United Nations Environment Programme

Terminal Evaluation

Assessment of Existing Capacity and Capacity Building Needs to Analyse POPs in Developing Countries

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Evaluation and Oversight Unit

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List of acronyms

BMZ	Federal Ministry for Economic Cooperation and Development
COP	Conference of the Parties
CRM	Certified Reference Material
DTIE	Division of Technology, Industry and Economics
FAO	Food and Agriculture Organization
GEF	Global Environment Facility
GMP	Global Monitoring Program
IGO	Intergovernmental Organization
M&E	Monitoring & Evaluation
NGO	Nongovernmental Organization
NIP	National Implementation Plan
PCDD/PCDFs	Polychlorodibenzo-p-dioxins and furans
PIR	Project Implementation Review
POPs	Persistent Organic Pollutants
QA/QC	Quality assurance / Quality control
SAICM	Strategic Approach to International Chemicals Management
SBC	Secretariat of Basel Convention
SC	Stockholm Convention
SMART	Self Monitoring Analysis and Reporting Technology
SWOT	Strengths, weaknesses, opportunities and threats
ToR	Terms of Reference
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organization
UNITAR	United Nations Institute For Training and Research
USD	US Dollars
WHO	World Health Organization

Executive summary

1. The present report represents the Terminal Evaluation of the UNEP/GEF Project "Assessment of Existing Capacity and Capacity Building Needs to Analyse POPs in Developing Countries".

Overview of the evaluated project

2. The project was set-up in order to assess the convention-driven country needs for laboratory analysis and the conditions necessary to conduct them in a sustainable manner, including on a regional basis. Based on this and on a thorough analysis of past experience and lessons learned, the feasibility of establishing a fully equipped regional laboratory in a developing country that may be able to analyze all twelve POPs, including dioxins and furans in relevant matrices, was to be explored through a pilot study.

3. The activities were implemented in two phases. Phase I (January 2005 – February 2006) had the regional consultations and the preparation of background documents as well as the initiation of the "POPs Laboratory Databank", as the major achievements. Phase II (March 2006 – June 2007) consisted of the pilot study referred to above, involving laboratories in developing countries and back-up laboratories in inspection and training activities.

4. In summary, major outcomes to be achieved throughout the project were:

   i) Development of criteria for the assessment of laboratory capacity (e.g. sampling, identification, quantification of POPs, data reporting, etc.);
   ii) Development of an inventory of laboratory capacity for POPs worldwide and regionally, stored in a searchable and Web accessible databank;
   iii) Analysis of past experience, lessons learnt, existing capacity, needs and requirements for analysis, technical and political conditions for sustainability;
   iv) Strengthening laboratory capacity in 3 developing regions, identifying at least one laboratory per region, and taking particularly into account greatest chances for sustainability.

5. The project was led by UNEP Chemicals and oversight by UNEP/DGEF. The total budget was USD 1,316,300, contributed by the Global Environment Facility (GEF) and the governments of Canada, Germany and Japan (USD 146,900). The project had substantial in-kind contributions from participating countries, UNEP and private companies.

Evaluation background

6. The objective of the evaluation was the assessment of project performance and of planned project activities and planned outputs against actual results. In this respect, the evaluation should assess the extent to which the major relevant objectives were effectively and efficiently achieved, the quality and impact of the actions carried out and the generated products, the participation of target groups in the different activities, and the functional development (management) of the project to ensure the timely accomplishment of its main goals and the potential replicability and sustainability of the outcomes.

7. The main sources of information have been the interviews with UNEP project management, technical support and other stakeholders, the visits to participant laboratories and national Focal Points of Ecuador and Kenya, and project documents, including technical reports and

relevant material outreached. Concluding assessments and ratings of the project against given evaluation criteria and standards of performance should be provided to support the lessons learned and final recommendations.

Project performance and rating

8. The general objectives of the project were successfully achieved. The project was highly effective in producing tools for implementing the monitoring component of the Stockholm Convention, like analytical guidance documents and a data bank of tiered laboratories around the world that may fulfil the requirements of the Convention for the sustainable monitoring of POPs.

9. One of the major outcomes of Phase I of the project was the creation of the databank of POPs laboratories and the establishment of Tier criteria to characterize them according to the instrumentation present and their POPs- and matrix-specific experiences. Presently, the project has information from 204 laboratories from all five UN regions, which identify certain gaps in analysis capacity in a number of sub-regions. This information, accessible via Internet, is essential in the implementation of the Global POPs Monitoring Program.

10. On the other hand, Phase II addressed the Strategic Priority of supporting countries to develop capacity to monitor and analyze POPs, and to provide their contribution to the global effectiveness evaluation undertaken by the Conference of the Parties using internationally accepted procedures.

11. The process of capacity building was a major part of the project and indeed the most successful. It was implemented through training sessions on-site at nine laboratories in seven developing countries. Training needs were identified such as introduction of new performance based methods, validation of these methods, and quality assurance/quality control regimes. Special attention was paid to the participation in intercalibration exercises.

12. The project was highly cost-effective because the resources initially allocated for each activity, supplemented with those additionally leveraged, were efficiently utilized to achieve the planned results.

13. Comparing with the situation existing at the start of the project, it can be noticed that its implementation significantly contributed to delineate the regional approach for undertaking the development of the Convention. Instead of a central regional laboratory, it was agreed that the operational structure should rely on a network of pilot laboratories that were assessed, trained, and capacity improved. Therefore, there was not only one laboratory strengthened but a number of them (9). The project management team was very successful in taking the adaptive management measures.

14. The selected pilot laboratories have to gain visibility and play a major role in the coordination of regional information for the Global GMP report and future GEF projects.

15. As GEF/UNEP does not usually provide financial support for the follow-up activities, a major emphasis was placed on the factors that may assure sustainability. The developments at the national and international levels by the Basel and Stockholm Conventions, with the implementation of NIPs and national monitoring systems, as well as the need to provide data within the GMP, will likely contribute to consolidate the achieved advances. Moreover, the

improved laboratory capacity may generate new business opportunities and, therefore, possibilities of external financing. In any case, a major implication of the project stakeholders could have been beneficial. Fortunately, the participation of commercial companies providing technical support and supplying spares and consumables free of charge or at reduced costs, was an encouraging initiative that could be extended in the follow-up activities.

16. The design of the feasibility study, which concluded with highly satisfactory results, has been used as reference in the extension and fostering of the monitoring activities within the Stockholm Convention, such as in the definition of the new GEF and SAICM QSP projects on "Supporting the Implementation of the Global Monitoring Plan of POPs in East, West and Southern Africa, Latin America and Caribbean, and the Pacific Islands Region".

17. The potential long-term impact of the project is expected to be seen in a few years time in assessing the data gaps existing on the occurrence and distribution of POPs in the different environmental compartments of developing countries, where the volume of information should increase and improve our knowledge for these regions.

18. In conclusion, all the anticipated outputs were satisfactorily delivered, both in quantity and quality as well as usefulness and timeliness; the methodologies used for developing the technical documents and related management options in the participating countries and targeted project area were sound and effective; and the project outputs will certainly contribute to fulfil the provisions of the Convention.

19. The overall rating of the project was from satisfactory to highly satisfactory, as indicated below.

Criterion	**Evaluator's Rating**
A. Attainment of project objectives and results	S
A. 1. Effectiveness	*HS*
A. 2. Relevance	*S*
A. 3. Efficiency	*HS*
B. Sustainability of Project outcomes	ML
B. 1. Financial	*ML*
B. 2. Socio Political	*ML*
B. 3. Institutional framework and governance	*ML*
B. 4. Ecological	*L*
C. Achievement of outputs and activities	HS
D. Monitoring and Evaluation	HS
D. 1. M&E Design	*HS*
D. 2. M&E Plan Implementation	*HS*
D. 3. Budgeting and Funding for M&E activities	*HS*
E. Replicability/Catalytic Role	S
F. Preparation and readiness	HS
G. Country ownership / drivenness	MS
H. Stakeholders involvement	S
I. Financial planning	HS
J. Implementation approach	HS
K. UNEP Supervision and backstopping	HS

HS=Highly Satisfactory

S= Satisfactory

MS=Moderately Satisfactory

MU=Moderately Unsatisfactory

U = Unsatisfactory

HU=Highly Unsatisfactory

L= Likely

ML=Moderately likely

MU=Moderately unlikely

U = Unlikely

Conclusions

20. Based on all the above and the assessment of project performance and impact made by the participant laboratories through a SWOT analysis, the following conclusions can be drawn:

1. The assessment of the indicators of the project log-frame matrix indicates that the initial objectives of the project were satisfactorily accomplished, and in some cases exceeding the expectations.

2. Few deviations or weaknesses were noticed, basically the necessity to reformulate the feasibility study to include the new regional approach, that was easily adopted by the management team, and the weak participation of stakeholders, with the exception of that of commercial suppliers of laboratory consumables in the training activities.

3. The construction of a web-accessible and searchable databank containing 204 POPs laboratories worldwide and the undertaking of capacity building activities in developing countries were the most successful outcomes. These will be highly relevant in the framework of the implementation of the monitoring component of the Stockholm Convention.

