



**Conference of the Parties to the Stockholm
Convention on Persistent Organic Pollutants
Tenth meeting**

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Item 5 (g) of the provisional agenda**

**Matters related to the implementation of the Convention:
financial resources and mechanisms**

**Report on the assessment of funding needs of Parties that are
developing countries or countries with economies in transition to
implement the Stockholm Convention for the period 2022–2026**

Note by the Secretariat

As is mentioned in the note by the Secretariat on the financial mechanism (UNEP/POPS/COP.10/15), the annex to the present note sets out the full report on the assessment of funding needs of Parties that are developing countries or countries with economies in transition to implement the Stockholm Convention for the period 2022–2026, prepared by two independent experts, Ms. Suely Machado Carvalho and Mr. William Kwan. The report is reproduced as submitted. The present note, including its annex, has not been formally edited.

* Face-to-face resumed meetings of the conferences of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and the Stockholm Convention on Persistent Organic Pollutants are tentatively scheduled to take place in 2022.

** UNEP/POPS/COP.10/1.

Annex

Full report on the assessment of funding needs of Parties that are developing countries or countries with economies in transition to implement the Stockholm Convention for the period 2022–2026

**Report of the Full Assessment of Funding Needs for Parties that are
Developing Countries or Countries with Economies in Transition for the
Implementation of the Stockholm Convention for the Period 2022-2026**

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at the request of BRS Secretariat

22 March 2021

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EXECUTIVE SUMMARY

A. Introduction

1. Pursuant to decision SC-9/15, the Secretariat engaged a team of experts¹ to undertake the assessment of funding needs under the Stockholm Convention for the period 2022–2026, based on the national implementation plans (NIPs) and Article 15 reporting data, and quantitative information from Parties eligible to receive funding from the Global Environment Facility (GEF). The outcomes of the needs assessment will inform the discussions on funding priorities in 2022–2026 during the meeting of the Conference of the Parties in July 2021 and will serve as input to the negotiations for the eighth replenishment of the GEF trust fund (GEF-8).

B. Methodology

2. According to the terms of reference, the methodology for the assessment should be transparent, reliable and replicable. Compilation, synthesis and evaluation of data undertaken drew primarily upon information provided by Parties in NIPs and NIP updates, Article 15 national reports, GEF terminal evaluation reports as at June 2020, and responses to questionnaires received by the Secretariat of the Basel, Rotterdam and Stockholm conventions as at 30 September 2020.² Relevant supplementary information was drawn upon from the Secretariat of the Basel, Rotterdam and Stockholm conventions and the GEF secretariat and implementing agencies. The team of experts divided the work into the following steps.

3. In a first step, inventory data from the multiple sources were compiled and consolidated to estimate remaining inventories of persistent organic pollutants (POPs) by chemical. POPs categories, such as polybromodiphenyl ethers, hexabromocyclododecane, and perfluorooctane sulfonic acid and its salts and perfluorooctane sulfonyl fluoride, were grouped together. Several Parties reported endosulfan and lindane together with other pesticides, so they were grouped as such.³ While all POPs quantities were converted to tons, calculations for unintentionally produced POPs (U-POPs) were done separately because of the different metrics. Quantities used for calculations are shown in table 1.

Table 1
Reported quantities of POPs chemicals as at June 2020

<i>Chemical group</i>	<i>PCB (tons)</i>	<i>Pesticides (tons)</i>	<i>DDT (tons)</i>	<i>New POPs (tons)</i>	<i>U-POPs (g TEQ/y)</i>
Quantity	721 099	96 105	28 435	14 325	189 719

Abbreviations: DDT – dichlorodiphenyltrichloroethane; g TEQ/y – grams toxic equivalent per year; PCB – polychlorinated biphenyls.

4. In a second step, data from GEF terminal evaluation reports were consolidated to extract final costs of completed projects. Experts believe cost effectiveness (\$/ton) figures, extracted from GEF evaluated projects, responded to the request of Parties to use methodology that can be proven and replicated. The information was used to estimate costs for groups of chemicals, except for new POPs, as there were no projects completed yet. For those, average costs were taken from approved projects, even though limited in number. Average costs per project for technical assistance activities were derived for each region and chemical group. The data that included a disposal or destruction component were also extracted. Disposal costs per ton were calculated based on reported project costs and reported tons disposed of/destroyed. Costs per ton of POPs waste were calculated for the GEF-funded component only (no co-finance included). Table 2 depicts the costs per ton of POPs chemical used in the needs assessment.

Table 2
Costs per ton and grams toxic equivalent per year of POPs chemicals used for needs assessment calculations

	<i>PCB</i>	<i>Pesticides</i>	<i>DDT</i>	<i>New POPs</i>	<i>U-POPs</i>
\$/ton	3 316	7 164	5 862	108 167	–

¹ Experts included Ms. Suely Machado Carvalho (Brazil) and Mr. William Kwan (United Kingdom of Great Britain and Northern Ireland).

² For responses to questionnaires, see: UNEP/POPS/COP.10/INF/34.

³ A figure of 1.25 kg of oil/piece of equipment (transformers and capacitors) was assumed to estimate the quantity of PCB. Densities of PCB and pesticides were between 1.0 and 1.9 g/cm³. Reported quantities in litres of PCB and pesticides were converted to tons using an average density of 1.7 g/cm³.

\$/g TEQ/y	–	–	–	–	690
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Abbreviations: DDT – dichlorodiphenyltrichloroethane; g TEQ/y – grams toxic equivalent per year; PCB – polychlorinated biphenyls.

5. In a third step, cost scenarios were derived for consideration.

C. Cost scenarios

1. Scenario A

6. Scenario A considers full GEF costs by region, for all remaining POPs reported. Quantities used were the ones compiled as of June 2020. Total GEF costs for scenario A are shown in table 3.

Table 3

Scenario A: Net GEF required funds by region for all remaining POPs

(Millions of United States dollars)

<i>Region</i>	<i>Total costs without new POPs</i>	<i>Total costs of new POPs</i>	<i>Grand total^a</i>
Africa	404	525	929
Asia-Pacific	2 085	221	2 306
Eastern Europe	566	316	882
Latin America and the Caribbean	356	488	844
TOTAL	3 411^b	1 550	4 961^c

^a Total figures were rounded.

^b PCB total calculated costs amount to \$2.4 billion, representing around 70 per cent of all costs for addressing all remaining legacy POPs reported.

^c PCB total calculated costs amount to \$2.4 billion, representing around 48 per cent of all costs for addressing the total of remaining POPs reported.

7. GEF has funded POPs projects totalling \$1.2 billion as at June 2020. This total was calculated after filtering out dropped and cancelled projects. The GEF funds committed for regional and global projects were subtracted from the total, as it was not possible to allocate the funds to specific regions or countries. The team of experts noticed that the GEF database does not separate project impact by chemical group, and that there are several POPs addressed in one single project. Therefore, the total impact of GEF funding for polychlorinated biphenyls (PCB) only, for instance, could not be determined.

