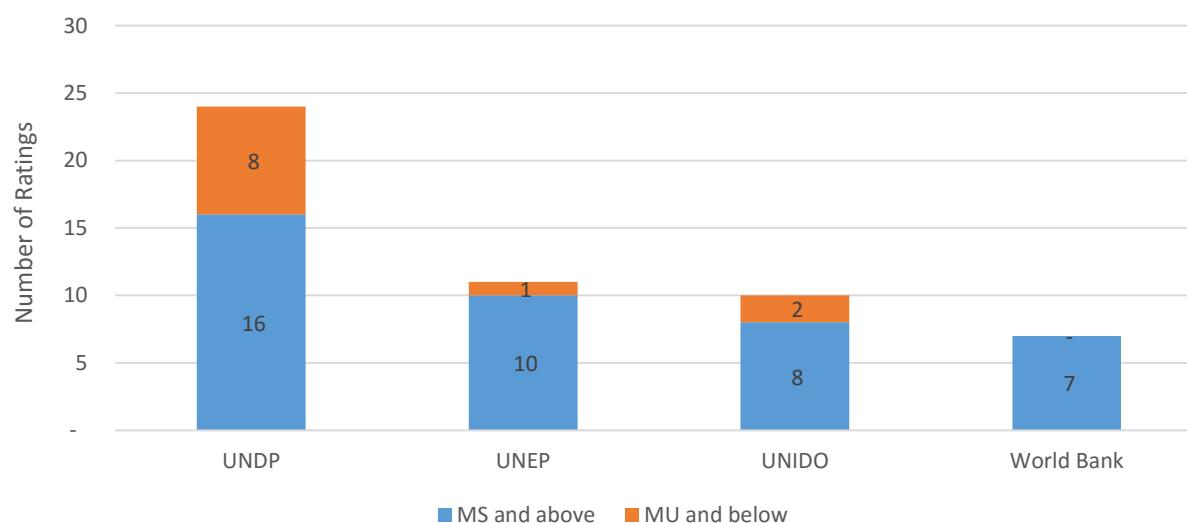
¹⁰ The remaining two projects were considered international waters focal area projects in GEF-2.

¹¹ Multilateral organizations include the United Nations Office for Project Services (UNOPS) and United Nations Institute for Training and Research (UNITAR), among others.

¹² Outcome ratings for projects led by FAO and the World Bank/FAO are excluded from the analysis due to insufficient sample sizes. The sole project led by FAO (GEF ID 3212) had an unsatisfactory outcome, while the sole project implemented jointly by the World Bank and FAO (GEF ID 1348) had a satisfactory outcome.

Bank had the highest share of satisfactory outcome ratings (100 percent), followed by UNEP (83 percent), UNIDO (78 percent), and UNDP (75 percent).

Exhibit 6: Overall Outcome Ratings by Lead Implementing Agency



Project Examples: High Ratings for Outcomes and Sustainability

The terminal evaluation review identified the following examples of closed projects with high outcome and sustainability ratings:

- A project in Mauritius (GEF ID 3205, implemented by UNDP) sent all inventoried obsolete POPs for environmentally sound disposal, as well as additional hazardous chemicals, exceeding its project target and eliminating POPs from the country. This project also achieved sustainable success in switching from DDT to pyrethroids as an alternative for vector management at airports and seaports.
- A project (GEF ID 3212, implemented by FAO) safeguarded more than 200 metric tons of obsolete pesticides in Belarus, Azerbaijan, and Georgia, and achieved more than anticipated in terms of awareness raising and capacity building on obsolete pesticide management and disposal, through the implementation of micro-support projects. The project was followed on by European Commission support to a regional project to dispose of obsolete pesticides, with a budget of €8.5 million in ten countries.

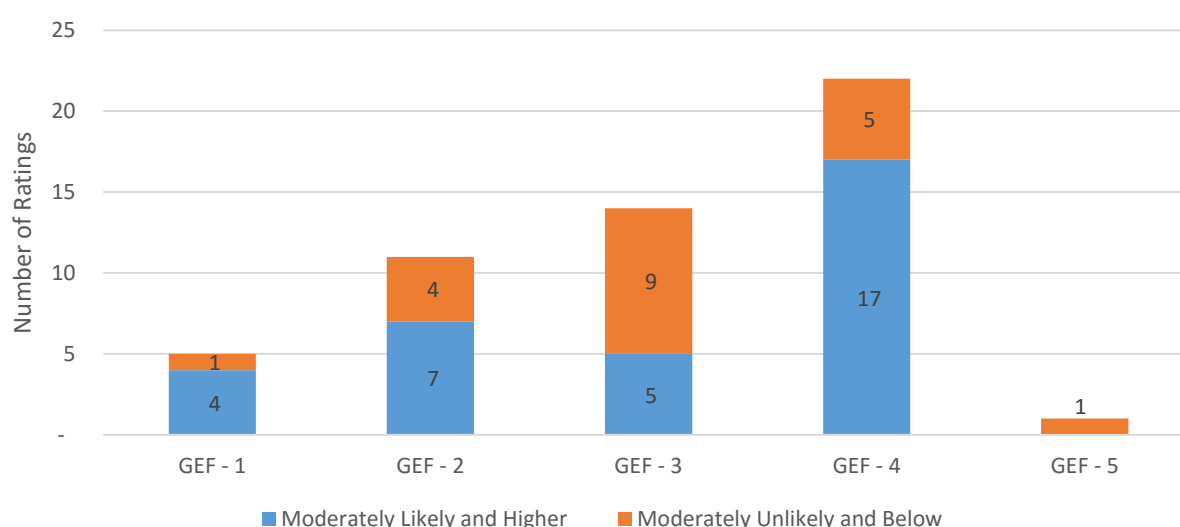
2. Sustainability

49. Sixty-two percent of CW projects and 64 percent of funding is in projects with sustainability rated moderately likely and above. This performance is slightly lower than ratings reported across all focal areas in the APR 2015 (67 percent of projects). Seventy-five percent of ODS focal area projects are rated likely to be sustained, while only 57 percent of POPs projects are rated likely to be sustained. Seventy percent of national projects are rated likely to have sustained outcomes, compared to 50 percent of multi-country projects. Just 30 percent of global projects have sustainability ratings of moderately likely and above. (*See also the*

discussion on multi-country projects in paragraph 83.) Projects executed by national governments were rated equally likely to be sustained, on average, as those executed by multilateral organizations (63 percent).

50. CW sustainability ratings dipped significantly in GEF-3, with just a third of project outcomes considered likely to be sustained, but recovered to 77 percent in GEF-4, as shown in Exhibit 7 below. These lower ratings in GEF-3 were primarily driven by poor ratings for the financial stability of projects. The total amount of actual cofinancing leveraged per dollar of GEF grant for these projects (1:0.6) was lower than the amount promised at appraisal (1:1.1).

Exhibit 7: Ratings for Overall Likelihood of Sustainability by GEF Phase



51. Across all GEF phases, UNEP and the World Bank had higher shares of projects with sustainability rated moderately likely and above (73 and 71 percent, respectively). Projects implemented by UNDP and UNIDO received lower overall sustainability ratings, with 58 and 56 percent of projects rated moderately likely and above, respectively.