4. The methodologies used for building the laboratory data base and in planning the capacity building activities proved to be accurate and remarkably efficient. In the first case, the careful preparation of questionnaires and the classification system for rating the laboratory performance (Tier criteria) were noticeable, whereas in the second, the selection of laboratories and the design of the training program, including intercalibration exercises, were noteworthy.

5. The large attendance to the project workshops, about 200 participants from 65 countries, enabled to wisely identify the needs and requirements for POPs analysis in developing countries to fulfil the compliance of the Convention. The participant laboratories considered timely and very valuable the training exercises.

6. The outreached materials and reports, available in the website, will not only contribute to the diffusion of the results but also to encourage further stakeholder participation. Several presentations made at international conferences and authored publications will also enhance the visibility of the on going projects on POPs.

7. The main impact of the project has probably been on the performance of the participant laboratories. The trained pilot laboratories got fully acquainted with QA/QC aspects, participating in international intercalibration exercises and implementing measures to further improve the quality of their performance. However, the conclusions of these exercises confirmed the need for continued training.

8. The sustainability of the project outcomes is a challenging issue. The implementation of NIPs and governmental policies regarding POPs on compliance of the Convention may offer favorable conditions but this is a question that should not be overlooked. The implementation of the GMP may also contribute as laboratories that have received assistance through this project should be invited to provide data.

Lessons learned

21. A number of lessons from the standpoint of the design and implementation of the project were learned, and considered of interest in future activities.

    1. The project has revealed that the effective contribution of developing countries/regions to the implementation of the Stockholm and Basel Conventions is a long-term process. The weaknesses of the laboratories and the needs for strengthening their performance have been evidenced. The initiated capacity building program demands a continued effort with an appropriate strategy at UNEP/GEF level. A good example in this direction is the laboratory databank built in the pilot phase of the project that will be maintained by UNEP, to serve the effectiveness evaluation and other activities of the Conventions.

    2. In this program, the training of human resources is of particular importance. This activity, that was conveniently included in the feasibility study and successfully accomplished, encompassed not only practical training but also QA/QC activities. These have demonstrated their usefulness in providing the means for the laboratories to test their skills following the training programme and, therefore, should be continued in one way or the other.

    3. However, besides the achievements of the present project, the technical difficulties encountered in performing comprehensive analysis of POPs in developing countries have been well documented. These refer from the availability of reference materials and other consumables or the lack of adequate instrumentation to the limited expertise in the analysis of the matrices of reference in the GMP (air, blood and mother's milk) or the restricted access to open literature for updating the analytical protocols.

    4. The adoption of a regional approach in implementing all these activities has proved to be the most convenient. To summarize, countries with similar problems and levels of development have very specific needs for capacity building that can be better addressed if the activities are organized on-site. A network of regional laboratories, assisted with dedicated workshops, provides the most adequate organization for identifying data gaps and priorities, developing on-going and collaborative research actions, and enhancing ownership/awareness of the outputs.

    5. An important aspect in the whole process is the implication of the different project stakeholders, at national, regional and international levels. The project has successfully engaged the academic sector but the policy sector has been less directly concerned. On the contrary, the participation of private companies has constituted an unexpected success. Based on the experience, all these actors have to play a more important role in the future.

22. Certainly, the lessons learned from the outreached materials and the feasibility study should be taken into account in the future actions of the Convention, particularly in the forthcoming projects and constitute the basis for the recommendations formulated in the following section.

Recommendations

23. As this is a terminal evaluation of the project, recommendations will mostly refer to strategic actions to be considered in the follow-up activities for the implementation of the SC in developing countries/regions, according to the lessons learned.

1. Taking into account the key role that POPs analysis plays in the implementation of the Stockholm and Basel Conventions (e.g. NIPs, GMP, etc.), and according to the main outcomes of the project, the production of guidance documents and enhancement of expertise in order to obtain reliable data for the different matrices, both on a geographical and temporal basis, should be continued through UNEP and the further mobilisation of financial resources.

2. In particular, it is suggested that the outreached materials of the project (including all reports) could be worked-up by UNEP to produce a series of synthesis documents to be used as reference materials for the further development of the Conventions. These documents should specially consider the adaptability of methods to the conditions in developing countries (e.g. low cost methods). A guidance document on monitoring (e.g. on what, where and when to sample) is particularly necessary as a complement of the GMP guide.

3. Based on the experience of the present project and the lessons learned, a more elaborated strategy for strengthening the regional implementation of the Convention should be adopted by the COP, under the UNEP guidance. This could encompass an enhanced visibility and networking of regional laboratories, the establishment of working groups and continued proficiency tests and interlaboratory studies, as well as the extension of on-site laboratory capacity development to cover other POPs and other countries. Creating an effective regional network of POPs laboratories would be a major achievement.

4. Moreover, the mechanisms for stakeholder participation in future UNEP/GEF projects for capacity building in developing countries should be improved, particularly to involve the ministries responsible and policy makers, in order to encourage basic laboratory investments and their use to assist in developing POPs management actions. At the end, this will also contribute to the sustainability of the technical infrastructure.

5. A specific program for associating commercial companies to this initiative could bring important benefits. In any case, establishing a background support for the laboratories of these countries/regions, in the form of supply of basic consumables (e.g. standards, CRM, etc.) and access to information updating, should be seriously considered by the SC Secretariat and endorsed to UNEP/GEF for implementation. This could be complemented with a series of sponsored training events (e.g. “summer schools”) and intercalibration studies, as part of the laboratory capacity building activities.

6. The potential long-term impact of the project is expected to be seen in a few years time in assessing the volume of information existing on the occurrence and distribution of POPs in the different environmental compartments of developing countries. An assessment of the open literature should be performed periodically (e.g. every 4 years) by UNEP, as part of the assessment of the Convention, with the formulation of recommendations to fill the observed gaps.

1. Introduction

Overview of the evaluated project

24. The Stockholm Convention (SC), aiming at protecting human health and the environment from Persistent Organic Pollutants (POPs), through measures which will reduce and/or eliminate the emissions and discharges of an initial set of twelve of these compounds, requires Parties to monitor, among others, sources and releases of POPs into the environment as well as levels and trends in humans and the environment. In addition, the Convention requires that the Conference of the Parties undertake an effectiveness evaluation four years after the entry into force. Indeed, without reliable data from all regions the global effectiveness evaluation my not proceed. Therefore, the availability of analytical techniques for measuring POPs in the different biotic and abiotic compartments is of paramount importance.

25. Parties from some regions, e.g., North America and Northern Europe would be able to provide adequate and comparable monitoring and other data, obtained under existing regional arrangements. However, Parties from other regions, particularly from the Southern Hemisphere (e.g. Sub-Saharan Africa and Latin America), would not be able to provide similar data to complete the global evaluation, since laboratory capacity for comprehensive POPs analysis (including PCDD/PCDF) would be inadequate or lacking.

26. Thus, the present project was set down in order to assess the convention-driven country needs for laboratory analysis and the conditions necessary to conduct them in a sustainable manner, including on a regional basis. Based on this and on a thorough analysis of experience and lessons learned, the economic and qualitative feasibility of establishing a fully equipped regional laboratory in a developing country that may be able to analyze all twelve POPs, including dioxins and furans in relevant matrices, were to be explored through a pilot study.

27. In addition, the project intended to assist Parties in developing country regions or regions with economies in transition for the implementation of the provisions of the Convention and finally providing their contribution to the global evaluation. In this respect, regional available capacity and qualifications through laboratory QA/QC procedures were given special consideration for improving countries' commitment to the Convention.

Programme activities

28. To achieve the above objectives, the following activities were designed:

    1. Analyze past experience and lessons learnt on the national and transnational programs on capacity building for laboratory analysis of POPs, to establish what has worked and what has not;
    2. Analyze existing capacity worldwide and regionally based on earlier efforts and responses to the UNEP Chemicals questionnaire;
    3. Analyze and compare the needs and requirements for analysis from a national point of view with those of the Stockholm Convention effectiveness evaluation;

4. Evaluate the needs for (i) harmonization of analytical sampling/identification/ quantification methods, (ii) accreditation of laboratories, (iii) quality assurance/quality control (QA/QC) and (iv) round robins for POPs;
5. Identify technical and political conditions for sustainability, including the economic and qualitative feasibility of regional labs, especially with regard to keeping technical expertise, to ensure that the regional laboratories would be sufficiently used;
6. Identify suitable countries with urgent data development needs e.g. in the Southern Hemisphere and convene 3 regional workshops with participants from countries with either existing laboratories (to be upgraded) or from countries interested in setting up laboratories;
7. Perform a feasibility study based on the outcome of the above in a developing country in one region.

29. These activities were implemented in two phases.

30. Phase I (January 2005 – February 2006) had the regional consultations and the preparation of background documents on "International Intercalibration Studies: A Global QA/QC Tool for the Analysis of POPs", "Analysis of Persistent Organic Pollutants in Developing Countries: Lessons Learned from Laboratory Projects", "Guidance for Analysis of Persistent Organic Pollutants (POPs)", as well as the initiation of the "POPs Laboratory Databank", as the major achievements.