2. Scenario B1

8. Scenario B1 depicts the total cost for GEF-8 with different levels of PCB prioritization. There was no specific chemical target in the seventh replenishment of the GEF trust fund (GEF-7), only an aggregate target for all solid and liquid POPs, but there was a separate target for U-POPs of 1,300 grams toxic equivalent per year. In order to simplify calculations, Parties may wish to consider allocating for POPs the same tonnage allocated for the chemicals and waste focal area in GEF-7 (~ 98 per cent estimated to be POPs), that is, 100,000 tons.

9. Using this tonnage, experts considered PCB allocation at different percentages of the 100,000 tons, apportioned to different chemical groups, except U-POPs (different metrics). For instance, considering targeting 25,000 tons (25 per cent) for PCB projects in GEF-8, the remaining 75,000 tons would be for all other POPs groups except for U-POPs. For U-POPs, cost estimates for this scenario were based on the GEF-7 target, 1,300 grams toxic equivalent per year (addressing only 0.7 per cent of the total current U-POPs inventory).

10. Other possibilities for consideration included 50 per cent and 80 per cent allocated to PCB (50,000 and 80,000 tons). PCB deadlines agreed on under the Convention are approaching (2025 and 2028), and targeting PCB makes sense. Scenario B1 allows consideration of national priorities for other POPs. Table 4 shows total funding needs for Scenario B1.

Table 4

Scenario B1: funding needs in GEF-8 with 100,000 tons POPs allocation and 1,300 grams toxic equivalent per year U-POPs

(Millions of United States dollars)

<i>PCB allocation</i>	<i>Total POPs cost</i>	<i>Total U-POPs cost</i>	<i>Grand total^a</i>
25 000 tons PCB (25%) (75 000 tons others ^b)	1 549	0.9	1 550
50 000 tons PCB (50%) (50 000 tons others)	1 143	0.9	1 144
80 000 tons PCB (80%) (20 000 tons others)	656	0.9	657

Abbreviation: PCB – polychlorinated biphenyls.

^a Total figures were rounded.

^b Other POPs mean pesticides, dichlorodiphenyltrichloroethane (DDT) and new POPs. U-POPs costs were calculated separately due to different metrics. Grand total includes estimated costs for all POPs groups.

3. Scenario B2

11. Scenario B2 depicts the total GEF-8 costs in case Parties wish to consider addressing 200,000 tons of POPs, double the tonnage allocated for the chemicals and waste focal area in GEF-7, while addressing the same target as GEF-7 for U-POPs, that is, 1,300 grams toxic equivalent per year.

Table 5

Scenario B2: funding needs in GEF-8 with 200,000 tons POPs allocation and 1,300 grams toxic equivalent per year U-POPs

(Millions of United States dollars)

<i>PCB allocation</i>	<i>Total POPs cost</i>	<i>Total U-POPs cost</i>	<i>Grand total^a</i>
50 000 tons PCB (25%) (150 000 tons others ^b)	3 807	0.9	3 808
100 000 tons PCB (50%) (100 000 tons others)	2 286	0.9	2 287
160 000 tons PCB (80%) (40 000 tons others)	1 312	0.9	1 313

Abbreviation: PCB – polychlorinated biphenyls.

^a Total figures were rounded.

^b Other POPs mean pesticides, dichlorodiphenyltrichloroethane (DDT) and new POPs. U-POPs costs were calculated separately due to different metrics. Grand total includes estimated costs for all POPs groups.

12. Scenarios B1 and B2 were introduced to illustrate the GEF programming challenge to follow the Convention deadlines regarding PCB, if remaining quantities reported in NIPs are the most updated and correct figures. If so, the total tonnage for PCB in oils and contaminated equipment is around 720,000 tons, the majority in Asia.

13. Even if scenario B1 (100,000 tons) or B2 (200,000 tons) allocations (which are for all POPs) were used just for PCB, the remaining PCB tonnage to be addressed would still be around 620,000 and 520,000 tons, respectively.

D. Country interviews conducted by the University of Massachusetts Boston to validate raw data

14. The Secretariat contracted the University of Massachusetts Boston (UMB) to interview countries in order to validate existing data of POPs provided by countries through NIPs and Article 15 national reports. Experts took into consideration UMB data validation work. Differences were identified between the data officially reported (in NIPs and their updates) and the information collected by UMB in interviews. Corrections needed were pointed out by the UMB team to the experts. While some mistakes (such as differences in metrics used) were identified, the majority had to do with new updated information provided to UMB and not available in NIPs and updates. Due to late response from two of the target countries, only 10 out of 12 countries were considered in the calculations of the experts (Antigua and Barbuda, Argentina, Brazil, China, Egypt, Ghana, Jordan, Mexico, North Macedonia and the Russian Federation). Table 6 presents the comparison cost figures with and without UMB validation corrections, for all POPs in the 10 countries considered.

Table 6
Impact of UMB validation interviews on total costs for 10 countries

<i>Total funding needs calculated from NIPs for 10 countries (millions of United States dollars)</i>	<i>Total funding needs based on UMB interviews (millions of United States dollars)</i>	<i>Change in funding needs (millions of United States dollars)</i>	<i>Percentage change</i>
2 263	2 038	-225	-9.96

15. The total estimated funding needs, before UMB interviews, was calculated following the presented methodology, to be \$2.263 billion for those 10 countries. After the interview results and database corrections, the funding estimate was reduced to \$2.038 billion. The impact in percentage change is -9.96 per cent. UMB also reported that there was a large number of unreported quantities related to unknown stocks of PCB and contaminated equipment, as well as uncertainties on the fate of POPs pesticide stockpiles (commonly reported in the first NIPs), as supporting documents for their disposal could, in most cases, not be obtained. Inventories on new industrial POPs are available only for selected chemicals, and data are based on use of toolkits, not chemical analysis, which presents challenges for identifying POPs-contaminated commodities (including in customs control) and disposing of them safely, as well as assessing their total quantities and associated global funding needs.

E. Recommendations

1. Assessment of the methodology used for previous needs assessments, with a particular focus on the data and information collection process

16. The large remaining quantity of PCB waste, and in general the incomplete data reported in the NIPs, highlight the issue of poor data quality.

17. It also shows lack of a harmonized chemical accounting structure between the Secretariat of the Basel, Rotterdam and Stockholm conventions and the GEF secretariat. It is key that data evidence collected when an implementing agency does a pre-project survey is informed and accounted for. For instance, once a project is implemented, the quantity of POPs addressed by the project can be discounted from the total reported by the country to avoid double counting. The GEF database would benefit from including project impact by chemical group. That would enable determination of funding spent addressing specific POPs groups, such as PCB. It is especially challenging in cases where the same project addresses several POPs groups.

18. The way information was presented in NIPs indicated difficulties with metrics and the managing of data collection complexity, and as a consequence, there may be large quantities of unreported data. The fact that a large number of Parties are late in submitting NIP updates adds to the data challenges.

19. Data validation work, such as that done by UMB, could be extended in 2022 and 2023 to all GEF eligible countries, focusing primarily on PCB, and in coordination with the GEF implementing agencies. The results would help to provide Parties with the most updated information on the remaining quantities of PCBs and inform allocation targets to meet the 2025 and 2028 Convention deadlines. Assessing quantities of obsolete POPs pesticides, including the fate of already reported stockpiles, would also merit further validation.