3. Quality of Implementation and Execution

52. Seventy-one percent of CW projects have received quality of implementation ratings in the satisfactory range, with a higher percentage (84 percent) of projects rated in the satisfactory range for quality of execution. This quality of execution performance is significantly higher than the ratings reported across all focal areas in APR 2015 (72 percent). Ratings on quality of implementation have improved from GEF-1 (50 percent satisfactory); in GEF-4, 85 percent of projects had a satisfactory rating for implementation. Ratings on quality of execution have been relatively consistent among phases. Quality of implementation ratings have been higher for POPs projects (79 percent) and lower for ODS focal area projects (45 percent).

Quality of execution ratings were also higher for POPs projects (88 percent) and lower for ODS focal area projects (70 percent).

53. Fifty-seven percent of regional projects are rated moderately satisfactory or higher for implementation, compared with 72 percent for national projects and 78 percent for global projects. Overall, quality of implementation has been higher in Asia (80 percent satisfactory) and lower in ECA (63 percent) and Africa (67 percent). Projects executed by government agencies have slightly higher quality of implementation ratings than multilateral agencies (71 percent versus 69 percent satisfactory), while projects executed by multilateral agencies have slightly higher quality of execution ratings than government agencies (88 versus 82 percent satisfactory). Trends toward lower quality of implementation are largely driven by a cohort of five ODS phaseout projects in the ECA region, approved in GEF-1 and -2 and implemented jointly by UNDP and UNEP.

54. Lower quality of implementation ratings is also correlated with longer project implementation times. The average time from GEF CEO approval or endorsement to operational completion across all CW projects is 4.8 years. The average time from GEF approval to operational completion is 5.3 years for projects with lower implementation scores and 4.5 years for projects with higher implementation scores. Likewise, the average length of time extended beyond the planned date of completion is 1.6 years for projects with low implementation scores and 1.1 years for projects with high implementation scores.

4. Monitoring and Evaluation Design and Implementation

55. Fifty-one percent of CW projects have received quality of monitoring and evaluation (M&E) design ratings in the satisfactory range, with a slightly higher percentage (59 percent) of projects rated in the satisfactory range for quality of M&E implementation. This performance is similar to ratings reported across all focal areas in APR 2015. Performance on M&E design and implementation has generally improved over time; in GEF-4, 78 and 77 percent of projects received satisfactory ratings for quality of M&E design and implementation, respectively. On average, ODS focal area projects were rated significantly lower than POPs projects on M&E design and implementation quality (31 percent and 65 percent, respectively), which also reflects the trend over time toward better M&E performance.

56. By GEF Agency, cumulatively since GEF-1, UNDP and the World Bank had the highest proportion of projects with shortcomings in M&E design quality, with 42 and 33 percent of projects scored in the satisfactory range, respectively. UNIDO and the World Bank had the highest proportion of projects with shortcomings in M&E implementation quality, with 50 and 25 percent of projects scored in the satisfactory range, respectively. By executing agency type,

multilateral agencies were rated significantly lower on average (37 percent satisfactory) than government agencies (56 percent) on M&E design quality.

B. Effectiveness

57. To analyze the progress of the CW focal area toward achieving impact, this study reviewed terminal evaluations for GEF-3, -4, and -5 projects. Of the 36 closed projects with terminal evaluations, 34 projects were included in this assessment. Excluded from the analysis was one project which received a rating of highly unsatisfactory for the overall quality of the terminal evaluation and a second project for which a terminal evaluation was not made available. Of the 34 projects included in the review, 91 percent are POPs projects; the remaining 9 percent are ODS.¹³ Forty-seven percent have been implemented by UNDP, followed by 26 percent by UNIDO, and 15 percent by UNEP. MSPs account for 59 percent of the project cohort, with FSPs making up 41 percent. The terminal evaluation review was also complemented by case studies of closed projects.

1. Progress toward Impact

58. Fifty-six percent of CW projects showed evidence of environmental impact—specifically, stress reduction. Given the nature of POPs and ozone projects, no projects showed evidence of improved environmental status.¹⁴ Stress reduction was achieved primarily through the disposal of PCBs and PCB-containing equipment, the disposal of POPs pesticides, reduction of DDT-based production and usage, introduction of BAT/BEP to address UPOPs, and remediation of dioxin contaminated hotspots. The majority of projects that did not show evidence of stress reduction were focused on capacity building, strategy or guideline development, or institutional strengthening. Projects showing evidence of impact were, on average, rated higher in terms of outcomes and likelihood of sustainability. All projects showing evidence of stress reduction included a demonstration or implementation component as part of the GEF's contribution.

59. Reliable data on the aggregate impact of closed CW projects in terms of tons of POPs, ODS, mercury, and other chemicals and related wastes phased out, reduced, or disposed were not readily available, representing a significant shortcoming in the capacity of the GEF monitoring system to accurately track and report on results achieved in the CW focal area. GEF tracking tools were available for 21 of the 34 projects reviewed, although it was not always clear whether the tracking tool on file was an annual implementation report or a terminal report submitted upon completion. Many of the quantitative achievements reported in the

¹³ Because just three projects in the cohort are ODS, results are not disaggregated by POPs versus ODS in the analysis that follows.

¹⁴ Stress reduction refers to the decrease, prevention or slowdown of the degradation, destruction or contamination of the environment. Improved environmental status refers to positive changes in the state of the ecosystem or any of its components.

tracking tool did not match exactly what was reported as achieved in the terminal evaluation, although some were reasonably close. Some tracking tools errantly reported results from other projects, in addition to the results of the relevant project. Interviews with the GEF Secretariat indicated that increasing attention is being paid to Agency monitoring and evaluation of CW projects in GEF-6, including incorporating designated resources for these purposes in project proposals.

60. Despite these challenges, this study attempted to analyze information reported in the available tracking tools as well as in the terminal evaluations to develop preliminary estimates of the aggregate impact of the 34 closed projects reviewed. The results of this analysis are shown in Exhibit 8. None of the tracking tools or terminal evaluations reported specific quantities of UPOPs reduced or avoided as a result of BAT/BEP applied in industrial or non-industrial sectors (either directly through the project or anticiapted through replication). Among the projects reporting impacts in terms of chemicals and related wastes phased out, disposed, and safeguard, one is an LDC (Ghana) and one is a SIDS (Mauritius).