31. Phase II (March 2006 – June 2007) consisted of the feasibility study under 7), involving laboratories in developing countries and back-up laboratories in inspection and training activities as well as in the conduct of intercalibration studies. In particular, the feasibility study included:

a) a start up workshop in the selected country for the countries in the region, to identify the specific conditions for political and technical sustainability in the region;
b) country activities, e.g. national meetings, infrastructure strengthening;
c) travel to other countries in the region to ensure buy-in and commitment;
d) support from external international experts;
e) strengthening capacity by acquiring supplementary hardware, e.g. retrofitting equipment and investment in infrastructure;
f) trainings workshop for laboratory personnel, preferably in co-operation with "sister lab" in donor country;
g) testing of draft guidance document for a POPs GMP and participation in round robin tests for quality assurance and quality control;
h) sampling, preparation and analysis of samples selected according to UNEP Chemicals draft guidance document for POPs GMP.

32. In summary, major outcomes to be achieved throughout the project were:

i) Development of criteria for the assessment of laboratory capacity (e.g. sampling, identification, quantification of POPs, data reporting, etc.);
ii) Development of an inventory of laboratory capacity for POPs worldwide and regionally, stored in a searchable and Web accessible databank;
iii) Analysis of past experience, lessons learnt, existing capacity, needs and requirements for analysis, technical and political conditions for sustainability;

iv) Strengthening laboratory capacity in 3 developing regions, identifying at least one laboratory per region, and taking particularly into account greatest chances for sustainability.

33. All these activities, outcomes and results, as well as verifiable indicators, are summarized in the project log-frame, in Annex 1.

Executing arrangements

34. The project was led by UNEP Chemicals, assisted by a Core Group, which consisted of representatives from the World Bank and the Secretariat of the Basel Convention (SBC) as well as from the three donor countries, namely Canada, Germany, and Japan. Other IGOs, e.g. FAO, UNIDO, UNDP, UNITAR and WHO were invited to participate in the workshops, as well as representatives of relevant regional agreements on waste and chemicals.

35. UNEP/DGEF was responsible for the overall project supervision and ensured consistency with GEF and UNEP policies and procedures. Further, DGEF provided guidance on linkages with related UNEP and GEF-funded activities. UNEP Chemicals Branch of Division of Technology, Industry and Economics (DTIE), was responsible for the execution of the project in accordance with the objectives and activities of the project outlined in the proposal.

36. The total project budget was USD 1,316,300. Of these, the Global Environment Facility (GEF) contributed with USD 395,000 and co-financing was USD 576,300, which was by the governments of Canada (USD 250,000), Germany (USD 180,800), and Japan (USD 146,900). The project had substantial in-kind contribution from participating countries, UNEP, and other IGOs (total of USD 345,000). Finally, about USD 84,500 were leveraged from the private sector and participant Institutions. A summary of the financial information and a statement of project expenditure by activity are shown in Annex 2.

Evaluation background

37. An external evaluation of the overall performance of the project, at the level of their objectives, outcomes, activities and management, should be conducted under the supervision of UNEP and the GEF Monitoring and Evaluation Unit, after the completion of the project. The evaluation should assess the extent to which the major relevant objectives were effectively and efficiently achieved, the quality and impact of the actions carried out and the generated products, the participation of target groups in the different activities, and the functional development of the project to ensure the timely accomplishment of its main goals and the sustainability of the outcomes. The conclusion would include remarks on the positive and negative results achieved, recommendations, and lessons learned from its implementation.

38. The Terms of Reference (ToR) of this evaluation are included in Annex 3. They indicate that it should be conducted using a participatory approach, involving interviews with key actors and visits to project staff and selected project sites, as well as an in-depth examination of all relevant documents and reports generated by the project. They also state the evaluation criteria and standards of performance that should be followed in formulating the concluding assessments and ratings of the project.

2. Evaluation scope, objective and methods

Scope

39. This terminal evaluation addressed the following components of the project:

    1. The different activities carried out during the development of the project by the leading Institution (UNEP Chemicals), the contracted experts and the participant laboratories.
    2. The subsequent attained objectives, notably the laboratory capacity building and its feeding into management and decision making processes on the monitoring of POPs and the fostering of NIPs.
    3. The project management, including financial planning and in particular attention was devoted to the internal monitoring procedures for tracking the progress towards the objectives.
    4. The planned outputs, with special emphasis on their cost-effectiveness regarding their incidence on country ownership as well as on their potential replicability and sustainability.

40. This assessment implies, whenever possible, the consideration of the baseline conditions in relation to the project outcomes, in order to attribute their achievement to the actions of the project.

Objective

41. The main objective of the evaluation is the assessment of project performance (e.g. the quality of the overall project management, application and effectiveness of project monitoring and evaluation plans and tools, of financial planning, etc.) and of planned project activities and planned outputs against actual results. The evaluation should also look at the extent and magnitude of any project impacts to date and determine the likelihood of future impacts on the development of the monitoring component of the SC. Concluding assessments and ratings of the project against given evaluation criteria and standards of performance (e.g. regarding "stakeholder" participation and future sustainability) should be provided to support the lessons learned and final recommendations.

42. The ToR indicate that in attempting to evaluate any outcomes and impacts that the project may have achieved, the project's performance should be assessed by considering the difference between the answers to two simple questions "what happened?" and "what would have happened anyway?".

43. As an example, the evaluation will focus on the following main questions:

    1. Did the project identify, analyse and establish the needs of countries to fulfil the requirements of the Stockholm Convention to monitor POPs?

    2. Did the project support countries to develop capacity to monitor and analyze several of the POPs, and to participate in the controlled sampling of different media for further processing and analysis

3. Did the project assist developing country regions and regions with economies in transition to contribute to the global effectiveness evaluation undertaken by the Conference of the Parties using internationally accepted procedures?

4. Are countries which were assisted by the project able to more fully implement the Convention and also assist other countries in the region in their efforts to do the same?

Methods

44. The evaluation, overseen by UNEP's Evaluation and Oversight Unit, was carried out between 8 November 2008 and 10 February 2009, with a first draft completed for circulation to UNEP/MEU on 22 December. Project management and technical support, including the Project Management in UNEP Chemicals, collaborators and members of the Steering Group, were interviewed. In the same way, the relevant opinions of participating laboratories and country coordinators were obtained in field visits or by Email.

45. Field visits to the following Institutions were completed:

a) Project staff.
   Global Project Management Unit in Geneva (UNEP Chemicals).
   UNEP Evaluation and Oversight Unit and Division of GEF Coordination in Nairobi (Kenya).
b) Participating laboratories.
   Chemistry Department. Naiorbi University (Kenya).
   Laboratory of Pesticides. Servicio Ecuatoriano de Sanidad Agropecuaria, Ministerio de Agricultura y Ganadería - SESA/MAG (Tumaco, Ecuador)
   Laboratory of Ecotoxicology. Comisión Ecuatoriana de Energía Atómica - CEEA (Quito, Ecuador).
c) National POPs Focal Points.
   Ministry of Environment and Natural Resources (Nairobi, Kenya).
   Ministerio del Ambiente del Ecuador (Quito, Ecuador).

46. The list of contacted persons is shown in Annex 4. An outline of the main questions discussed during the corresponding talks or electronic correspondence is given in Annex 5. The laboratory's responsible were further invited to perform a SWOT analysis (Annex 6) with respect to the impact of the project on their performance and capabilities.

47. Finally, the evaluation was also based on a desk review of project documents (Annex 7), including:

a) Project proposals and monitoring reports, such as progress and financial reports to UNEP and GEF, and relevant correspondence.
b) Technical and Project Country Reports.
c) Relevant material outreached.

48. Following a given criteria, the evaluation used "achievement indicators" and "standards of performance" in formulating the concluding assessments and ratings of the project.

3. Project performance and impact

49. The assessment was performed on the basis of all information generated by the project and obtained from the main actors, as well as on the baseline conditions existing beforehand in relation to the project outcomes, in order to be able to identify the results credited to the project.

50. Particular attention was paid to the objectively verifiable indicators and critical assumptions and risks specified in the log-frame matrix of the project document (Annex 1) together with the internal rating project performance and risk assessment carried out annually by the Project and Task managers (UNEP GEF PIR FY Reports).

51. The two phases of the project were considered separately as they differed in the targeted objectives. Phase I (January 2005 – February 2006), with a more global scope, had the establishment of a databank of operational laboratories and the preparation of background documents on recommended criteria for POPs analysis as the major achievements. Phase II (March 2006 – June 2007), focused on the implementation of the SC in developing regions, consisted of regional consultations for capacity building on POPs analysis, involving laboratories in developing countries and back-up laboratories in inspection and training activities.

3.1. Attainment of objectives and planned results

52. The project achieved satisfactorily the anticipated objectives and outcomes identified in the log-frame matrix, as demonstrated in the following table, where the achievement indicators used are evaluated against the attained results.