2. Recommendations for the assessment of funding needs for the period 2026–2030

20. The various information sources used for the assessment, including NIPs, updated NIPs, national reports and questionnaires submitted by Parties, deliver a good basis for the assessment. However, after extensive efforts to compile and verify the data gained from the sources, information gaps and data inaccuracies still persist. To further refine the funding need estimation, the experts see a requirement to further strengthen the quality of data contained in the NIPs and national reports and to consider including additional data sources from other related intersessional processes in the needs assessment methodology.

21. To strengthen the data contained in the NIPs, countries should consider updating already established inventories and action plans contained in their respective NIPs, taking into account work that has been undertaken since the last update.

22. Moreover, to increase the availability of data on the quantity of POPs and the cost of their environmentally sound management, the experts reiterated their recommendation that such data contained in the NIPs be moved to an electronic format and harmonized with national reports.

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23. Also, the experts recommend the use of harmonized inventory templates, which would greatly facilitate the assessment of needs over a specified period and allow the identification of trends.
24. The questionnaire to collect additional quantitative data in support of the needs assessment was an important aspect of improving data accuracy and should hence be continued. The experts recommend that the Secretariat strengthen its efforts to reach out to countries with a view to maximizing the submission of data through such questionnaires.
25. In line with the preceding recommendation, the experts saw merit in the validation, through interviews, of the information contained in questionnaires and in the NIPs. The robustness of the data thanks to the possibility to cross-check existing data was greatly improved. The credibility of the needs assessment could be further improved by undertaking the validation through missions to verify the data on site, in combination with remote interviews. The experts hence recommend, for future assessments, that a combined approach of both remote interviews and on-site validation missions be included in the core budget of the methodology.
26. In order to further strengthen the data used for the needs assessment methodology, the experts recommend taking into account, as appropriate, additional information sources, such as, for example, other relevant processes under the Convention and/or implementing agencies involved in the implementation of POPs projects funded by GEF.

REPORT OF THE FULL ASSESSMENT OF FUNDING NEEDS FOR THE IMPLEMENTATION OF THE STOCKHOLM CONVENTION FOR THE PERIOD 2022-2026

Chapter I: Decisions and Terms of Reference (TOR)

Decisions

In decision SC-1/9, the Conference of Parties to the Stockholm Convention on Persistent Organic Pollutants adopted the guidance to the financial mechanism set out in the annex to that decision.

In decision SC 5/22, the Conference of Parties decided to undertake an assessment of funding needs every four years, starting at its sixth meeting, as input to the negotiations on the replenishment of the Trust Fund of the Global Environment Facility.

In decision SC-9/15 (Annex II) the Conference of Parties adopted the terms of reference for the assessment of the funding needed by developing countries Parties and Parties with economies in transition to implement the Convention over the period 2022-2026.

Pursuant to the terms of reference of the assessment set out in Annex II to decision SC-9/15, the methodology included, as appropriate and subject to the availability of funding, the validation of existing inventory data to support the experts conducting the assessment.

The Secretariat engaged a team of two independent experts, Ms. Suely Machado Carvalho (Brazil) and Mr. William Kwan (United Kingdom of Great Britain and Northern Ireland), to conduct an assessment of the funding necessary and available for the implementation of the Convention for the period 2022–2026, based on, among other things, lessons learned from the methodologies used for the previous needs assessments⁴ and available data gained from the previous assessments of funding needs.⁵

The Secretariat also engaged a team of experts from the University of Massachusetts, Boston (UMB), based in the United States of America, represented by its Center for Governance and Sustainability, to undertake a validation of inventory data. Both expert teams worked in close collaboration and in coordination with the Secretariat.

Terms of Reference⁶

A. Objectives

The objectives of the work to be carried out under the present terms of reference are:

- (a) To enable the Conference of the Parties to provide to the principal entity entrusted with the operation of the financial mechanism referred to in Article 13 of the Convention and to other entities, should they be so entrusted, at periodic intervals, assessments of the total funding, which consists of funding for baseline and agreed full incremental costs, needed by Parties eligible for assistance from the financial mechanism to facilitate their effective implementation of the Convention;
- (b) To provide the principal entity and any other entities with a framework and modalities for the determination in a predictable and identifiable manner of the funding necessary and available for the implementation of the Convention by Parties eligible for assistance from the financial mechanism.

B. Methodology

Pursuant to the objectives set out in paragraph 1 above, the work to be carried out under the present terms of reference will be facilitated and coordinated by the Secretariat with a view to enabling a team of up to three independent experts to undertake a full assessment of the funding necessary and available for the implementation of the Convention for the period 2022–2026, based on, among other things, the experience in using and lessons learned from the methodology and available data gained from the preliminary assessments of funding needs for the periods

⁴ See previous methodologies: UNEP/POPS/COP.2/12; UNEP/POPS/COP.3/15, annex; UNEP/POPS/COP.5/22; UNEP/POPS/COP.7/18.

⁵ See available data: UNEP/POPS/COP.3/19; UNEP/POPS/COP.4/27, annex; UNEP/POPS/COP.6/20; UNEP/POPS/COP.8/INF/32.

⁶ Annex II of Decision SC-9/15.

2006–2010,⁷ 2010–2014,⁸ 2015–2019,⁹ and 2018–2022¹⁰ for consideration by the Conference of the Parties at its tenth meeting.

The assessment will include an estimation of baseline and agreed full incremental costs of activities described primarily in national implementation plans and required to implement Parties' obligations under the Convention.

The methodology for assessing the funding necessary and available for the implementation of the Convention shall be transparent, reliable and replicable.

C. Execution and sources of information

In developing the assessment of funding needs, the work will draw primarily on information provided by Parties in the national implementation plans submitted pursuant to Article 7 and reports submitted by Parties pursuant to Article 15 of the Convention.

The assessment methodology for the funding needed over the period 2022–2026 will be complemented by the following three-step approach:¹¹

- (a) Step one involves the consolidation of inventory data from multiple sources to estimate the quantities of persistent organic pollutants to be disposed of by developing-country Parties and Parties with economies in transition from 2022 to 2026;
- (b) Step two involves the estimation of average disposal costs for groups of chemicals;
- (c) Step three, based on the findings of the first two steps, involves the estimation of disposal costs for groups of chemicals and the aggregation of such by United Nations region.

Relevant supplementary information, where available, will be obtained from the Secretariat and from:

- (a) Parties, which are requested to provide information on funding needs associated with implementation of the Convention and inventory data using, as appropriate, online questionnaires and other formats and any other information regarding their experiences in implementing the Convention;
- (b) The Global Environment Facility, which, as the principal entity entrusted with the operation of the financial mechanism on an interim basis, is invited to provide information gathered through its operations relevant to the assistance needs of eligible Parties and to the calculation of disposal costs as set out in paragraph 6 above;
- (c) Intergovernmental organizations, non-governmental organizations and other stakeholders, which are invited to provide information relating to the Needs Assessment and, as appropriate, to the calculation of disposal costs as set out in paragraph 6 above;
- (d) Other international financial institutions that provide bilateral or multilateral financial or technical assistance pursuant to paragraph 6 of Article 13 of the Convention, which are invited to provide information on such assistance, including the levels of such assistance;
- (e) The secretariats of other multilateral environmental agreements, which are invited to provide information relevant to modalities for conducting similar needs assessments in connection with their agreements.