Exhibit 8. Aggregated Project Impacts in Terms of Chemicals and Related Wastes Phased Out, Disposed, and Safeguarded

DDT	Quantity (in tons)
Annual use of DDT targeted by the project and achieved	4,580
DDT stocks disposed of in an environmentally sound manner	3,455
DDT stocks safeguarded	5
PCBs	Quantity (in tons)
PCB concentrated oils disposed of	318
PCB contaminated oils disposed of, or decontaminated	87
PCB capacitors disposed of	1,178
PCB contaminated equipment and wastes disposed of*	14,325
PCB oils and PCB contaminated equipment under safe storage	670
Pesticides	Quantity (in tons)
Obsolete pesticides, including POPs pesticides, disposed of in an environmentally sound manner	1,745
Obsolete pesticides safeguarded	37,217
Production and Use	Quantity (in tons)
Amount of POPs chemical phased-out from use following demonstration of alternative - project direct	700
Amount of POPs chemical phased-out from use following demonstration of alternative - through replication	--
Amount of POPs chemical production closed forever	450

* Includes both low- and high-concentration wastes

Case Study Example: Achieving Impact in SIDS

Under the GEF-4 *Sustainable Management of POPs in Mauritius* project's first pillar (GEF ID #3205, implemented by UNDP), the quantities of obsolete POPs pesticides and contaminated soil for final disposal exceeded the target, with the costs of the extra quantity supported by government cofinancing. The following obsolete POPs chemicals were collected and sent for disposal in a cost-effective and environmentally sound manner:

- 138 tons of DDT
- 6.7 tons of hazardous chemicals
- 5,000 kg of PCB-containing oil
- 63 kg of Mirex, 13 liters of Dieldrin, and 13 liters of Aldrin
- 300 cubic meters of DDT contaminated soil

In addition, the spraying of DDT at airports and seaports ceased in 2011 and was substituted with an alternative vector control management strategy. A stock of 5 metric tons of technical DDT was retained for safe storage in UN-approved bags as a precautionary measure in case of malaria outbreak. The results achieved through project activities have generated significant positive and sustainable impacts on the environment and human health for the population in Mauritius and supported the Government's goal to be waste-free. Interviews indicated that new infrastructure now exists on the previously contaminated sites. The project impacts also contribute to reduced global environmental stress as a result of the disposal of POPs pesticides, hazardous chemicals, and contaminated soil.

A contributing factor to the project's successes under the first pillar was the strong participation from the Government of Mauritius, including in the form of cofinancing. The Government of Mauritius provided funds to UNDP to manage the disposal of contaminated soil beyond the scope of the project, demonstrating the capacity and capability of the government to address hazardous chemicals wastes as a result of the intervention. A secondary driver of success was active participation from other actors, including NGOs and, to a more limited degree, the private sector.

The project's second pillar was less successful. An integrated vector management strategy was piloted in several villages, with the ultimate objective of national replication, and volunteers were solicited to monitor and prevent the accumulation of stagnant water. A lack of institutionalization of this program was a constraint (including a lack of ownership and uptake by the Government of Mauritius, and the fact that the positions were volunteer and unpaid), and the program has not been scaled up.

61. Results were achieved in many projects in terms of awareness raising, capacity building, and policy strengthening. Nearly all GEF CW projects have made contributions to information sharing and awareness raising as well as building institutional and stakeholder capacity for technical and environmental management of chemicals and waste (see Exhibit 9). Three-quarters of projects have also contributed to strengthening policy and regulatory frameworks that govern POPs and ODS, and nearly two-thirds of projects have included a pilot or demonstration component. A much smaller proportion of projects have focused on research, which may reflect the maturity of the legacy POPs field as well as the movement away from targeted research in GEF focal area strategies after the GEF-3 period.

Exhibit 9. Areas of Contribution of Chemicals and Waste Projects

Project Contribution	Number of Projects	% of Projects Assessed (n=34)
Laws, policies, regulations	26	76%
Institutional capacity	32	94%
Information sharing / awareness raising	33	97%
Demonstration / pilots	21	62%
Implementation	13	38%
Management systems / strategies	14	41%
Research / knowledge generation	4	12%

62. These trends illustrate the multi-faceted approach that many POPs projects have taken, involving on one hand, efforts to build the enabling environment for continued safe management and disposal through strengthening laws, policies, and regulations for POPs management, and capacity to inventory and manage POPs, as well as monitor and enforce regulations; and on the other hand, pilot projects working directly with industry and government to demonstrate viable alternatives to POPs, and activities that help to educate practitioners regarding the processes and practices that lead to the release of POPs. For these projects, the logic is that demonstrated best practices cannot be sustained or scaled up without regulatory drivers and institutional support. As the analysis in paragraph 63 below indicates, however, chemicals and waste projects have not been particularly successful at scaling up.

2. Broader Adoption and Strategies for Scaling Up

63. Sixty-eight percent of CW projects showed some evidence of broader adoption, as shown in Exhibit 10 below. The most common form of broader adoption was mainstreaming, primarily through the adoption and enforcements of laws and regulations focused on sound chemicals management, including at both the national and local levels. About a quarter of projects showed evidence in their terminal evaluation of scaling up—i.e., expanding the results of GEF activities to larger geographical or administrative scales within a country. This was often achieved through successful demonstration effects.

64. Four projects (12 percent) showed some evidence of transforming markets; two of these projects were complementary FSPs in China focused on DDT-based production and usage. Few projects showed evidence of replication—i.e., reproducing results at a comparable scale in a different geographical area or region. It is possible that terminal evaluations are conducted too early to see much evidence of this broader adoption pathway.

Exhibit 10. Number of Projects Showing Evidence of Broader Adoption

Broader Adoption	Number of Projects	% of Projects Assessed (n=34)
Mainstreaming	20	59%
Replication	2	6%
Scaling up	8	24%
Market change	4	12%
TOTAL showing evidence of broader adoption	23	68%

Case Study Example: Mainstreaming and Transforming Markets to Eliminate DDT in China

Collectively, two GEF projects (GEF IDs 2629 and 2932, both implemented by UNDP) covered the two sources of China's DDT consumption—dicofol and anti-fouling paint (AFP) production. The projects aimed to eliminate both sources of DDT consumption and promote alternatives. During the implementation of the projects, a national ban on the production, distribution, use, and import of DDT was issued jointly by 10 ministries that went into effect in May 2009. In addition, regulations banning the production, sale, and use of dicofol were promulgated in three demonstration counties in 2011. The AFP project also played a part in supporting China to accede to the International Maritime Organization (IMO) Convention on the Control of Harmful Anti-Fouling Systems on Ships (adopted 2001).

The two complementary projects played a key role in ensuring that the ban on DDT would be realized. The ban helped ensure the sustainability of the project objectives to eliminate DDT production and consumption, but created new challenges of transforming the markets and introducing viable alternatives. For dicofol, the GEF project supported the closure of two open production cycle dicofol plants, environmentally sound disposal of 1,600 tons of high-risk DDT waste, and optimization of the only closed-system dicofol production facility. On the consumption side, the project demonstrated Integrated Pest Management (IPM) technology in three counties and conducted farmer training; these activities catalyzed other farmers not participating in the demonstration to apply IPM technologies at their own cost—in recognition that IPM increased crop output, quality, and income. Interviews indicated that the Ministry of Agriculture has mainstreamed IPM promotion into its regular budget. On AFP, the project eliminated the use of 250 MT/year of DDT by conversion to non-toxic and environmentally friendly alternatives. The terminal evaluation concluded that AFP manufacturers had produced AFP alternatives for a sufficiently long period, and that the project's stakeholders had been successful in creating the required markets, such that the AFP market had been transformed and the results likely to be sustained.

Factors contributing to these successes include the strong commitment of the Government of China to eliminating DDT, as well as the cooperation between the Ministry of Agriculture and Ministry of Environment on the dicofol project. Private sector support was also significant on the dicofol project, as evidenced by the amount of cofinancing contributed on top of the US\$ 6 million financed by GEF. Dicofol plants and farmers originally committed a total of US\$ 8.65 million in cash and in-kind contributions, but by the end of the project had exceeded this commitment by US\$ 2.54 million, largely due to in-kind contributions from farmers.