PROJECT LOG-FRAME		EVALUATION OF ATTAINED RESULTS
OVERALL OBJECTIVES	VERIFIABLE INDICATORS	
To assess the convention-driven country needs for laboratory analysis and the conditions necessary to conduct them in a sustainable manner, including on a regional basis. To define the criteria to establish and select a fully equipped regional laboratory in a developing country that may be able to analyze all twelve POPs, including PCDD/PCDF in relevant matrices.	• An assessment report published identifying existing analytical capacity for analyzing POPs; • Identified criteria for sustainability for operating laboratories; • Limit values in legislation; • At least one regional cooperation agreement for the future regional laboratory	• Databank of laboratories published and accessible (204 entries), according to POP, matrix, and region, and ranking of laboratory performance (Tiers). • Recommendations from 3 regional workshops and input from pilot laboratories. • No apparent incidence of the project results on the national legislations. • A central, regional laboratory was not agreeable. Therefore, pilot laboratories in China, Moldova, Kenya, Uruguay, Ecuador and Fiji were selected to play a role in their regions and in future GEF projects.

PROJECT LOG-FRAME		EVALUATION OF ATTAINED RESULTS
PLANNED OUTCOMES	**VERIFIABLE INDICATORS**	
Analysis of POPs laboratory capacity worldwide and regionally	• Filled questionnaires with technical substantive information returned. • Country list of labs made available and classified into different Tiers. • Lists available from other entities, *e.g.*, FAO. WHO, accreditation bodies.	• Very detailed questionnaires developed, widely distributed and returned filled with information. • Updateable database of laboratories established and functional. Agreement on Tier characteristics and successful implementation (Internet). • Not workable as these bodies do not apply all the agreed criteria.
Analysed past experiences and lessons learnt on what has worked and what did not work	• Compilation of documents and reports created in this study, *e.g.*, National Profiles and NIPs and from bilateral donors, international organizations, private entities	• A published report on Lessons Learned from Laboratory Projects. Although useful, rather limited in scope (all recommendations based on one project).
Identified needs and requirements for POPs analysis on a regional basis to fulfil the obligations of the Stockholm Convention	• Substantive responses and inputs from countries to the study; active participation; performance and economic criteria	• Detailed information obtained at inspection tours, training sessions as well as the two workshops where all pilot laboratories (5 regions) and the backup expert laboratories participated.
Agreed criteria for sampling, identification, quantification of POPs	• Information exchange between stakeholders; • Agreed criteria for analysis, requirements, and evaluation by countries and international organizations.	• Limited to the incidental cooperation between pilot and back-up labs. • Criteria for all aspects of POPs analysis, namely sampling, transport, storage, quantification, and reporting, well established. Included in GMP guidance document and adopted by COP-3.
Strengthened capacity to analyze POPs in at least one country per region	• Improved quality of data from labs involved in this project proved in national reports and open literature • Governments, IGOs, and other clients express willingness to support regional labs	• Successful training of pilot labs, including participation in international intercalibration studies. Conclusions drawn for further improvement of performance. • The already approved SAICM QSP projects are a step forward but lab sustainability is still a challenge.
Enhanced knowledge and understanding of national POPs problems amongst decision makers, managers, industry, and the public at large.	• Active participation in international POPs activities.	• Impact limited to the concerned regions. The steadily increasing number of Parties to the Convention can only be marginally attributed to the existence of this project.

53. Overall, the results were satisfactorily attained, in relation to the planned activities and time span. The project was highly effective in producing tools for enhancing the global monitoring of POPs, like a data bank of tiered laboratories including useful features not originally anticipated, and in capacity building of developing countries for monitoring POPs. Strengthening the analytical capacity of laboratories in developing countries is relevant in order to contribute, among others, to support the NIPs and foster the GMP. The project was also highly cost-effective because the resources initially allocated for each activity, supplemented with those additionally leveraged (see Annex 2), were efficiently utilized to achieve the planned results.

54. Comparing with the situation existing at the start of the project, it can be noticed that its implementation significantly contributed to delineate the regional approach for undertaking the development of the Convention. Instead of a central regional laboratory, the operational structure should rely on a network of pilot laboratories that were assessed, trained, and improved. Therefore, there was not only one laboratory strengthened but a number of them (9) and no major investment costs did occur at one place. The selected pilot laboratories have to gain visibility and play a major role in the coordination of regional information for the Global GMP report and future GEF projects.

55. The potential long-term impact of the project is expected to be seen in a few years time in assessing the data gaps existing on the occurrence and distribution of POPs in the different environmental compartments of developing countries, where the volume of information should increase and improve our knowledge for these regions.

3.2. Sustainability

56. The sustainability of the outcomes of Phase I of the project does not pose major problems as the management and updating of the data bank developed in this project will be guaranteed by UNEP in the framework of the implementation of the SC. On the other hand, the issued analytical guidelines have already been incorporated into the POPs GMP manual.

57. The sustainability of the actions carried out in Phase II is more challenging from all points of view (e.g. financial, socio-political, institutional and ecological). In principle, to ensure sustainability, commitments from developing countries to provide basic support for the laboratories would be sought during the project as a prerequisite part of the country selection process. However, the reality is that countries that cannot satisfy the basic needs of their citizens cannot afford to digress into environmental management systems and adequately fulfil international commitments. In this case, public institutions, usually constrained by the availability of financial resources, are particularly affected by the low priority given to the environmental protection in the political agenda. Moreover, political instability may also negatively affect a sustained governmental support to the national laboratories.

58. Nonetheless, the following factors may positively contribute to the mid and long-term upholding of the project-derived outcomes:

    - The improved laboratory capacity may generate new business opportunities and, therefore, possibilities of external financing. After a start up phase the labs could be self- sufficient and rely on requests for analyses from the country/region.

- The progressive development of the SC in the respective countries, with the implementation of NIPs and national monitoring systems, as well as the need to provide data within the GMP, may also contribute.
- A general enhancement of personal and institutional commitment, with improved country ownership (see section 3.7, below), will stimulate the demand of laboratory services.

59. Although GEF/UNEP does not usually provide financial support for the follow-up activities, the developments at the international level by the Basel and Stockholm Conventions will likely improve the outcome sustainability. The adopted technical guidelines include limit values for POPs, thus requiring chemical analysis at high level of acceptance for the enforcement of these values or the establishment of temporal and spatial trends in the environment. The COP also identified needs for capacity building, and the map of existing laboratories and their qualifications/experiences, which can be seen from the databank, play a vital role in this activity that will last beyond the duration of this UNEP/GEF project.

60. In any case, it is important to consider the opportunity of establishing a background support for the laboratories of these countries/regions, in the form of supply of indispensable consumables (e.g. standards, CRM, etc.) and access to updating activities (e.g. training, communication, etc.).

3.3. Achievement of outputs and activities

61. The assessment of the project success in producing each of the programmed outputs, both in quantity and quality, as well as the usefulness and timeliness of these outputs, is also based on the log-frame matrix of the project (Annex 1) and on the different reports provided, substantiated with the corresponding visits and interviews.

62. The evaluation of the attained results is shown in the following table that does not include the activities dealing with specific aspects of the project management, which will be discussed later in section 3.10.

PROJECT LOG-FRAME		EVALUATION OF ATTAINED RESULTS
OUTPUTS	VERIFIABLE INDICATORS	
1: Assessment of past experiences and establishment of criteria		
Activity 1: Assessment of lessons learnt	• Analysis of information provided	• The experiences and lessons learned from capacity building programmes have been analyzed in a document that, although useful, could have provided a more comprehensive overview of the several programmes carried out by national/international organizations, including GEF and donor countries.
Activity 2: Establish criteria	• The criteria established and	• Needs and requirements for

for needs, requirements, sustainability.	agreed by the countries based on earlier projects and experiences from laboratories	analysis from a national point of view and from Convention effectiveness, as well as the political and technical conditions for sustainability and long-term commitment, have been discussed in dedicated workshops and reported. At the end, the formulation of some strategic (executive) proposals would have been advisable
2: Inventory of global laboratory capacity for measuring POPs		
Activity 3: Collect data on existing POPs laboratories	• Questionnaires prepared, disseminated, and evaluated	• Questionnaires requesting extensive information on laboratory performance were prepared, distributed worldwide and returned
Activity 4: Establish database of existing laboratories and their capacities	• Database of laboratories and capacities created as part of the UNEP data system and accessible to users.	• The large number of responses gathered (204) were evaluated and utilized in creating an inventory on laboratory capacity, where laboratories were classified according to the instrumentation present and their POPs- and matrix-specific experiences. The database is fully operational (Internet)
3: Organization of three regional workshops		
Activity 5: Hold workshops, prepare reports	• Broad regional participation of substantively relevant individuals in the three workshops • Relevant conclusions and recommendations reached	• Based on the analysis under A1-A4 three developing country regions with significant potential for fully measuring all twelve POPs were selected (Africa, Latin America and the Caribbean, and Asian and Central and Eastern European Countries). Three regional workshops were organized, bringing together experts from all countries in the regions. The workshops identified the level of expertise, infrastructure and sustainability of candidate laboratories in the region, as well as their capacity to serve the region as a whole with measurements on POPs.
4: Identification of countries for feasibility study		