The methodology for assessing the funding needs over the period 2022–2026 may also include, as appropriate and subject to the availability of funding, validation missions to developing-country Parties and Parties with economies in transition to verify existing inventory data and to collect additional data and other relevant information.

D. Scope

The assessment of the funding necessary and available for the implementation of the Convention should be comprehensive and primarily directed towards assessing total funding needs, with a view to identifying funding

⁷ UNEP/POPS/COP.3/19, with terms of reference for the assessment set forth in the annex to decision SC-2/12.

⁸ UNEP/POPS/COP.4/27, with terms of reference for the assessment set forth in the annex to decision SC-3/15.

⁹ UNEP/POPS/COP.6/20 and UNEP/POPS/COP.6/INF/20, with terms of reference for the assessment set forth in annex II to decision SC-5/22.

¹⁰ UNEP/POPS/COP.8/18, annex III, with terms of reference for the assessment set forth in the annex to decision SC-7/18.

¹¹ The details of the three-step approach are contained in the recommendations pertaining to the assessment of funding needs for the period 2018–2022 as set out in documents UNEP/POPS/COP.8/18, annex III, and UNEP/POPS/COP.8/INF/32.

needed for baseline and agreed full incremental costs to enable all Parties to fulfil their obligations under the Convention.

E. Process

The information identified above should be provided to the Secretariat by 31 August 2020. Any future updating of the information will be decided upon by the Conference of the Parties.

Based on the information that it receives from the Secretariat, the team of experts referred to in paragraph 2 above will prepare a report on the assessment of the funding necessary and available for the implementation of the Convention for the period 2022–2026 by developing-country Parties and Parties with economies in transition, and for all their continuing needs as identified in previous assessments of baselines, and transmit it to the Secretariat.

The Secretariat will present the above-mentioned report to the Conference of the Parties at its tenth meeting for its consideration and subsequent action, including for the purpose of informing the replenishment process of the Global Environment Facility. The report will be deemed to be an official document of the Conference of the Parties.

Chapter II: Methodology

According to the terms of reference, the methodology for the assessment should be transparent, reliable and replicable. Compilation, synthesis and evaluation of data undertaken drew primarily upon information provided by Parties in National Implementation Plans (NIPs) submitted pursuant to Article 7 and reports by Parties pursuant to Article 15 of the Convention.

In addition, GEF Terminal Evaluation Reports as of June 2020, and Parties' responses to questionnaires received by the Secretariat as of 30 September 2020 were also compiled and used. Relevant supplementary information, was drawn upon from the Secretariat and the GEF Secretariats and implementing agencies.

According to the recommendations of Parties, the assessment methodology for the funding needed over the period 2022–2026 will be complemented by a three-step approach¹², including the consolidation of inventory data from multiple sources to estimate the quantities of persistent organic pollutants to be disposed of by developing-country Parties and Parties with economies in transition from 2022 to 2026; estimation of costs for groups of chemicals; and estimation of costs aggregated by United Nations region.

Added steps by the Secretariat included the validation of raw data reported, performed by the University of Massachusetts at Boston; and the presentation of different cost scenarios focusing on total costs to the GEF to address all POPs reported so far and estimates for the costs for the 2022 to 2026 period only.

Consolidation of Inventory Data

The Experts, in close collaboration with the Secretariat, evaluated, in a first step, the data collection process. This was particularly relevant since the information contained in the NIPs, NIPs Update and Article 15 reports, among others, was based on different timeframes of action plans, covered a broad range of different sectors, and showed data gaps. In addition, several Parties are behind in submitting their updated NIPs, what brought additional gaps of information, especially concerning new POPs.

The Experts also acknowledged it was necessary to collect additional information by means of a questionnaire in order to help to improve the data and address some of the gaps. The Experts worked to provide guidance to the BRSC Secretariat regarding a revised electronic questionnaire to be used in order to address information gaps and update the quantities of POPs in countries.

The Secretariat submitted to Parties the electronic-questionnaires for their feedback by September 30th 2020. The request contained an explanatory note and deadline for responses.

The information reported on the questionnaires received as of October 15th 2020 was considered. Parties with a validated/ formal submission of the questionnaire (the Parties that clicked on “submission” at the end of the questionnaire) were only the 25 listed, namely Guyana, Cameroon, Burundi, Sao Tome and Principe, Nicaragua, Ivory Coast, El Salvador, Argentina, Niger, Trinidad and Tobago, Suriname, Madagascar, North Macedonia, Colombia, Kyrgyzstan, Myanmar, Georgia, Bolivia, Montenegro, Qatar, Tanzania, Thailand, Burkina Faso, Sri Lanka and Eritrea

An Excel table was created for information collection purposes and based on the different Annexes A (Elimination), B (Restriction), C (Unintentional Productions) and columns for the first and second NIP submitted to

¹² The details of the three-step approach are contained in the recommendations pertaining to the assessment of funding needs for the period 2018–2022 as set out in documents UNEP/POPS/COP.8/18, annex III, and UNEP/POPS/COP.8/INF/32.

the Secretariat were created. Information collected from Article 15 report, when pertinent, as well as responses from the Secretariat questionnaire were included.

Reporting on POPs pesticides was usually done together so the Experts could not separate the different chemicals. In addition, new POPs such as Endosulfan and Lindane were reported together with other pesticides by several Parties.

In the case of PCBs, units of contaminated equipment, such as capacitors and transformers, were reported separately from PCB oils. Transformers are assumed to contain 1.36 kg of oil; capacitors contain much smaller amounts. A figure of 1.25 kg of oil/piece of equipment (transformers and capacitors) was assumed to estimate PCB quantity. Densities of PCBs and pesticides were between 1.0 and 1.9 g/cm³. Reported quantities in liters of PCBs oils and pesticides were converted to tonnes using an average density of 1.7 g/cm³.

Reporting on new POPs chemicals and related compounds, such as BDE and PFOS and salts, was usually done together so the Experts could not separate the quantities. Tonnages for exempt uses were omitted from the inventory figures. Only acceptable use amounts were included.

When reported tonnages for new POPs were very large, it was assumed the reported figures were finished goods. The POPs chemicals are assumed to be on average 1% of the finished goods, and the figures were adjusted to indicate “pure” POPs for costing purposes, even though there are not stockpiles of these POPs in pure form. Where PFOS were reported in liters, conversion to tonnes used a density of 1.8 g/cm³.

The summary of consolidated information on POPs quantities reported by Parties as June 2020 is presented in Table 1. Pesticides group includes Endosulfan and Lindane.