Five years after the project began, DDT and tributyltin levels in the marine environment have decreased.

65. Overall, chemicals and waste projects have not sufficiently focused on approaches to scale up or replicate project successes. Less than a third of chemicals and waste projects' terminal evaluations mention or evaluate strategies to scale up or replicate results. Among

those with discussion of scaling up, half do not elaborate on specific strategies or identify specific instances of successful scale-up. Instead, projects seem to largely anticipate a positive regional or global demonstration effect by identifying successful elements of the project that may be appropriate for future chemicals or waste-related initiatives within neighboring countries or for South-South cooperation activities.

66. In particular, the terminal evaluation review suggested that projects have generally not given adequate attention to strategies for scaling up projects' approaches at the national level—for example, strategies for the disposal of POPs stockpiles or PCB-containing equipment that are not covered by the project, or for developing or introducing financial incentives to address the safeguarding and disposal of waste that is also not covered by the project, or for scaling up local-scale demonstration activities.

67. Several GEF POPs interventions in China are exceptions and have successfully mobilized national replication programs. For example, the Improvement of DDT-based Production of Dicofol and Introduction of Alternative Technologies including IPM for Leaf Mites Control in China (GEF ID 2629), implemented by UNDP, finalized an integrated pest management national replication program prior to project completion. Replication activities had been initiated at several provincial locations and were expected to expand nationwide and to cover additional crops. Factors expected to influence the success of this program are availability of financial resources and technology support.

68. Analysis across multiple study methods (terminal evaluation review, quality at entry review, case studies, and interviews) identified several strategies that CW projects have used or plan to use to scale up project results, although the effectiveness of these strategies cannot be fully evaluated. The quality at entry review of projects approved in GEF-6 also suggested increasing attention to approaches for scaling up project results; among the 25 PIFs reviewed, 70 percent including description of plans for scale-up. CW strategies for scaling up include:

- (a) **Preparing technical guidelines and regulations** that would apply to all sector actors, rather than just those supported through demonstration activities. The terminal evaluation review did not provide sufficient evidence on whether this approach has been successful for scaling up.
- (b) **Involving private sector actors as project partners and beneficiaries.** For example, the Demonstration of Mercury Reduction and Minimization in the Production of Vinyl Chloride Monomer in China project (GEF ID 6921), implemented by UNIDO, intends to scale up calcium carbide based VCM production technologies with mercury free catalyst in China through the China Petroleum and Chemical Industry Federation and China Chlor-Alkali Industry Association. As another example, the Environmentally

Sound Management and Destruction of PCBs in Mexico: Second Phase project (GEF ID 9214), implemented by UNDP, plans to establish a public-private partnership (PPP) responsible for coordinating integrated management of PCBs as a means of sustaining and scaling up disposal by PCB owners and maintainers.

- (c) **Targeting eco-industrial parks and industrial zones.** This approach allows projects to work with a larger community of industries and target interventions at multiple scales, including individual company, industry, park (e.g., 500 companies), and national levels. *(See also lessons learned from a project under implementation in Vietnam in the text box below.)*
- (d) **Developing strategies or plans that serve as the foundation for future investment projects.** For example, the GEF-4 MSP, “Preparing for HCFC phase out in CEITs: needs, benefits and potential synergies with other MEAs” (GEF ID 2331), helped develop country strategies that served to mobilize a larger investment program to assist six countries with their Montreal Protocol obligations.
- (e) **Documenting lessons learned and knowledge gained.** Some projects include specific components on promoting and disseminating project results, to encourage positive demonstration effects.

69. A major constraint for scaling up and the sustainability of CW projects—and particularly clean-up of legacy POPs stockpiles and contaminated sites—is that such efforts are generally not financially attractive. Many countries where such stockpiles exist also do not have the capacity to destroy those materials, and transporting those chemicals to destruction sites in other countries can be complex and costly. Under these circumstances, a GEF demonstration project may not be sufficient to catalyze further action. In other words, the barriers to broader adoption are not generally overcome by a successful demonstration. Institutional, policy, and especially financial mechanisms are needed to sustain and expand project results.

Case Study Examples: Lessons Learned for Scaling Up

- **Engaging financial institutions.** Lack of early engagement with financial institutions such as local banks were found to be a hindering factor to scaling-up pilot demonstration activities in the GEF-4 MSP “Regional Plan for Introduction of BAT/BEP Strategies to Industrial Source Categories of Stockholm Convention Annex C of Article 5 in ESEA Region,” implemented by UNIDO (GEF ID 3572). Although the pilot demonstrations were considered relevant and successful as standalone activities, loan windows were not sufficiently available to SMEs to catalyze broader adoption within and across the seven participating countries (Cambodia, People’s Republic of China, Indonesia, Lao PDR, Mongolia, Philippines, and Thailand). Attempts to engage regional and local banks during project implementation were unsuccessful. According to interviews with UNIDO, one important lesson learned is to engage financial institutions such as local banks as early as possible in the project design phase, and keep them engaged throughout the project lifecycle. Early and ongoing engagement with local banks, such as inviting them to project design and implementation meetings, will help them better understand pilot demonstrations, their successes, and the need for private sector participation.
- **Sight-line to scale from the outset.** In a project implemented by UNDP, “Sustainable Management of POPs in Mauritius” (GEF ID 3205), one of the project pillars lacked a viable strategy to scale up from pilot interventions. An Integrated Vector Management (IVM) strategy was introduced in pilot villages to reduce the risk of malaria outbreaks. Volunteers were selected in pilot villages to monitor sources of water that could be mosquito breeding sites. Lessons learned were that paid positions and/or a dedicated office to formalize support IVM activities were needed to scale up pilot activities.
- **Identifying synergies.** The objective of the GEF-5 FSP, “Implementation of Eco-industrial Park Initiative for Sustainable Industrial Zones in Vietnam” (GEF ID 4766) implemented by UNIDO, was to improve the management of chemicals in industrial zones (IZ) in Vietnam through a multifocal area approach. The project includes the implementation of three eco-industrial parks (EIP) pilot projects—one in the North, one in the Center, and one in the South of Vietnam. A key element to the project’s success was identifying synergies across companies within the pilot parks, in neighboring communities, and across the regional and national industrial community. By working together at various levels from park employees to the national industrial community, the project was able to realize benefits greater than the sum of companies optimizing their individual performance. According to UNIDO, the pilots have gained traction at the government level, which will be beneficial for scaling up the interventions.

3. Country Ownership

70. The terminal evaluation review showed that all chemicals and waste projects are appropriately aligned with national priorities, policies, and strategies. Recipient country governments have provided more co-financing to CW projects than any other entity, including the private sector. To date, 40 percent of all cofinancing for CW projects has been provided by government agencies. However, further analysis of terminal evaluations suggested that these conditions are not guarantees of country ownership. Among the terminal evaluations that specifically assessed country ownership (23), 74 percent of projects showed high or satisfactory country ownership; the remaining 26 percent had either mixed or low ownership.