Activity 6: Identify candidate countries (up to three; one per region)	• Letters of interest • Selection criteria developed (*e.g.*, candidate country is Party to SC, enabling activities have substantial progress)	• Based on the assembled information (e.g. expertise, trained personnel, laboratory facilities, infrastructure, financial and technical support, links and co-operation with other qualified laboratories, publications, etc.) and certain criteria, a selection of candidates from the 3 regions was made by the Core Group
Activity 7: Conduct site visits to potential candidate countries	• At least one visit to the countries that have been selected	• Site visits at candidate countries were undertaken, aiming at getting more detailed information on the necessary laboratory qualifications.
Activity 8: Prepare documentation to the Core Group decision and sign the MoU with countries	• Decision of the Core Group and the letter of endorsement from the country selected, also indicating commitment of the Government and labs.	• A final decision was adopted, involving 9 laboratories from Fiji Islands, Uruguay, Ecuador (2), Moldova (2), Kenya, China and Viet Nam. MoU with all countries were prepared and signed
5: Feasibility study in at least one country		
Activity 9: Organise start-up workshop to determine the details of the feasibility study	• Agreement of the stakeholders on the scope and workplan	• The start-up workshops in the selected countries identified the specific conditions for the feasibility study and the workplan. The workshop reports include the list of participating stakeholders and their roles and commitments to the project
Activity 10: Identify political, technical, financial, human resources conditions	• Agreement between national stakeholders on the political, technical, financial and human resources conditions	• Agreement on political and technical sustainability in the region, co-ordination of all elements, national meetings, etc. is shown in a letter of commitment
Activity 11: Perform the components of the feasibility study; *e.g.*, train laboratory personnel, test the guidance document as indicated in the project document, upgrade laboratories, participate in round robins	• Activities undertaken	• All activities were successfully performed, notably training workshops for laboratory personnel, support on technical issues from international experts, preparation and analysis of samples according to the UNEP guidance document for a POPs GMP, and participation in round robin tests for quality assurance and quality control. However, neither all POPs nor the selected matrices were studied.

63. In general, the activities were properly, timely and adequately implemented as planned. The background documents prepared for launching Phase I on assessing criteria for operating POPs laboratories in a sustainable manner were not outstanding but provided the necessary information to convey to the participants in the dedicated regional workshops. As a result, the project identified, analysed and established the needs of countries to fulfil the requirements of the Stockholm convention for the sustainable monitoring of POPs.

64. The guidance document on POPs analytical performance was particularly relevant by the fact that the main elements have been included into the Stockholm Convention guidance document for the Global POPs Monitoring Plan, which was adopted by the 3rd Conference of the Parties in 2007.

65. The creation of the databank of POPs laboratories through the worldwide distribution of questionnaires and the establishment of Tier criteria to characterize them according to the instrumentation present and their POPs- and matrix-specific experiences are major outcomes of the project. Presently, the project has information from 204 laboratories from all five UN regions, which identify certain gaps in analysis capacity in a number of sub-regions. This information, accessible via Internet, is essential in the implementation of the Global POPs Monitoring Program.

66. Phase II addressed the Strategic Priority of supporting countries to develop capacity to monitor and analyze POPs, and to provide their contribution to the global effectiveness evaluation undertaken by the Conference of the Parties using internationally accepted procedures.

67. The process of capacity building was a major part of the project and indeed the most successful. It was implemented through on-site training sessions at nine laboratories in seven countries. Training needs were identified such as introduction of new performance based methods, validation of these methods, and quality assurance/quality control regimes. However, the exercise did not encompass the study of the most difficult analysis and matrices considered in the Convention, namely dioxins and air, human blood and mother's milk, respectively.

68. In conclusion, all the anticipated outputs were satisfactorily delivered, both in quantity and quality as well as usefulness and timeliness; and the methodologies used for developing the technical documents and related management options in the participating countries and targeted project area were sound and effective. The project outputs will certainly contribute to fulfil the provisions of the Convention, although some of the priority issues (e.g. submit data on the selected matrices) will still be a challenge for most laboratories in developing countries.

3.4. Monitoring and Evaluation systems

M&E design

69. The project did not set-up a separate monitoring and evaluation plan but had the logical framework and institutional arrangements as basis for M&E. The project did self-assess performance against the project objectives, outcomes and activities with achievement

indicators defined in the Log-frame which generally fit the SMART criteria (Annex 1). The selected indicators were found adequate and useful.

70. The major weakness of this approach was the lack of a baseline analysis system for each outcome-level indicator at the beginning of the project that nullified some of the initially proposed objectives. However, the Core Group identified the necessary changes that were easily taken on board during the project implementation (see section 3.10).

71. The Project Core Group was also supposed to oversee the onsite monitoring and evaluation activities.

M&E plan implementation

72. The evaluation of the overall performance of the project was undertaken within the framework of the Monitoring and Evaluation Programme of the GEF Secretariat, which encompassed half-year reports on substantive and financial matters and an annual GEF Project Implementation Review (PIR) of the project by UNEP Chemicals with the assistance from the UNEP Division of GEF Co-ordination. This involved not only an assessment of achievement indicators but also that of risk management based on the assumptions and risks identified in the project document.

73. The Terminal Evaluation has verified that these arrangements and a clear distribution of responsibilities for monitoring project progress facilitated timely tracking of results and progress towards objectives throughout the project implementation period. The Minutes of Core Group meetings convey that the information provided by the M&E activities was used to improve project performance and to adapt to changing needs. The field visits supported the impression that design, implementation and monitoring of project activities was adequate and timely.

Budgeting and funding for M&E activities

74. No specific budget was allocated for the current monitoring of the impact and level of achievement of the different activities undertaken or planned. However, reporting of M&E activities can be considered within the in-kind contribution of UNEP.

75. Meanwhile, a Terminal evaluation was budgeted with the unspent financial resources of the project.

3.5. Replicability/Catalytic role

76. These criteria are not fully applicable in the context of this project. The activities developed during Phase I were self consistent, thus not intended for replication but for providing tools for the follow-up process, and this objective was satisfactorily accomplished (see section 3.3). In fact, the databank of POPs laboratories and the Tier criteria are being used as an orientation for new UNEP projects development and quality of analysis.

77. As far as Phase II is concerned, the project was not designed for replication either, so no steps were taken to do so. Nevertheless, the lessons and experiences coming out of the project had

high potential for playing a catalytic role in the expansion of the activities at national and regional levels. Meanwhile, some of the participant laboratories (e.g. Nigeria and Ecuador) started to organise training activities for other Institutions of their countries.

78. Moreover, the design of the feasibility study, which concluded with highly satisfactory results, has been used as reference in the extension and fostering of the monitoring activities within the Stockholm Convention, such as in the definition of the new GEF and SAICM QSP projects on "Supporting the Implementation of the Global Monitoring Plan of POPs in East, West and Southern Africa, Latin America and Caribbean, and the Pacific Islands Region".

3.6. Preparation and readiness

79. This is a mid-size project with objectives clearly defined and feasible within the timeframe. The leading Institution (UNEP Chemicals) was properly selected and the management was highly efficient. UNEP Chemicals has managed the process that led to the adoption of the Stockholm Convention on POPs. The project was built on the experience gained through its on-going capacity-building programme and the great number of workshops on POPs awareness rising, on management of POPs, from the POPs Global Monitoring Programme and other technical issues related to the Convention.

80. The contributing partners (donors and implementing/ executing agencies) all had appropriate expertise for implementing this Targeted Project. A Core Group with these representatives was formed to meet annually for providing guidance and advice.

81. The project's objectives and components were clear, practicable and feasible within its timeframe. The project document identified and properly determined the roles and responsibilities of the different participants. The resources provided by the counterparts, both national and international (funding, staff, and facilities) were efficiently used.

82. The first phase of the project involved a wide participation of individuals and Institutions that concluded with the elaboration of a directory of 204 laboratories analysing POPs around the world, classified according to a Tier ranking and easily retrievable in different groupings or categories.

83. The criteria established for selecting the partnership for the second phase (feasibility study) were sound and adequate to the aims of the project. The roles of the different participants were clearly established and agreed through MoU prior to project implementation. They exhibited great motivation and awareness in the different activities achieving good return. The selected experts were also highly competent for the tasks assigned.

3.7. Country ownership/drivenness

84. The project was launched to address Convention-driven country needs but did not originate from within countries. Therefore, country ownership and its outputs by individual national governments have been limited. In this respect, the evaluator was unable to identify an effective undertaking of the project in providing and communicating information that

catalyzed action in participating countries to improve policy decisions relating to POPs. The main component of the project was technically rather than policy driven, so it is not clear how the results will be valued by national authorities.

85. However, the fact that the POPs Focal Points were involved in the planned activities, sending questionnaires and participating in the identification of participant laboratories, provided some national insights, although with limited incidence in addressing the integrated management of issues concerning POPs. Notwithstanding, the project is relevant to national development of environmental agendas, notably to the SC compliance, because it has covered the necessary steps forward (e.g. enhancing monitoring capacity).

86. On the other hand, as country ownership has a direct implication on the sustainability of the project outcomes this aspect should be specifically considered in future projects definition and implementation, together with the participation of stakeholders (see below).