Table 1: Inventory of Reported POPs Chemicals by Region

Region	Pesticides (tonne)	PCBs (tonne)	PCB equipment (tonne)	DDT (tonne)	New POPs (t)	UP-POPs (g TEQ/y)
CEE	77,538	26,574	128	8,066	2,998	3,306
LAC	5,880	60,415	123	387	4,486	12,977
Africa	6,929	35,479	79	2,779	4,724	120,190
Asia-Pacific	5,759	597,544	757	17,204	2,117	53,247
TOTAL	96,105	720,012	1,086	28,435	14,325	189,719
		721,099	Total PCB			

The Experts identified the following issues and shortcomings in the data collection and consolidation process:

- (a) NIPs and Article 15 reports, to date, still contain large data gaps and hardly any distinction between baseline and incremental costs;¹³
- (b) Some delays were experienced in receiving response to the questionnaires prepared by the Secretariat from Parties, with a generally low response rate. Also, issues have been identified regarding the harmonization and accuracy of the data received. Many responses were blank;
- (c) Review of the countries whose data was included in the Inventory led to elimination of the data for Central and Eastern European countries who are no longer GEF-eligible countries (Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia).
- (d) In many cases, reported data did not include units of measurement, and assumptions had to be made based on interpretation of data.
- (e) In some cases, reported inventory amounts for numbers of PCB-containing equipment and/or PCB tonnage were disproportionate compared to countries of similar size and circumstance. Review and analysis of figures led to assumptions and editing of figures based on the Expert’s experience and professional judgment.

¹³ This is aggravated by the fact that, at the time of the preparation of this report, many countries have not yet updated their NIPs, as required following the listing of new chemicals under the Convention.

(f) In many of the second NIPs submitted, there is lack of reference to the inventory data in the first NIP, making it impossible for Experts to interpret if inventory no longer exist or what quantities have been reduced/eliminated.

Country interviews undertaken by University of Massachusetts Boston to validate raw data

The Secretariat contracted the University of Massachusetts Boston (UMB) to interview countries in order to validate existing data of Persistent Organic Pollutants (POPs) provided by countries through NIPs and Article 15 reports. Experts took into consideration UMB's data validation work. There were differences identified between the data officially reported (in NIPs and its updates) and the information collected from UMB's interviews. Corrections needed were pointed out by UMB team to the Experts. While some mistakes (such as differences in metrics used) were identified, the majority had to do with new updated information provided to UMB and not available in NIPs and updates. Due to late response from two of the target countries, only ten out of twelve countries were considered in the calculations of the Experts (North Macedonia, Antigua and Barbuda, Argentina, Brazil, Mexico, Egypt, Ghana, China, Jordan and the Russian Federation). Table 2 presents the comparison cost figures with and without UMB validation corrections for all POPs in the 10 countries considered.

Table 2. Impact of UMB validation interviews on total costs for 10 countries

Total Funding Needs Calculated from NIPs for 10 countries (million US\$)	Total Funding Needs Based on UMB interviews (million US\$)	Change in Funding Needs (million US\$)	% Change
\$2,263	\$2,038	-\$225	-9.96%

The total estimated funding needs, before UMB interviews, was calculated following the presented methodology, to be US\$ 2.263 billion for those 10 countries. After the interview results and database corrections, the funding estimate was reduced to US\$ 2,038 billion. The impact in percentage change is – (minus) 9.96%. UMB also reported that there was a large number of non-reported quantities related to unknown stocks of PCBs and contaminated equipment, as well as uncertainties on the fate of POPs pesticide stockpiles (commonly reported in the first NIPs) as supporting documents for their disposal could, in most cases, not be obtained. Inventories on new industrial POPs are available only for select chemicals and data are based on use of toolkits, not chemical analysis, which presents challenges for identifying POPs contaminated commodities (including in customs control) and disposing them safely, as well as, assessing their total quantities and associated global funding needs.

Country interviews by UMB have been compiled in document UNEP/POPS/COP.10/INF/56.

Estimation of Costs

a) Terminal Evaluation Reports

The Experts analyzed final project costs reported in GEF POPs Terminal Evaluation Reports supplied by the GEF Secretariat (as of June 2020) to derive the cost figures used for future funding needs calculations.

Using Terminal Evaluation information on final POPs disposal costs, the Experts estimated costs for groups of chemicals. Experts believe that by providing cost effectiveness figures from GEF completed projects instead of information on costs in NIPs, the methodology can be replicated, what addresses Parties request.

Each Terminal Evaluation Report analyzed was broken down by region and country, as well as group of chemicals. The information was used to estimate costs for groups of chemicals, except for new POPs since there were no projects completed as of June 2020. For those, average costs were taken from approved projects and a slightly revised methodology is presented later in this report (add page or section?).

Twenty-one (21) Terminal Evaluation Reports of projects covering 69 countries, in different UN regions, were selected for the analyses. Projects were of various types, for one single country and for a number of countries, such as one report for a project covering 15 African countries in a regional approach. It is important to note that the number of completed projects is still limited, considering all chemical groups.

Due to the relatively small number of new (post 2016) Terminal Evaluation Reports available for analysis, the final figures used for cost estimations were supplemented and informed by the pre-2016 reports, which were used for the previous needs assessment study (2018-2022).

Data from Terminal Evaluation Reports of projects that included capacity building and technical assistance activities (not directly related to the destruction or disposal of POPs)¹⁴ was extracted and analyzed, and organized by chemical group¹⁵ and region.

Data from Terminal Evaluation Reports of projects that included a disposal or destruction component was also extracted. Disposal costs per tonne were calculated based on project costs and tonnes disposed/destroyed reported in the Terminal Evaluation Reports.

From the Terminal Evaluation Reports costs analysis, Experts came up with rounded figures to use for costing estimates, which were then applied for every eligible country with reported data, to come up with total estimated funding needs.

The disposal costs per tonne of POPs waste were calculated for the Facility's funded component only, so, only GEF budgeted figures have been indicated; co-financing figures have not been included/taken into account.

An average cost per chemical was derived from the final calculations, as indicated in Table 3 (Table 2 of the Executive Summary), which shows the cost allocation per tonne of chemicals based on the total calculated costs and reported tonnages.

Table 3: Costs per tonne and g TEQ/y of POPs Chemicals for Needs Assessment Calculations

	Pesticides	PCB	DDT	New POPs	U-POPs
US\$/tonne	7,164	3,316	5,862	108,167	
US\$/g TEQ/y					690

b) Limitations Regarding Terminal Evaluations

Limitations arising from the data extracted from the post-2016 Terminal Evaluation Reports were similar to the pre-2016 ones, and included projects that covered multiple substances without clear enumeration of costs associated with each category of substance (for instance, mixed PCBs and "other POPs", or mixed DDT and dioxins). In these cases, it was not possible to establish clear costs for each category of substance, therefore in such cases the data was of limited use.

Another limitation was the lack of completed projects in all chemical groups for each region.

c) New POPs Cost Estimates

It is important to note that Experts encountered difficulties to address several new POPs (other than Endosulfan, Lindane and other pesticides) which were reported, especially in the second NIP submitted by a party. They are PBDE (including other related/mixed), HBCD and PFOS and its salts.