71. The level of country ownership appeared to have implications for sustainability and progress toward impact. Country-owned projects were rated more likely to have sustainable results, on average.¹⁵ Seventy-one percent of country-owned projects showed evidence of impact (environmental stress reduction), versus just 17 percent of projects with lower ownership. Among the projects with lower ownership, four were focused on planning and capacity building, suggesting that countries may show stronger ownership of projects with more tangible outcomes.

72. Regional and global projects represent a larger share of projects with lower country ownership (67 percent versus 29 percent for projects with high country ownership), suggesting challenges with achieving strong country engagement in multi-country projects. Terminal evaluations for two regional projects noted that low commitment from one country partner can negatively influence progress and results for the broader project. Projects with high country ownership were also more likely to be executed by a government entity (76 percent versus just 33 percent for projects with lower country ownership).

Case Study Example: Good Practices for Ensuring Country Ownership

Country ownership was ensured in the GEF-4 FSP “Safe Management and Disposal of PCBs, Pillar I” (GEF ID 3082) implemented in Morocco by UNDP, through the following good practices:

- The designation of an executing agency of the project within the Ministry for the Environment, which supported institutional integration.
- Significant cofinancing provided by the Government of Morocco, both in cash and in-kind (through project management unit staff).
- Measures by the Ministry for the Environment to integrate project activities within its own planning process.

4. Stakeholder Engagement

73. A wide range of stakeholders have been involved in CW projects, including national and subnational government agencies and authorities, civil society organizations, private sector entities, and research and educational entities. These stakeholders have been engaged in myriad ways—from executing agencies, to cofinancers, to project partners, to beneficiaries of capacity building and technology transfer.

74. Most terminal evaluations found stakeholder engagement to be sufficient—i.e., involving stakeholder groups appropriate for achieving the project objectives. Project case studies suggest that broad and meaningful engagement of stakeholders can contribute to successful outcomes (see box). Approximately 10 percent of terminal evaluations¹⁶ identified lack of stakeholder involvement as a factor detracting from results achievement.

¹⁵ Averaging a 3.2 versus 2.3 for projects with lower country ownership, on a five point scale for overall likelihood of sustainability.

¹⁶ Four of 34 projects reviewed.

75. Below are findings on engagement by major stakeholder group:

- (a) **Government.** National government agencies were involved in all projects, and subnational government entities were also engaged in a quarter of projects (primarily projects with demonstration or pilot activities that required the involvement of local authorities). Government-executed projects is the dominant approach for CW projects (77 percent of approved projects).
- (b) **CSOs.** More than half of projects with TEs engaged CSOs, primarily to support outreach (e.g., disseminating information to raise awareness among broader audiences) or as beneficiaries (e.g., training participants). In a few projects, CSOs participated in the project steering committee. No clear patterns emerged in terms of which projects engaged CSOs and which did not – including by implementing or executing agency, GEF phase, or project focus. Less than 1 percent of GEF projects have been executed by CSOs.
- (c) **Private sector.** Most projects engaged the private sector in some capacity. Less than 20 percent of terminal evaluations provided no evidence of private sector engagement; these were primarily global and regional projects focused on capacity building for NIP development and implementation and to prepare CEITs for ODS phaseout. A more detailed assessment of private sector engagement is provided below.

5. Private Sector Engagement

76. As noted above, more than 80 percent of CW projects with TEs engaged the private sector in some manner. Thirty-four percent of all CW projects have been cofinanced by the private sector. Of this cofinancing, 36 percent has been grants, and 37 percent has been in-kind contributions.¹⁷ The GEF's ODS portfolio has been characterized by strong private sector engagement from project design through implementation, and the impact evaluation found that private engagement was a strong driver of success.¹⁸ GEF Agencies view the private sector as a core constituency for CW projects and important for sustainability.

77. The types of private sector entities engaged generally vary based on the project focus, but primarily are larger national and multinational corporations. For example, PCB management projects typically engage private (and public) PCB holders, primarily large electricity companies with PCB-containing transformers and capacitors, as well as waste

¹⁷ The remaining 27 percent has been from other contribution types.

¹⁸ GEF Impact Evaluation of the Phase-Out of Ozone-Depleting Substances in Countries with Economies in Transition

management companies to handle safe dismantling, temporary storage, transportation, and disposal. Projects focused on unintentional POPs production involve industrial actors, including pulp and paper manufacturers, iron and steel producers, and cement kilns, as well as the healthcare industry (medical waste).

78. For POPs pesticides projects, CropLife International—a global association of multinational pesticide producers, including BASF, Bayer, Dow AgroSciences, DuPont, FMC, Monsanto, Sumitomo Chemical, and Syngenta—has been a frequent partner and cofinancer based on corporate stewardship principles. In some countries, CW projects have also engaged DDT producers. In the ODS focal area, private sector actors have included equipment manufacturers (e.g., foam blowing, air conditioning, and refrigeration equipment), chemical manufacturers and importers, and air conditioning and refrigeration equipment servicing companies. The terminal evaluation review offered little evidence of CW projects engaging with financial institutions.

79. Capacity building has been the dominant mode of engagement for private actors, based on a review of terminal evaluations in the CW portfolio, with about three-quarters of projects providing capacity building for the private sector. For example, private companies are often trained on safe and sustainable handling of chemicals. Such capacity building assistance is given sometimes in combination with direct support (40 percent of projects). Projects providing direct support (e.g., technology upgrades) to the private sector include those in which the GEF funds demonstration and implementation activities, predominately PCB, DDT, and UPOP projects.

80. Interviews and desk analysis identified the following lessons learned regarding the engagement of private sector in the CW portfolio:

- **Importance of “soft” activities.** In many countries, capacity building and policies are needed to ensure that the government can effectively oversee the private sector. Similarly, awareness raising and training among private sector actors—particularly PCB holders—has been shown to be an important driver of success.
- **Careful management of industry partnerships.** Because many CW projects have multiple components—and often include both policy and implementation activities—the engagement of private sector actors must be carefully managed and sometimes segmented. For example, several GEF Agencies mentioned the importance of maintaining distance from big or multinational industry players with regard to policy or enforcement work in order to maintain credibility and objectivity in advising government clients. Private actors receive legitimization through working with the GEF and its Agencies and are often keen to influence the regulatory playing field. At the same time, consulting with national and

smaller-scale industries on regulations can provide practical insights on nomenclature and constraints related to their applicability in field situations.

- (a) **Challenges engaging small-scale and informal sector actors.** Building awareness among and gaining the commitment of small-scale industries and small- and medium-sized PCB holders has been a challenge in CW projects. More limited financial and human resources limit smaller enterprises' interest and ability to participate, and at the same time, their smaller quantities of PCB-containing equipment does not provide a strong incentive for Agencies to target them, given quantitative disposal targets for the CW portfolio.
- (b) **Financial models and sustainability.** Terminal evaluations provide little evidence of developing financial mechanisms to ensure continued engagement of private sector actors. Few chemicals and waste projects generate revenues for the private sector—apart from disposal or waste management companies—suggesting that more work needs to be done in this area. Program 1 of the GEF-6 Focal Area Strategy recognizes this need, allowing support for development and demonstration of private sector partnerships, economics instruments and financing models that can achieve large scale and long-term investment, as well as development of frameworks for cost recovery from the private sector for environmental clean-up.