3.8. Stakeholder participation / public awareness

87. According to the objectives of the project, the main target groups were:
    - Government representatives at the policy level responsible for preparing the ratification of the Convention and lead technical ministries that will be charged with developing a NIP under the Convention and implementing the Convention upon its entry into force
    - Country experts on POPs measurements
    - International organisations, including UN and funding agencies
    - Private corporations, including industry
    - Environmental NGOs and other representatives of civil society.

88. Progress reports were submitted to SC COP-2 and COP-3 receiving positive feedback. One of the project outputs, namely the guidance document on POPs analytical performance, is gaining importance and acceptance at global level and serves as an orientation for many institutions. The main elements of the document have been included into the SSC guidance document for the Global POPs Monitoring Plan, which was adopted by COP-3. The databank of POPs laboratories and the Tier criteria are being used as an orientation for further project development (as for GEF and SAICM QSP).

89. Regrettably, it appears that other international organizations that had worked in similar areas did not evaluate the information and therefore did not contribute to the project. Therefore, the basis to build upon was much weaker than anticipated.

90. On the other hand, decision-making processes are slow and mechanisms appear to be inefficient in developing countries, so the participation of national Focal Points at the start of the project (despite being designed “top-down”) was instrumental in promoting institutional endorsement. Keeping them informed on the project progress and results is also a good way to enhance awareness and gave them the opportunity to be engaged in the sustainability of the project outcomes and to be encouraged to work together as it is specifically required by the Stockholm Convention.

91. Fortunately, particularly relevant was the participation of private companies in the development of the project, supplying spares and consumables free of charge or at reduced costs, and technical support, an initiative that could be extended in the follow-up activities. The scientific community was also informed of the project results through presentations in international conferences and publications in the open literature. All this was handled by the project management but it would be beneficial to promote also the direct involvement of the participant laboratories in the dissemination activities.

92. Finally, it should be taken into account that the availability of all information in the website will not only contribute to the diffusion of the results but also to the further stakeholder participation. Several presentations made at international conferences and authored publications will also enhance the visibility of the project.

3.9. Financial planning

93. The financial aspects of the project were handled in duplicate by the UNEP Offices in Geneva and Nairobi. This procedure has contributed to the transparent and reliable control of the project but has also increased the bureaucracy and has added a burden on the project management. Particularly lengthy were the procurement procedures that unfortunately delayed some activities.

94. The Project was not closed at the time of the evaluation and no external audit was expected. A summary of the co-finance information, including leveraged resources and project expenditure by activity is presented in Annex 2. These data have been reviewed with UNEP staff and there have been no indications that they were not managed soundly. In his respect, the accounts and records have been maintained properly; all project expenditures have been supported by vouchers and adequate documentation; and, expenditures have been incurred in accordance with the objectives outlined in the project document. The funds previously allocated for certain activities that were not undertaken were later on reallocated. Whenever small budget readjustments were needed, this was done in a transparent manner. A particularly relevant result was that the project benefited from attracting additional co-funding from private companies exceeding initial expectations.

95. The financial controls, including reporting and planning, seem to have been useful enough to help the project management make the appropriate decisions regarding the budget, and allow for a proper and timely flow of funds for the payment of satisfactory project deliverables. In conclusion, from the information available there are no questions over the financial management of the project's execution.

3.10. Implementation approach

96. UNEP/DGEF was responsible for the execution of the project in accordance with the objectives and activities of the project outlined in the proposal and ensured consistency with GEF and UNEP policies and procedures.

97. A Core Group, which consisted of representatives from the World Bank and the Secretariat of the Basel Convention (SBC) as well as from the three donor countries, namely Canada,

Germany, and Japan provided guidance and assistance. The Core Group established the workplan, timetable and the list of necessary documents for workshops. Other IGOs, e.g. FAO, UNIDO, UNDP, UNITAR and WHO were invited to participate in the workshops, as well as representatives of relevant regional agreements on waste and chemicals.

98. One key to the success of the project is the extent to which the management team is able to adapt to unforeseen circumstances or events to ensure that the project remains on track to meet its objectives. The project management team was very successful in taking adaptive management measures.

99. During the regional workshops at Phase I it became clear that regional POPs laboratories were not acceptable and that countries preferred to build upon the present existing laboratories by having them assessed, trained, and improved. The Core Group identified these changes and took them on board; subsequently, a broader approach was taken and seven pilot countries were selected as pilots for the project's feasibility study. Therefore, there was not only one laboratory strengthened but a number of them and no major investment costs did occur at one place. This did not affect the indicators or the outputs.

100. Unfortunately, other international organizations that had worked in similar areas did not contribute to the project. Therefore, the basis to build upon was much weaker than anticipated. However, no problems were encountered with costs associated with the tracking of indicators.

101. Overall, the project was executed according to the plans. The reports are comprehensive, reflecting the strengths and limitations of the implementation process. Supervision and administrative and financial support by UNEP was effectively and efficiently implemented (see sections 3.9 and 3.11). Administrative delays related with procurement procedures were minimized by the facilities (donations) provided by the supplying companies. Deliverables were submitted on time.

3.11. UNEP Supervision and backstopping

102. The Project was loosely monitored by the Core Group but the concerned unit in UNEP/GEF, and particularly the Project manager, provided an efficient supervision and administrative and financial support, responding in a timely manner to questions from the countries/laboratories and providing expertise as requested. There is no evidence that there were any perceived shortfalls in this regard. Furthermore, the quality of the service provided is on record and was verified during country interviews.

103. The concerned unit in UNEP/GEF has been efficient in providing the necessary supervision and administrative and financial support. No administrative, operational and/or technical problems and constraints influencing the effective implementation of the project were identified, nor did any arise during any stage of the evaluation process. However, the last procurement of laboratory spare parts and consumables in the context of the feasibility study was finalized with considerable delay compelling to an extension of the project.

4. Conclusions and rating

104. Following the evaluation criteria discussed in the previous section, the overall ratings of project implementation success are given below.

Criterion	Evaluator's Summary Comments	Evaluator's Rating
A. Attainment of project objectives and results (overall rating)	The general objectives were successfully achieved, although the strategy of implementing a regional laboratory was found not agreeable and needed to be modified.	S
A. 1. Effectiveness	The project was effective in producing guidance documents and tools, and in capacity building of developing countries to monitor and analyze POPs.	HS
A. 2. Relevance	The results should contribute, among others, to support NIPs and fostering the GMP.	S
A. 3. Efficiency	The results were satisfactorily attained, in relation to the planned activities and time span.	HS
B. Sustainability of Project outcomes (overall rating)	Outcomes in the participant countries are hardly sustainable unless there is continued external support. However, the development of the compliance of the Convention may slowly increase the possibilities.	ML
B. 1. Financial	National resources are limited. Improving the labs capacity may create new business opportunities. The implementation of the GMP may also contribute.	ML
B. 2. Socio Political	This is a long-term process, primarily depending on the implementation of NIPs and governmental policies.	ML
B. 3. Institutional framework and governance	Enforcement of national policies regarding POPs should facilitate the conditions for sustainability.	ML
B. 4. Ecological	The benefits of the project are obvious but will depend on follow-up actions.	L
C. Achievement of outputs and activities	All activities were successfully accomplished according to the planned schedule, particularly the feasibility study. The documents and tools produced will be of reference in the further implementation of the UNEP POPs portfolio.	HS

Criterion	Evaluator's Summary Comments	Evaluator's Rating
D. Monitoring and Evaluation (overall rating)	M&E were effectively taken into the project. The Log-frame matrix defined the "achievement indicators" and the "means of verification". The Half-year and UNEP GEF PIR FY Reports provide good evidence of the project M&E.	HS
D. 1. M&E Design	A M&E system is not formally described in the project document but M&E activities were adequately performed.	HS
D. 2. M&E Plan Implementation (use for adaptive management)	The implementation is positively reflected in the progress reports. The revision of the project, reallocating resources and extending the duration, illustrates the proper use of M&E activities.	HS
D. 3. Budgeting and Funding for M&E activities	M&E activities were not budgeted but they were well completed.	HS
E. Replicability/Catalytic Role	Phase I does not need to be replicated but updated in the future, whereas Phase II could be easily replicated in other countries/regions. However, more regional ownership is suggested.	S
F. Preparation and readiness	The project design was proper and the planned activities feasible. The arrangements with the partners and experts were totally adequate. The management was efficient.	HS
G. Country ownership / drivenness	The fact that the selection of labs was made through the country Focal Points may ensure feedback and country ownership. Hopefully, this will also improve management issues concerning POPs.	MS
H. Stakeholders involvement	The project did not emphasize stakeholders participation, although the outputs have a direct interest at national, regional & global levels. The availability of all information on the website will facilitate the involvement of these partners. Private companies contributed significantly to the project.	S
I. Financial planning	Although financial audits were not available, according to the information provided it appears that funds were soundly managed. Budget adjustments were minor and adequate.	HS

Criterion	Evaluator's Summary Comments	Evaluator's Rating
J. Implementation approach	The project was executed according to the plans. Management was effectively and efficiently implemented. Deliverables were submitted on time. Supervision and financial support by UNEP was satisfactory. Administrative delays related with procurement procedures were minimized by the facilities (donations) provided by the supplying companies.	HS
K. UNEP Supervision and backstopping	The Project was loosely monitored by the Core Group but the Project manager did very efficiently, responding in a timely manner to questions from the countries/laboratories and providing expertise as requested.	HS

HS = Highly Satisfactory
S = Satisfactory
MS = Moderately Satisfactory
MU = Moderately Unsatisfactory
U = Unsatisfactory
HU = Highly Unsatisfactory

L = Likely
ML = Moderately likely
MU = Moderately unlikely
U = Unlikely

105. Based on all the above and the assessment of project performance and impact made by the participant laboratories through a SWOT analysis (Annex 6), the following conclusions can be drawn:

1. The assessment of the indicators of the project log-frame matrix indicates that the initial objectives of the project were satisfactorily accomplished, and in some cases exceeding the expectations.