With respect to "new POPs management or specifically destruction/irreversible transformation costs, there is little actual experience either within GEF or elsewhere as far as the Experts know and/or found out from discussions with other experts.¹⁶ The cost record on GEF or similar projects expressed in \$/tonne is almost entirely for concentrated POPs (stockpiles) and that is the metric used as a basis for cost effectiveness in terms of Global Environment Benefits, GEB.

Unfortunately, the other experts believe that is not as easy to apply to the new POPs, nor in fact that relevant. These really do not appear in any quantity as legacy stockpiled chemicals but rather as dilute POPs contaminated waste streams in products so the methodology of using this metric per say as a route to cost targeted elimination from potential release is not straight forward and in fact involves factoring in other kinds of investment that may or may not be GEF eligible to actually address the issue. The highest direct GEB investments for GEF will be projects that replace any remaining use of chemicals like HBCD, PFOS and PBDE in manufacturing where it might remain in developing countries.

In addition, when dealing with the accumulating legacy of product waste streams in various sectors that contain or "may" contain these POPs, it is not practical to separate product wastes as segregated POPs waste for some kind of dedicated management since even if the waste streams are segregated by product type (such as textiles,

¹⁴ Activities include regulatory framework, capacity building, establishing inventories, monitoring and evaluation, etc. These activity descriptions are derived from the Terminal Evaluation Reports.

¹⁵ Chemical groups used: pesticides, PCBs, DDT, and U-POPs. New POPs except the pesticides were dealt with separately.

¹⁶ The Experts are grateful to Mr. Rick Cook and Mr. Timo Seppala's contributions. Both technical experts are experienced on the business of chemicals and project implementation, with practical experience on POPs management and destruction.

automotive plastic, insulating and packaging foam) only a portion of it will contain POPs and in fact given most of these chemicals are now banned will decline over time. The cost effectiveness of this in terms of GEB is low and declining with time.

The alternative is to include these product waste streams into the implementation of integrated life cycle waste or circular economy waste management strategies that separate and segregated product waste streams for beneficial recovery re-use and resource recovery. This can capitalize on source and local management as well as facilitate introduction of Extended Producers Responsibility (EPR)¹⁷ and carbon finance mechanisms.

Because there is no clear guidance on how to report or approach those issues, the experts considered as a final methodological step, grouping New POPs together and using a slightly modified methodology to calculate disposal costs. This is because, there were no GEF-funded projects completed covering those chemicals, nor terminal evaluation reports, making it impossible to collect cost information, as done for legacy chemicals. Projects approved and still under implementation, covering those chemicals were analyzed and cost figures extracted for use in the absence of Terminal Evaluation Reports.

The GEF Project database was scrutinized to identify approved projects addressing new POPs other than pesticides (new pesticides were reported together with “old”/legacy pesticides), either alone or in combination with other substances (mercury, ODS, etc.). For combination projects, analysis of project documents identified costs allocated solely to POPs as accurately as possible.

From the approved projects, it was noted that the majority of the GEF project costs were related to country-wide policy activities, training, awareness-raising and similar technical assistance (TA) activities, rather than technology specific investment activities. Therefore, it was decided to use an average cost/country for fixed technical assistance type activities, with a smaller allocation for investment activities based on the tonnage of new POPs reported.

From the project documents, the investment costs are mainly related to end-of-life destruction activities for finished products containing the chemicals, rather than direct destruction of the chemicals themselves. Research into the finished products identified in the project documents revealed that the POPs content was approximately 1% of the tonnage of the products. Therefore, for costing purposes, the reported tonnage of finished goods was converted into approximate tonnage of pure POPs, and an investment cost/tonne was calculated. Finally, an average of these investment costs/tonne was determined and used for costing purposes.

From the approved projects analyzed, technical assistance fixed costs ranged from \$1.1 million to \$2.3 million/country, while the investment costs ranged from \$25,000 to \$250,000/tonne. Table 4 shows the data used to determine the average costs for calculating the funding needs.

Table 4: Proposed Costs for New POPs calculations (United States dollars)

Substance	TA fixed cost/type of new POPs	Investment cost/tonne
PBDE/Others/mixed	\$ 1,500,000	\$ 250,000
HBCD	\$ 1,500,000	\$ 25,000
PFOS	\$ 1,500,000	\$ 80,000

The tonnages of new POPs reported from the countries was converted to “pure” POPs using an assumption of 1% concentration when the inventory figures were reported as finished goods, and the investment cost/tonne was applied to the aggregate tonnage of new POPs for each country. The total cost for new POPs was then determined by adding the TA fixed costs and the Investment costs/tonne for each country.

As mentioned above, there were no projects completed covering those chemicals, and therefore, no terminal evaluations, making it impossible to collect cost information from the Terminal Evaluation Reports. Projects approved

¹⁷ Faced with increasing amounts of waste, many governments have reviewed available policy options and concluded that placing the responsibility for the post-consumer phase of certain goods on producers could be an option. Extended Producer Responsibility (EPR) is a policy approach under which producers are given a significant responsibility – financial and/or physical – for the treatment or disposal of post-consumer products. Assigning such responsibility could in principle provide incentives to prevent wastes at the source, promote product design for the environment and support the achievement of public recycling and materials management goals”. Extracted from website www.OECD.org. March 2021.

and under implementation, covering those chemicals were analyzed and cost figures extracted, in the absence of Terminal Evaluation Reports.

Aggregation of Disposal Costs by Chemical

The information from the several steps above was used to estimate costs by country based on the reported chemical inventories, and then summarized by region. GEF database of approved projects as of June 2020 was consulted to ascertain final costs. Nevertheless, getting information on disposal costs allocated by chemical turned out to be a difficult task as the capillarity of the information is not available. Therefore, the report indicates only total figures of approved projects as of June 2020.

Table 5 presents a summary of estimated funding needs by chemical group to address all POPs reported. The figures in the table refer to incremental costs only. Co-funding to cover costs exceeding the agreed incremental costs would need to be raised in line with the Global Environment Facility's co-funding policy. In addition, Experts calculated the funding needs for the period 2022-2026 only, using cost scenarios (Chapter III).

Table 5: Summary of required funds to address all POPs reported by chemical group

Chemical group	Quantities reported (tonnes)	Total Funding (billion US\$)
PCBs	721,099 ¹⁸	2.39
Pesticides	96,105	0.69
DDT	28,435	0.17
New POPs	14,325	1.55
Unintentionally produced persistent organic pollutants (U-POPs)	189,719 (g TEQ/y)	0.13
Total funding needed to address 859,964 tonnes POPs and 189,719 g TEQ/y UPOPs		4.9

Abbreviations: g TEQ/y, grams toxic equivalent per year.

Total funding figures were rounded

As of 30 June 2020, GEF has approved projects to address POPs in the total amount of US\$ 1.2 billion. Given that inventory data forming the basis of this assessment have been further validated through interviews with a number of relevant Parties to the Convention, it is assumed that the total funding needs presented in Table 5 is over and above this amount. An error margin of $\pm 10\%$ on the final cost figure is suggested to take into account that not all Parties' inventory data could be validated and to reflect that quantitative data per POPs chemicals on the outcomes of the GEF-funded projects is not available.