Case Study Example: Engaging the Private Sector for PCB Management

The main objective of the GEF-4 FSP, "Safe Management and Disposal of PCBs, Pillar I" (GEF ID 3082), was to improve the capabilities for the safe management of PCB oils and PCB-containing equipment at all stages of the management cycle in Morocco. To achieve this objective, the project engaged private sector entities with PCBs or PCB-containing equipment in their possession (i.e., PCB holders), including large utility and transformer service companies. During the project, these companies were trained to manage PCB-containing equipment throughout operation, maintenance, and decommissioning phases. A synthesis report on regional workshops on PCB management technical trainings indicated that PCB holders in general were willing to translate the gained capacities into practice. In Morocco, at the end of the project, 27 private sector actors adopted a PCB management plan, exceeding the indicator target of 25 plans. The high number of PCB management plans adopted will help support the safe management of PCBs by private actors after project close.

6. Gender Considerations

81. All of the CW projects with terminal evaluations proceed the adoption of the GEF's policy to mainstream gender, and more than 60 percent of terminal evaluations do not address gender. Eight projects (or about a quarter of all CW projects with terminal evaluations) showed evidence of considering gender issues in design and/or implementation, to varying extents. Four of the eight projects focused on equal opportunities for women and men to benefit from training activities organized by the project. For example, for one DDT project in China (GEF ID

2629), the large majority of farmers of the demonstration crops were female, and training activities thus benefitted female farmers. Another project in China (GEF ID 2359) conducted a social assessment for a chlordane and Mirex producer to determine gender-disaggregated impacts of the factory closure and develop mitigation plans.

82. Terminal evaluations suggest that more education and awareness may be needed regarding the relevance and importance of gender in CW projects. None of the terminal evaluations include lessons learned related to gender considerations, and several evaluators opined that gender was irrelevant. Interviews with GEF Agencies suggest increased attention to and learning around gender issues in recent years.

7. Multi Country Projects

83. Compared to single-country projects, multi-country projects show a lower rate of stress reduction (15 percent) and broader adoption (less than 40 percent for mainstreaming and 15 percent for scaling up). This finding partly reflects the fact that many multi-country projects have focused on capacity building, strategy development, and civil society participation, which may be seen as precursors to achieving impact. The terminal evaluation performance ratings also suggest that sustainability is a particular challenge for multi-country projects.

84. Agency interviews suggested that a key contributing factor is the difficulty associated with embedding supranational project management and structures in countries with varying geographic, socio-political, and other individual circumstances. Another lesson learned is that narrower programming on a specific topic or sector is helpful when several countries are involved. Implementing regional projects across countries with diverse needs, priorities and

Case Study Examples: Implementing Regional Projects

Differing country capabilities and circumstances can translate into different rates of project implementation and cause delays or issues in the overall project's progress. For example, in the GEF-4 MSP, "Preparing for HCFC Phase out in CEITs: Needs, Benefits and Potential Synergies with other MEAs" (GEF ID 2331), implemented by UNDP, UNEP, and UNIDO, technical and institutional needs and priorities of participating countries were not compatible. The unstable institutional context in Ukraine, for example, impacted the rate of project implementation and delayed certain activities such as the completion of HCFC surveys.

Similarly, in another GEF-4 MSP, "Regional Plan for Introduction of BAT/BEP Strategies to Industrial Source Categories of Stockholm Convention Annex C of Article 5 in ESEA Region" (GEF ID 3572), implemented by UNIDO, more developed countries (e.g., China and Thailand) led dioxin trainings for less developed countries in the ESEA region (e.g., Cambodia, Indonesia, and Lao PDR). The trainings were considered an important output of the project, demonstrating a willingness of more developed countries to take on a leadership role and enabling south-south learning exchange. However, when participants returned to their respective countries and tried to apply the trainings, difficulties were reported in finding commonalities and applying what they learned within local contexts.

country contexts has proven a significant challenge for some CW projects, as the case study examples in the text box illustrate.

8. Multi Focal Area Projects

85. Multifocal area approaches offer significant potential to increase effectiveness and efficiency of chemicals and waste project delivery, particularly given concerns about diminishing resources. The GEF's new role as the financial mechanism for the Minamata Convention offers additional opportunities for mercury projects to address connected issues, particularly related to international waters and climate change.

86. Implementation experience in the GEF is limited, however, with just 11 multifocal area projects with CW components approved since GEF inception, and none yet completed. These projects have focused primarily on collaborations with international waters and climate change, including three projects on energy efficient lighting and safe disposal of mercury, two projects on industrial zones, two projects on environmental management of bodies of water, and one project on ASGM and minimizing mercury releases to international waters.

87. As previous GEF IEO evaluations—including OPS5—have pointed out, some institutional disincentives and challenges still remain for pursuing multifocal area projects. Agencies continue to raise concerns related to the burden of tracking tool reporting requirements for multifocal area projects. While the Stockholm and Minamata Convention Secretariats expressed support for multifocal area projects as a means of increasing the impact and cost-efficiency of CW projects, they also emphasized the need to ensure coherence with the core mandates and the priorities of the Conventions.

88. Agencies identified the combining of CW funds with those from focal areas with STAR allocations as a particular challenge for multifocal area projects with CW components. Planning timelines are part of this issue. STAR allocations for each focal area are often planned early in each replenishment period, and Agencies noted that chemicals and waste opportunities are not always raised during these early national planning discussions, such that by the time CW opportunities are identified that could be synergistic with other focal areas, the STAR allocations are already programmed.

Case Study Examples: Lessons Learned for Multifocal Area Projects

A key lesson learned for chemicals and waste multifocal projects is that design should be driven by the theory of change and natural connections across focal areas. UNIDO's "Implementing Integrated Measures for Minimizing Mercury Releases from Artisanal Gold Mining" project (GEF ID 4799) was originally conceptualized as a chemicals and waste project in Ecuador. During the design process, the project team discovered the transboundary and multi-focal area implications, since the AGSM community in Ecuador discharges mercury into a river basin that flows into Peru. International waters funding was added to the project to enable environmental monitoring in the basin. Working in a small geographical area also enabled the project to put more emphasis on building relationships between the countries, authorities, and the miners—contributing to project successes. According to interviews with UNIDO, this project also illustrates the critical importance of formalization and building—and sustaining—a strong enabling environment to support miners.

UNIDO's "Implementation of Eco-industrial Park Initiative for Sustainable Industrial Zones in Vietnam" project (GEF ID 4766) also illustrates the value of a sound conceptual foundation for involving multiple focal areas. This project was designed from an industrial and resource efficiency perspective, focused on water, energy, and raw materials, and includes funding from the CW, International Waters, and Climate Change focal areas. The multifocal area nature of the project enables it to address synergies in industrial upgrades, like boilers that are both energy intensive and produce unintentional POPs that are discharged to air and waterways.

3. Emerging Issues for the GEF Partnership

89. Interviews conducted for this study identified several recurring themes with regard to the GEF partnership in the CW focal area.

90. Agencies and Convention Secretariats noted improvements in the partnership with the GEF Secretariat since OPS5, including increased communication and clearer guidance. In GEF-6, the GEF Secretariat is more strongly guiding the use of resources, including more upstream consultation with Agencies and countries to identify viable concepts. Some Agencies welcome this stronger management as a means of limiting time spent on developing concepts that may not be approved.