2. Few deviations or weaknesses were noticed, basically the necessity to reformulate the feasibility study to include the new regional approach, that was easily adopted by the management team, and the weak participation of stakeholders, with the exception of private companies. The involvement of commercial suppliers of laboratory consumables in the training activities was not only highly beneficial for the development of the project but opened interesting possibilities to be explored in future projects.

3. The construction of a web-accessible and searchable databank containing 204 POPs laboratories worldwide and the undertaking of capacity building activities in developing countries were the most successful outcomes. These will be highly relevant in the framework of the implementation of the monitoring component of the Stockholm Convention.

4. The methodologies used for building the laboratory data base and in planning the capacity building activities proved to be accurate and remarkably efficient. In the first case, the careful preparation of questionnaires and the classification system for rating the laboratory performance (Tier criteria) were noticeable, whereas in the second, the selection of laboratories and the design of the training program, including intercalibration exercises, were noteworthy.

5. The large attendance to the project workshops, with about 200 participants from 65 countries, enabled to wisely identify the needs and requirements for POPs analysis in developing countries to fulfil the compliance of the Convention. The participant laboratories considered timely and highly valuable the training exercises. Some problems were noticed regarding the exclusive use of English in all activities, particularly in the training exercises, but they should be regarded as minor.

6. The outreached materials and reports, available in the website, will not only contribute to the diffusion of the results but also to encourage further stakeholder participation. Several presentations made at international conferences and authored publications will also enhance the visibility of the on going projects on POPs.

7. The main impact of the project has probably been on the performance of the participant laboratories. The trained pilot laboratories got fully acquainted with QA/QC aspects, participating in international intercalibration exercises and implementing measures to further improve the quality of their performance. However, the conclusions of these exercises confirmed the need for continued training.

8. The sustainability of the project outcomes is a challenging issue. The implementation of NIPs and governmental policies regarding POPs on compliance of the Convention may offer favorable conditions but this is a question that should not be overlooked. The implementation of the GMP may also contribute. In this respect, laboratories that have received assistance through this project should be invited to provide data and scientific experience to the regional POPs networks and to the regional reports that are due for the effectiveness evaluation.

5. Lessons (to be) learned

106. A number of lessons from the standpoint of the design and implementation of the project were learned, and considered of interest in future activities.

1. The project has evidenced that the involvement of developing countries/regions in the implementation of the Stockholm and Basel Conventions is a long-term process. The project has revealed the weaknesses of the laboratories in these regions and the needs for strengthening their performance. The initiated capacity building program demands a continued effort with an appropriate strategy at UNEP/GEF level. A good example in this direction is the laboratory databank built in the pilot phase of the project that will be maintained by UNEP, to serve the effectiveness evaluation and other activities of the Conventions.

2. In this program, the training of human resources is of particular importance. This activity, that was conveniently included in the feasibility study and successfully accomplished, encompassed not only practical training but also QA/QC activities. These have demonstrated their usefulness in providing the means for the laboratories to test their skills following the training programme and, therefore, should be continued in one way or the other.

3. However, besides the achievements of the present project, the technical difficulties encountered in performing comprehensive analysis of POPs in developing countries have been well documented. These refer to the availability of reference materials and other consumables or the lack of adequate instrumentation to the limited expertise in the analysis of the matrices of reference in the GMP (air, blood and mother's milk) or the restricted access to open literature for updating the analytical protocols.

4. The adoption of a regional approach in implementing all these activities has proved to be the most convenient. To summarize, countries with similar problems and levels of development have very specific needs for capacity building that can be better addressed if the activities are organized on-site. A network of regional laboratories, assisted with dedicated workshops, provides the most adequate organization for identifying data gaps and priorities, developing on-going and collaborative research actions, and enhancing ownership/awareness of the outputs.

5. An important aspect in the whole process is the implication of the different project stakeholders, at national, regional and international levels. The project has successfully engaged the academic sector but the policy sector has been less directly concerned. On the contrary, the participation of private companies has constituted an unexpected success. Based on the experience, all these actors have to be invited to play a more important role in the future.

107. Certainly, the lessons learned from the outreached materials and the feasibility study should be taken into account in the future actions of the Convention. The forthcoming projects (8) are in line with these developments and could incorporate some of the present conclusions and the recommendations formulated in the following section.

6. Recommendations

108. As this is a terminal evaluation of the project, recommendations will mostly refer to strategic actions to be considered in the follow-up activities for the implementation of the SC in developing countries/regions, according to the lessons learned.

1. Taking into account the key role that POPs analysis plays in the implementation of the Stockholm and Basel Conventions (e.g. NIPs, GMP, etc.), the production of guidance documents and enhancement of expertise in order to obtain reliable data for the different matrices, both on a geographical and temporal basis, and the further mobilisation of financial resources should be continued through UNEP

2. In particular, it is suggested that the outreached materials of the project (including all reports) could be worked-up by UNEP to produce a series of synthesis documents to be used as reference materials for the further development of the Conventions. These documents should specially consider the adaptability of methods to the conditions in developing countries (e.g. low cost methods). A guidance document on monitoring (e.g. on what, where and when to sample) is particularly necessary as complement of the GMP guide.

3. Based on the experience of the present project and the lessons learned, a more elaborated strategy for strengthening the regional implementation of the Convention should be adopted by the COP, under the UNEP guidance. This could encompass an enhanced visibility and networking of regional laboratories, the establishment of working groups and continued proficiency tests and interlaboratory studies, as well as the extension of on-site laboratory capacity development to cover other POPs and other countries. Creating an effective regional network of POPs laboratories would be a major achievement.

4. Moreover, the mechanisms for stakeholder participation in future UNEP/GEF projects for capacity building in developing countries should be improved, particularly to involve the ministries responsible and policy makers, in order to encourage basic laboratory investments and their use to assist in developing POPs management actions. At the end, this will also contribute to the sustainability of the technical infrastructure.

5. A specific program for associating commercial companies to this initiative could bring important benefits. In any case, establishing a background support for the laboratories of these countries/regions, in the form of supply of indispensable consumables (e.g. standards, CRM, etc.) and access to information updating, should be seriously considered by the SC Secretariat and endorsed to UNEP/GEF for implementation. This could be complemented with a series of sponsored training events (e.g. “summer schools”). Overall, requiring relatively modest investments.

6. The potential long-term impact of the project is expected to be seen in a few years time in assessing the volume of information existing on the occurrence and distribution of POPs in the different environmental compartments of developing countries. An assessment of the open literature should be performed periodically (e.g. every 4 years) by UNEP, as part of the assessment of the Convention, with the formulation of recommendations to fill the observed gaps.

Annexes

Annex 1. Project log-frame matrix

SUMMARY	OBJECTIVELY VERIFIABLE INDICATORS	MEANS OF VERIFICATION	CRITICAL ASSUMPTION AND RISK
Overall Objective			
To assess the convention-driven country needs for laboratory analysis and the conditions necessary to conduct them in a sustainable manner, including on a regional basis if appropriate. A pilot study will explore the feasibility of establishing a fully equipped regional laboratory in a developing country that may be able to analyze all twelve POPs, including PCDD/PCDF in relevant matrices. Pilot study leads to actual recognition of a regional laborator(ies) based on the regional agreement(s) and the criteria to establish such a laboratory.	• An assessment report published identifying existing analytical capacity for analyzing POPs including *inter alia* of governmental report and peer-reviewed papers; • Identified criteria for sustainability for operating laboratories; • Limit values in legislation; • At least one regional cooperation agreement for the future regional laboratory	• Database of laboratories on a regional basis (country-by-country); • National legislations that incorporated limit values based on the project recommendations; • Participation of developing countries in international round robins, *e.g.*, by WHO	• That financial and technical assistance will be available to implement the pilot study; • That PCDD/PCDF analysis will be restricted to high-capacity established OECD laboratories; • That regional cooperation to support ONE regional Tier 1 laboratory cannot be achieved. Our aim is to set the basis to establish a Tier 1 regional laboratory after the finalization of this pilot study
Outcomes			
Analysis of POPs laboratory capacity worldwide and regionally	• Filled questionnaires with technical substantive information returned • Country list of labs made available and classified into different Tiers; • Lists available from other entities, *e.g.*, FAO. WHO, accreditation bodies	• Updateable database of laboratories established and functional	• Lack of cooperation of laboratory manager/owners; • Lack of cooperation of international bodies
Analysed past experiences and lessons learnt on what has worked and what did not work	• Compilation of documents and reports created in this study, *e.g.*, National Profiles and NIPs and from bilateral donors, international organizations, private entities	• Written documents and conclusions of regional meetings	• That cooperation with other organizations/institutions that conducted past projects is secured; • Most important studies are not accessible
Identified needs and requirements for POPs analysis on a regional basis to fulfil the obligations of the Stockholm Convention	• Substantive responses and inputs from countries to the study; active participation; performance and economic criteria	• Reports of the outcomes of Activities 4 and 5 (site visits and feasibility study)	• Poor participation of countries; • Poor participation of private sector; • Poor participation of international organisations