Chapter III: Cost Scenarios

1. Scenario A

Scenario A considers full GEF costs aggregated by United Nations regions, to address all remaining POPs reported. Quantities used were the ones compiled as of June 2020. Total GEF costs for Scenario A is in Table 6. Annex 1 details the estimations for Scenario A.

¹⁸ While the estimated global production of PCB (ca. 1.3 million tonnes) is considered relatively accurate, the quantities of PCB still to be destroyed is more difficult to estimate because the quantities of oil or equipment containing or contaminated with PCB with the concentrations above the threshold are much larger than the quantities of pure PCB, and could continue to increase due to unintentional contamination or improved inventories of PCB. According to the report prepared by the small intersessional working group on PCB in 2019 (UNEP/POPS/COP.9/INF/10) based on the information in the national reports of the Stockholm Convention and the Basel Convention as well as an online survey conducted in 2018, the quantities of PCB still need to be eliminated were estimated to be ca. 300,000 tonnes. The discrepancy with the figures between the report prepared by the small intersessional working group and the present report could be attributed to, for example, information not captured or inconsistency in reporting, improved inventories since 2018, and difference in the methodology for information collection and calculation.

Table 6: Scenario A: GEF Required Funds by Region for All Remaining POPs

REGION	Total Costs without New POPs (million US\$)	Total Costs of New POPs (million US\$)	Grand-Total (million US\$) ¹⁹
CEE	\$566	\$316	\$882
LAC	\$356	\$488	\$844
Africa	\$404	\$525	\$929
Asia-Pacific	\$2,085	\$221	\$2,306
TOTAL	\$3,411²⁰	\$1,550	\$4,961²¹

The GEF has funded POPs projects totaling 1.2 billion USD as of June 2020. This total was calculated after filtering out dropped and canceled projects. The GEF funds committed for regional and global projects were subtracted from the total, as it was not possible to allocate to specific regions/countries. The Experts noticed that the GEF database does not separate project impact by chemical group, and that there are several POPs addressed in one single project. Therefore, the total impact of GEF funding, for instance, for PCBs only, could not be determined.

2. Scenario B1

Scenario B1 depicts the total cost for GEF-8 with different levels of PCB prioritization. There was no specific chemical target in GEF-7, only an aggregate target for all solid and liquid POPs, but there was a separate target for U-POPs of 1,300 g TEQ/y. In order to simplify calculations, Parties may wish to consider allocating for POPs the same tonnage allocated for the Chemicals and Waste focal area in GEF-7 (~ 98% estimated to be POPs), that is, 100,000 tonnes.

Using this tonnage, Experts considered PCB allocation at different percentages of the 100,000 tonnes, apportioned to different chemical groups, except U-POPs (different metrics). For instance, considering targeting 25,000 tonnes (25%) for PCB projects in GEF-8, the remaining 75,000 tonnes would be for all POPs groups except for U-POPs. For U-POPs, cost estimates for this scenario were based on the GEF-7 target, i.e., 1,300 g TEQ/y (addressing only 0.7% of the total current U-POPs inventory).

Other possibilities for consideration included 50% and 80% allocated to PCBs (50,000 and 80,000 tonnes). PCB deadlines agreed by the Convention are approaching (2025 and 2028) and targeting PCBs makes sense. Scenario B1 allows consideration of national priorities for other POPs. Table 7 shows total funding needs for Scenario B1.

Table 7. Scenario B1 Funding Needs in GEF-8 with 100,000 tonnes POPs Allocation and 1,300 g TEQ/y U-POPs

PCB Allocation	Total POPs Cost (million US\$)	Total U-POPs Cost (million US\$)	GRAND-TOTAL (million US\$) ²²
25,000 tonnes PCB (25%) (75,000 tonnes others ²³)	\$ 1,549	\$ 0.9	\$ 1,550
50,000 tonnes PCB (50%) (50,000 tonnes others)	\$ 1,143	\$ 0.9	\$ 1,144
80,000 tonnes PCB (80%) (20,000 tonnes others)	\$ 656	\$ 0.9	\$ 657

3. Scenario B2

Scenario B2 depicts the total GEF-8 costs in case Parties wish to consider addressing double the tonnage for POPs (200,000 tonnes) that was allocated for the Chemicals and Wastes focal area in GEF-7 while addressing the same target for GEF-7 for U-POPs, that is, 1,300 g TEQ/y.

¹⁹ Total figures were rounded.

²⁰ PCB total calculated costs amount to US\$ 2.4 billion, representing around 70% of all costs for addressing all remaining legacy POPs reported

²¹ PCB total calculated costs amount to US\$ 2.4 billion, representing around 48% of all costs for addressing the total of remaining POPs reported

²² Figures were rounded.

²³ Other POPs mean Pesticides, DDT and new POPs. U-POPs costs were calculated separately due to different metrics. Grand-total includes estimated costs for all POPs groups.

Table 8. Scenario B2 Funding Needs in GEF-8 with 200,000 tonnes POPs Allocation and 1,300 g TEQ/y U-POPs

PCB Allocation	Total POPs Cost (million US\$)	Total U-POPs Cost (million US\$)	GRAND-TOTAL (million US\$) ²⁴
50,000 tonnes PCB (25%) (150,000 tonnes others)	\$ 3,807	\$ 0.9	\$ 3,808
100,000 tonnes PCB (50%) (100,000 tonnes others)	\$ 2,286	\$ 0.9	\$ 2,287
160,000 tonnes PCB (80%) (40,000 tonnes others)	\$ 1,312	\$ 0.9	\$ 1,313

Scenarios B1 and B2 were introduced to illustrate the GEF programming challenge to follow the Convention deadlines regarding PCBs, if remaining quantities reported in NIPs are the most updated and correct figures. If so, the total tonnage for PCB in oils and contaminated equipment is around 720 thousand tonnes, the majority in Asia.

If one uses Scenario B1 (100,000 tonnes) or B2 (200,000 tonnes) allocations (which are for all POPs) just for PCBs, the remaining PCB tonnage to be addressed would still be around 620,000 and 520,000 tonnes respectively.

Annexes 2 and 3 details estimations for Scenarios B1 and B2 respectively.

Chapter IV: Conclusions and Recommendations

Assessment of the methodology used for previous needs assessments, with particular focus on the data and information collection process

The large remaining quantity of PCBs waste, and in general the incomplete data reported in the NIPs, brings the issue of poor data quality.

It also shows lack of a harmonized chemical accounting structure between the Convention and the GEF Secretariats. It is key that data evidence collected when an implementing agency does a pre-project survey is informed and accounted for. For instance, once a project is implemented, the quantity of POPs addressed by the project can be discounted from the total reported by the country to avoid double counting. The GEF database would benefit from including project impact by chemical group. That would enable determination of funding spent addressing specific POPs groups, such as PCBs. It is especially challenging in cases when the same project addresses several POPs groups.