91. These changes are not received without some friction, however. Some Agencies and Convention Secretariat staff felt that the GEF Secretariat may at times be over-managing the pipeline—for example, approaching a specific Agency to demonstrate a specific activity in a specific country, rather than letting the needs flow from the countries through the Agencies and the GEF Secretariat, or rather than selecting countries that may need support the most. While the actions of the GEF Secretariat do not go beyond its mandate, they may contribute to perceptions of an uneven playing field. Similar concerns were voiced about the increasingly active engagement of the GEF Secretariat at the country level, related to the GEF Secretariat's

re-organization into regional teams. Agencies felt that GEF management has occasionally made promises at the country level that have led to the development and inclusion in the work program of specific activities. In the context of reduced resource availability in GEF-6, these actions are perceived as preferential treatment.

92. Interviews revealed some concerns about the transparency of the project cycle for CW activities. These concerns are amplified by the scarce resources—and hence increased competition—for CW projects during GEF-6. During the first stages of project development—from first contact to project concept submission—Stockholm Convention Secretariat staff expressed concern about political consequences of Agency processes for filtering requests and deciding which projects to take up. Some countries complain to the Convention Secretariat that they cannot access the GEF or that some aspects of their priorities are not taken up. On the other hand, it is the role of the Agencies in the GEF partnership to help determine what country needs are consistent with the CW Focal Area Strategy and offer global environmental benefits and incremental costs that might be funded by the GEF, as well as to determine whether such needs are within an Agency’s technical expertise and comparative advantage. Between project submission to work program inclusion, several Agencies felt that the criteria for determining which projects are included or not were insufficiently clear.

IV. CONCLUDING REMARKS AND ISSUES FOR CONSIDERATION

93. This study provides the first comprehensive look at the relevance, performance, and effectiveness of the GEF’s activities in the CW focal area, as well as challenges and future opportunities. The study was based on a review of the evolution of the CW strategies over time, analyses of the portfolio, terminal evaluations, and project concepts approved in GEF-6, a review of the existing evaluative evidence, and interviews with 20 stakeholders from the GEF Secretariat, the GEF Agencies, Convention Secretariats, and managers of GEF projects. The following concluding remarks are based on this evidence and analysis:

- (a) The CW focal area of the GEF has evolved through the GEF-4, GEF-5, and GEF-6 phases to remain highly relevant, including expanding to cover new global priorities such as mercury and embracing synergies between chemicals issues. The transition to a single CW focal area has been synergistic. Ambitious SDG targets related to the environmentally sound management of chemicals and waste make the CW focal area of increasing relevance and importance moving forward. Numerous reviews—including this study—have found that the focal area is coherent with the guidance of the Stockholm and Minamata Conventions for which it serves as financial mechanism, as well as supportive of the goals of related agreements, including SAICM, the Basel and Rotterdam Conventions, and the Montreal Protocol.

- (b) Projects in the GEF's CW focal area have largely performed on par with projects in other focal areas, in terms of the achievement of outcomes and quality of implementation and execution. Performance data indicate potential challenges for CW projects with regard to the sustainability of POPs results and the outcomes, sustainability, and quality of implementation of multi-country projects.
- (c) The terminal evaluation review found that overall CW projects have not sufficiently focused on approaches to scale up or replicate project successes, particularly at the national level. Many projects have demonstrated the collection and destruction of POPs and reduced environmental stress in a relatively straightforward manner, but have not succeeded in setting in place sustainable strategies and financial mechanisms to scale up those results. As the GEF's portfolio toward UPOPs, mercury, and other emerging chemicals issues, it is still critical to ensure that a strategy for legacy POPs is articulated.
- (d) As the first to attempt to comprehensively assess the results of the CW focal area,¹⁹ this study faced some difficulties. Reliable data on the aggregate impact of closed CW projects in terms of tons of POPs, ODS, mercury, and other chemicals and related wastes phased out, reduced, or disposed were not consistently available. This shortcoming in the capacity of the GEF monitoring system deserves more attention moving forward. Long implementation timelines and frequent delays in project completion have also meant that results and lessons learned are being tallied with a significant lag.
- (e) The partnership between the GEF Secretariat, Agencies, and Convention Secretariats is generally seen as improved since OPS5. However, resource scarcity in GEF-6 has highlighted some concerns about actions that contribute to an uneven playing field, including over-management of the GEF pipeline by the GEF Secretariat, active engagement by GEF management at the country level and perceived resulting preferential treatment, and lack of transparency in the early stages of the GEF project cycle.

94. Addressing the following issues through the formulation and implementation of the CW focal area strategy in GEF-7, as well as through internal policy reforms, could improve the performance and results of the CW focal area.

¹⁹ Previous studies refrained from making substantive conclusions given the small number of completed POPs and ODS projects.

- (a) More attention needs to be paid during project design and implementation to considering sector-wide approaches, strategies for scaling up, and particularly financial mechanisms to support private sector engagement and sustainability. The GEF cannot finance the collection and destruction of every ton of legacy POPs, nor cannot it fund the conversion of every industrial facility to cleaner production processes. A more robust theory of change is needed for how the GEF's demonstration activities will catalyze broader action and impact in the CW focal area. This may involve the development of innovative private sector partnerships, economic instruments, and financial models, as envisioned in the GEF-6 CW Focal Area Strategy under Program 1; such efforts deserve continued support in GEF-7. In particular, as the GEF CW portfolio evolves and focus changes, attention should be paid to ensure that remaining legacy POPs are not orphaned, especially given that cost, ownership, and other barriers are diminishing the efficacy of the demonstration effect for these projects. Different solutions will likely be required for LDCs and SIDS versus middle income countries.
- (b) The GEF should also not forget its ozone depletion program, which has been given new relevance with the recent adoption of the Kigali Amendments to the Montreal Protocol. CEITs will need support to meet these new obligations, and opportunities are likely to arise for MFA collaborations with the climate change focal area.
- (c) Given the challenges this study faced in tallying the verified results of the GEF CW focal area, the GEF's monitoring procedures deserve more scrutiny. Tracking tools should be consistently submitted and clearly identified as annual or terminal submissions, and terminal results reported by indicator should match values in the terminal evaluation. Project proposals should consistently incorporate resources designated for monitoring and evaluation.
- (d) Communications among the GEF partnership organizations is an area for continued attention. Given an evolving and expanding landscape of opportunities, it is important that all aspects of communication are transparent and collaborative and that country perspectives drive the process. To facilitate the process, a more structured set of partnership planning meetings that fosters on-going dialogue on resource availability over the replenishment period, focus or priority among strategic objectives and program areas, and transparency of the project pipeline process would be helpful in reducing pockets of confusion.