The way information was presented in NIPs indicated difficulties with metrics and the managing of data collection complexity, and as consequence, there may be large unreported data. The fact that a large number of Parties are late in submitting NIP-updates adds to the data challenges. Parties may wish to consider adding a table annex to all NIPs [to be] submitted summarizing quantitative information on both POPs stockpiles and wastes to be addressed in the country (“baseline”) and POPs already disposed of, according to all annexes to the SC convention. The annex could be revised by the country with assistance from the IA when submitting a project proposal for consideration, revised when the project is approved and when it is completed, in order to have proper accounting of quantities disposed of by the project and baseline. This “accounting framework” process must be the same used for all GEF agencies as well as in the NIPs submitted to the Secretariat of the Stockholm Convention and use the same metrics across the world.

Data validation work, such as done by UMB, could be extended in 2022 to all GEF eligible countries, focusing primarily on PCBs, and in coordination with the GEF implementing agencies. The results would help to provide Parties with the most updated information on the remaining PCB quantities and inform allocation target to meet Convention deadlines of 2025-2028. Assessing quantities of obsolete POPs pesticides, including the fate of already reported stockpiles, would also merit from further validation.

Recommendations for the assessment of funding needs for the period 2026–2030

The various information sources used for the assessment, including implementation plans, updated implementation plans, national reports and questionnaires submitted by Parties deliver a good basis for the assessment. However, after extensive efforts to compile and verify the data gained from the sources, information gaps and data inaccuracies still persist. To further refine the funding need estimation, the Experts see a requirement to further strengthen the quality of data contained in the implementation plans and national reports and to consider including additional data sources from other related intersessional processes in the Needs Assessment methodology.

²⁴ Figures were rounded.

To strengthen the data contained in the national implementation plans, countries should consider updating already established inventories and action plans contained in their respective implementation plans, taking into account work that has been undertaken since the last update. Adding an annex with quantitative information as per recommendation above in paragraph 3 and its continued update will help with accurate and up-to-date data.

Moreover, to increase the availability of data on the quantity of persistent organic pollutants and the cost of their environmentally sound management, the experts reiterated their recommendation that such data contained in the NIPs be moved to an electronic format and harmonized with national reports.

Also, the experts recommend the use of harmonized inventory templates, which would greatly facilitate the assessment of needs over a specified period and allow the identification of trends.

The questionnaire to collect additional quantitative data in support of the Needs Assessment was an important aspect to improve data accuracy and should hence be continued. The experts recommend that the Secretariat strengthen its efforts to reach out to countries in view of maximizing the submission of data through such questionnaires.

In line with the preceding recommendation, the experts saw merit in the validation through interviews of the information contained in questionnaires and in the national implementation plans. The robustness of the data thanks to the possibility to cross-check existing data was greatly improved. The credibility of the Needs Assessment could be further improved by undertaking the validation through missions to verify the data on site, in combination with remote interviews. The Experts hence recommend, for future assessments, to include a combined approach of both remote interviews and on-site validation missions in the core budget of the methodology.

Validation could also be improved by sending out the questionnaire with prefilled data of reported baseline information and data on POPs quantities disposed. This will help to verify to which degree the needs assessment is based on the latest information available, since information from respondents will enable to estimate the validity of the database used to prepare the needs assessment.

In order to further strengthen the data used for the Needs Assessment methodology, the experts recommend to take into account, as appropriate, additional information sources, such as, for example, other relevant processes under the Convention and/or from implementing agencies involved in the implementation of POPs projects funded by the GEF.

ANNEXES

Annex 1: Scenario A- GEF Funding by Region for all Remaining POPs Reported

Annex 2: Scenario B1- GEF Total Funding Needs in GEF-8

Annex 3: Scenario B2- GEF Total Funding Needs in GEF-8

Annex 2: Scenario B1- GEF Total Funding Needs in GEF-8

SCENARIO B1 (100,000 tonnes POPs total)								
	PCB (tonne)	Pesticides (tonne)*	DDT (tonne)*	"Old POPs" addressed (tonne)	New POPs (PBDE/others/ mixed; HBCD, PFOS/salts) (tonne)	Total tonnes addressed	UP-POPs (g TEQ/year)	Grand Total (US\$)
25% PCB:	25,000	51,563	14,063	90,625	9,375	100,000	1,300	
50% PCB:	50,000	34,375	9,375	93,750	6,250	100,000	1,300	
80% PCB:	80,000	13,750	3,750	97,500	2,500	100,000	1,300	
				TOTAL prior POPs		TOTAL		
25% PCB:	\$ 82,904,604	\$ 369,408,612	\$ 82,428,806	\$ 534,742,022	\$ 1,014,068,224	\$ 1,548,810,246	\$ 896,956	\$ 1,549,707,202
50% PCB:	\$ 165,809,207	\$ 246,272,408	\$ 54,952,537	\$ 467,034,152	\$ 676,045,483	\$ 1,143,079,635	\$ 896,956	\$ 1,143,976,591
80% PCB:	\$ 265,294,732	\$ 98,508,963	\$ 21,981,015	\$ 385,784,710	\$ 270,418,193	\$ 656,202,903	\$ 896,956	\$ 657,099,859
* Pesticides, DDT and New POPs were apportioned according to their relative ratios of reported tonnes; 3/16 DDT, 11/16 Pesticides, 2/16 New POPs for remaining tonnes after PCB allocation								

“Old POPs” = Legacy POPs

Annex 3: Scenario B2- GEF Total Funding Needs in GEF-8

SCENARIO B2 (200,000 tonnes POPs total)								
	<u>PCB (tonne)</u>	<u>Pesticides (tonne)*</u>	<u>DDT (tonne)*</u>	<u>"Old POPs" addressed (tonne)</u>	<u>New POPs (tonne) (PBDE/others/mixed; HBCD, PFOS/salts)</u>	<u>Total tonnes addressed</u>	<u>UP-POPs (g TEQ/year)</u>	<u>Grand Total (US\$)</u>
25% PCB:	50,000	96,105	28,125	174,230	25,770	200,000	1,300	
50% PCB:	100,000	68,750	18,750	187,500	12,500	200,000	1,300	
80% PCB:	160,000	27,500	7,500	195,000	5,000	200,000	1,300	
				TOTAL prior POPs		TOTAL		
25% PCB:	\$ 165,809,207	\$ 688,527,492	\$ 164,857,612	\$ 1,019,194,311	\$ 2,787,416,834	\$ 3,806,611,145	\$ 896,956	\$ 3,807,508,101
50% PCB:	\$ 331,618,415	\$ 492,544,817	\$ 109,905,074	\$ 934,068,306	\$ 1,352,090,966	\$ 2,286,159,272	\$ 896,956	\$ 2,287,056,228
80% PCB:	\$ 530,589,464	\$ 197,017,927	\$ 43,962,030	\$ 771,569,421	\$ 540,836,386	\$ 1,312,405,807	\$ 896,956	\$ 1,313,302,763
<p>*Pesticides, DDT and New POPs were apportioned according to their relative ratios of reported tonnes; 3/16 DDT, 11/16 Pesticides, 2/16 New POPs for remaining tonnes after PCB allocation; in the 25% PCB scenario, pesticides maxed out at less than full allocation, so remainder of tonnes was apportioned to New POPs to reach 200,000 tonnes total</p>								

“Old POPs” = Legacy POPs