V. APPENDICE A: LIST OF INDIVIDUALS CONSULTED

Exhibit 11. Stakeholders Interviewed

Affiliation	Name
GEF Secretariat	Anil Sookdeo
	Evelyn Swain
Secretariat of the Basel, Rotterdam and Stockholm Conventions	Frank Moser
Secretariat of the Strategic Approach to International Chemicals Management; Interim Secretariat of the Minamata Convention on Mercury	Jacob Duer
African Development Bank (AfDB) GEF Coordination Unit	Ayanleh Daher
	Francesca Battistelli
Food and Agriculture Organization (FAO) GEF Coordination Unit	Richard Thompson
	Herman Gonzalez
United Nations Development Programme (UNDP)	Jacques Van Engel
	Hilda van der Veen
	Maksim Surkov
	Etienne Gonin
	William Kwan
United Nations Environment Programme (UNEP)	Kevin Help
United Nations Industrial Development Organisation (UNIDO)	Klaus Tyrkko
	Jerome Stucki
	Elisabeth Mueller
	Carolina Gonzalez-Mueller
	Carmela Centeno
World Bank	Laurent Granier

VI. APPENDICE B: SUPPORTING EVIDENCE AND ANALYSIS

Guidance-Strategy Mapping

This study conducted a full review of guidance from the Conference of the Parties (COP) to the Stockholm Convention and the guidance issued by the Conference of the Plenipotentiaries to the Minamata Convention on Mercury, to assess the coherence of the GEF-6 Chemicals and Waste Focal Area Strategy with that guidance. This assessment provides an update to the analysis of convention guidance provided in *Technical Paper 5: Chemicals* prepared as part of the *Evaluation of the GEF Focal Area Studies* (2012) in support of OPS5.²⁰

Exhibit 12: Guidance-Strategy Mapping for GEF-6 Focal Area Strategy on Chemicals and Waste

Stockholm Convention COP Guidance	GEF-6 Programming Directions: CW Strategy
NIPs 8	
<ul style="list-style-type: none"> Request to support the regular review and updating of national reporting and national implementation plans (NIPs) Request to give priority to countries that have not yet received funding for implementation of activities in NIPs 	<ul style="list-style-type: none"> GEF support for development and update of NIPs including in Program 2 Completion of NIP updates included in Results Framework as Outcome 2.3 No explicit prioritization for countries that have not yet received funding for implementation of activities in NIPs
DDT 7	
<ul style="list-style-type: none"> Request to prioritize programming for the elimination of the production and use of DDT Request to support capacity for sound management and appropriate monitoring of DDT use in disease vector control as well as the development and promotion of cost-effective alternatives to DDT 	<ul style="list-style-type: none"> GEF support for elimination of production and use of DDT provided under Program 3; strategy cites specific Convention guidance on DDT Also under Program 3, GEF may also support introduction of alternatives to DDT for vector control Tons of DDT disposed included in Corporate-level Indicator
REGIONAL CENTERS 6	
<ul style="list-style-type: none"> Requests to give consideration to the proposals developed by nominated Stockholm Convention regional centers in the context of GEF support for the delivery of technical assistance on a regional basis and to prioritize such support to those centres situated in developing countries and countries with economies in transition Invitation to able entities to provide financial support to enable regional centers to implement their work plan 	<ul style="list-style-type: none"> Use of regional centers as executing agencies or providers of technical assistance encouraged in Annex I, particularly in regional projects where centers would have a comparative advantage
CAPACITY BUILDING FOR GLOBAL MONITORING AND EFFECTIVENESS EVALUATION 6	

²⁰ In keeping with the method of the previous analysis, only convention guidance that was issued before the GEF-6 Programming Directions went into effect on May 22, 2014 was included (i.e., guidance through COP-6 of the Stockholm Convention, and the guidance from the Conference of Plenipotentiaries in October 2013). Guidance on GEF operational issues are addressed through channels other than the focal area strategies and were therefore not included in the analysis.

<ul style="list-style-type: none"> Requests to incorporate activities and provide financial support for capacity building related to the global monitoring plan and effectiveness evaluation 	→	<ul style="list-style-type: none"> Program 2 will “support global monitoring that help to measure the effectiveness of the Conventions to which the GEF is the financial mechanism” Strengthening of global monitoring for POPs included in the Results Framework under Outcome 2.4
BAT/BEP ④		
<ul style="list-style-type: none"> Request to incorporate best available techniques and best environmental practices and demonstration as one of the priorities for providing GEF support Request to provide funding to use BAT/BEP to support reduction of unintentional releases of POPs Request to prioritize programming for use of BAT for new sources in the categories listed in part II of Annex C, and to facilitate technical assistance and technology transfer in this regard 	→	<ul style="list-style-type: none"> Demonstration of new technologies, based on BAT/BEP guidance, encouraged under Program 1 Use of BAT for new sources supported under Program 3; strategy cites specific Convention guidance on BAT
NEWLY LISTED CHEMICALS ③		
<ul style="list-style-type: none"> Requests to support activities in respect of newly listed chemicals (including endosulfan), and to include such chemicals when updating NIPs 	→	<ul style="list-style-type: none"> GEF support for elimination or restriction of product and use of newly listed POPs included under Program 3; strategy cites specific Convention guidance on newly listed POPs
PCBS AND PCB ELIMINATION NETWORK ②		
<ul style="list-style-type: none"> Request to provide financial support for country-driven training and capacity-building activities related to activities of the polychlorinated biphenyls elimination network Request to prioritize programming for elimination of use of PCBs in equipment by 2025 and environmentally sound waste management of liquids containing and equipment contaminated with PCBs, as soon as possible and no later than 2028 	→	<ul style="list-style-type: none"> GEF support to eliminate PCBs in equipment by 2025 and for environmentally sound management of liquids containing and equipment contaminated with PCBs as soon as possible and no later than 2028, provided under Program 3; strategy cites specific Convention guidance on PCBs Tons of PCBs disposed included in Corporate-level Indicator
TIMEBOUND PRIORITIES ①		
<ul style="list-style-type: none"> Request to prioritize programming in specific areas from 2014 to 2017, including PCBs, newly listed POPs, DDT, and BAT for new sources 	→	<ul style="list-style-type: none"> Program 3 addresses the specific deadlines for timebound priority areas; strategy cites specific Convention guidance (SC-6/20)
INFORMATION EXCHANGE / CLEARING HOUSE MECHANISM ①		
<ul style="list-style-type: none"> Request to provide the financial resources necessary to carry out projects aimed at improving information exchange at the regional and national levels and to set up clearing-house mechanism nodes. 	→	<ul style="list-style-type: none"> Support for regional cooperative action and regional approaches provided under Program 6 for LDCs and SIDs Mechanisms for information exchange or a clearing house mechanism are not explicitly elaborated in the GEF-6 Focal Area Strategy No outcomes related to information exchange
Guidance from the Minamata Convention		GEF-6 Programming Directions: CW Strategy
<ul style="list-style-type: none"> Invitation to support developing countries and CEITs that are signatories to the Convention in 	→	<ul style="list-style-type: none"> Support for enabling activities—specifically Minamata Convention initial assessment activities

undertaking activities, particularly enabling activities, to facilitate early implementation and ratification of the Convention ①

(MIAs) and Artisanal and Small Scale Gold Mining (AGSM) National Action Plans (NAPs)—provided under Program 2

- Program 4 focuses on early implementation of mercury reduction projects
- Mercury activities also supported under Program 1 and 6
- Phaseout and reduction of mercury included in the Results Framework as an expected Impact

Note: Circled numbers are cumulative items of guidance issued from COP-1 through COP-6 (for Stockholm Convention) and from the Conference of Plenipotentiaries in October 2013 (for Minamata Convention).