Summary	Objectively Verifiable Indicators	Means of Verification	Critical Assumption and Risk
Overall Objective			
To assess the convention-driven country needs for laboratory analysis and the conditions necessary to conduct them in a sustainable manner, including on a regional basis if appropriate. A pilot study will explore the feasibility of establishing a fully equipped regional laboratory in a developing country that may be able to analyze all twelve POPs, including PCDD/PCDF in relevant matrices.	• An assessment report published identifying existing analytical capacity for analyzing POPs including governmental reports, and open literature • Identified criteria for sustainability of operating laboratories; • Limit values in legislation;	• Database of laboratories on a regional basis (country-by-country); • National legislations that incorporate limit values based on the project recommendations; • Participation of developing countries in international sound robins, e.g., by WHO	• That financial and technical assistance will be available to implement the pilot study; • That PCDD/PCDF analysis will be restricted to high-capacity established OECD laboratories; • That regional cooperation to support ONE regional Tier 1 laboratory cannot be achieved.
Pilot study leads to actual recognition of a regional laborator(ies) based on the regional agreement(s) and the criteria to establish such a laboratory.	• At least one regional cooperation agreement for the future regional laboratory	• Successful implementation of obligations of Stockholm Convention; • Steadily increasing number of Parties to the Convention	Our aim is to set the basis to establish a Tier 1 regional laboratory after the finalization of this pilot study
Outcomes			
Analysis of POPs laboratory capacity worldwide and regionally	• Filled questionnaires with technical substantive information returned	• Updatable database of laboratories established and functional	• Lack of cooperation of laboratory manager/owners; • Lack of cooperation of international bodies
Recommended criteria for analytical data	• Country list of labs made available and classified into different Tiers; • Lists available from other entities, e.g., FAO, WHO, accreditation bodies	• Written technical document available	• No agreement being reached due to too strong national positions
At least one field-test performed	• Feasibility study in at least one country finalized and reported	• Written document to report study outcomes; • Strengthened national analytical capacity	Organizational and financial constraints dominating
Analysed past experiences and lessons learnt on what has worked and what did not work	• Compilation of documents and reports created in this study, *e.g.*, National Profiles and NIPs and from bilateral donors, international organizations, private entities	• Written documents and conclusions of regional meetings	• That cooperation with other organizations/institutions that conducted past projects is secured; • Most important studies are not accessible
Identified needs and requirements for POPs analysis on a regional basis to fulfil the obligations of the Stockholm Convention	• Substantive responses and inputs from countries to the study; active participation; performance and economic criteria	• Reports of the outcomes of Activities 4 and 5 (site visits and feasibility study)	• Poor participation of countries; • Poor participation of private sector; • Poor participation of international organisations

Agreed criteria for sampling, identification, quantification of POPs	• Information exchange between stakeholders; • Agreed criteria for analysis, requirements and evaluation by countries and international organizations	• Criteria agreed and document prepared	• Labs and countries willing to acknowledge other country's results
Strengthened capacity to analyze POPs in at least one country per region	• Improved quality of data from labs governmental and peer reviewed papers; • Governments, IGOs, and other clients express willingness to support regional labs	• Labs in the developing countries participate in intercalibration studies; • Labs offer their services to Parties; • Clients use labs accordingly	• Lack of PCDD/PCDF cofinancing for this study; • Lack of sustainability of funds; • Clients after the strengthening of the lab; • Lack of acceptance by the clients
Enhanced knowledge and understanding of national POPs problems amongst decision makers, managers, industry, and the public at large.	• Active participation in international POPs activities;		• Interest in analysis of POPs will continue throughout the implementation of Stockholm Convention
Results			
A map of POPs laboratories in operation according to their capabilities to analyze different classes of POPs (pesticides, PCB, PCDD/PCDF)	• Database of existing laboratories on global basis, classified into Tiers	• Database published, accessible, and updatable	• Poor regional participation
	• Utilization of agreed criteria to generate reliable data		
Needs and requirements on regional basis identified	• Conclusions from regional workshops	• Regional workshops held and conclusions achieved	• No agreement on common parameters
Exchange of experiences within and among regions initiated	• Interest in analytical questions; • Interest in improving quality; • Existing networks used for dissemination of information (e.g., NIP mechanism, SC Focal Points, SC Clearinghouse)	• Increasing numbers of labs applying the criteria; • Contacts initiated by the regional workshops and the feasibility study	• No funding beyond this project will be available; • No interest in the regions

Agreed criteria for sampling, identification, quantification of POPs	• Information exchange between stakeholders; • Agreed criteria for analysis, requirements, and evaluation by countries and international organizations.	• Criteria agreed and document prepared	• Labs and countries willing to acknowledge other country's results
Strengthened capacity to analyze POPs in at least one country per region	• Improved quality of data from labs involved in this project proved in national reports and open literature • Governments, IGOs, and other clients express willingness to support regional labs	• Labs in the developing countries participate in intercalibration studies; • Labs offer their services to customers; • Clients use labs accordingly	• Lack of sufficient cofinancing for this study; • Lack of sustainability of funds/ clients after the strengthening of the lab; • Lack of acceptance by the clients
Enhanced knowledge and understanding of national POPs problems amongst decision makers, managers, industry, and the public at large.	• Active participation in international POPs activities.	• Successful implementation of obligations of Stockholm Convention; • Steadily increasing number of Parties to the Convention	• Interest in analysis of POPs will continue throughout the implementation of Stockholm Convention
Results			
A map of POPs laboratories in operation according to their capabilities to analyze different classes of POPs (pesticides, PCB, PCDD/PCDF)	• Database of existing laboratories on global basis; classified into Tiers	• Database published, accessible, and updatable	• Poor regional participation
Recommended criteria for analytical data	• Utilization of agreed criteria to generate reliable data	• Written technical document available	• No agreement being reached due to too strong national positions
At least one field-test performed	• Feasibility study in at least one country finalized and reported	• Written document to report study outcomes; • Strengthened national analytical capacity	Organizational and financial constraints dominating
Needs and requirements on regional basis identified	• Conclusions from regional workshops	• Regional workshops held and conclusions achieved	• No agreement on common parameters
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Activities			
Activity 1a: Project management			
Establish a Core Group	• All stakeholders represented (donors and implementing/ executing agencies); • Inputs received from the Core Group members including pilot country selection.	• Reports of the meetings with a list of participants	• Lack of participation
Establish workplan, timetable and necessary documents for workshops	• Workplan, timetable approved, list of necessary documents available	• Correspondence to participating countries and organizations	• Various donors do not agree on the workplan.
Activity 1b: Assessment of past experiences and establishment of criteria			
Assessment of lessons learnt	• Analysis of information provided	• Written document	• Lack of information
Establish criteria for needs, requirements, sustainability	• The criteria established and agreed by the countries based on earlier projects and experiences from laboratories; • Relevant input from other sources	• Criteria/needs document	• No agreements are being reached; • No agreement reached between regions
Activity 2: Inventory of global laboratory capacity for measuring POPs			
Collect data on existing POPs laboratories	• Questionnaires prepared, disseminated, and evaluated	• Number of questionnaires sent out and returned	• Laboratories do not provide accurate and relevant data
Establish database of existing laboratories and their capacities	• Database of laboratories and capacities created as part of the UNEP data system and accessible to users.	• Demonstrated database at the Core Group meeting or anywhere else • Number of users	• Lack of resources available
Activity 3: Organization of three regional workshops			
Hold workshops, prepare reports	• Broad regional participation of substantively relevant individuals in the three workshops; • Relevant conclusions and recommendations reached	• Workshop reports and participants' list	• Lack of active cooperation of important players

Activity 4: Identification of countries for feasibility study			
Identify candidate countries (up to three; one per region)	• Letter of interests; • Selection criteria developed (*e.g.*, candidate country is Party to SC, enabling activities have substantial progress)	• Selected countries fulfil the criteria	• Lack of interest and participation from countries; • Lack of financial and human resources commitments of the countries
Conduct site visits to potential candidate countries	• At least one visit to the countries that have been selected	• Country commitments	• No candidate identified or can be selected based on the criteria set.
Prepare documentation to the Core Group decision and sign the MoU with countries	• Decision of the Core Group and the letter of endorsement from the country selected, also indicating commitment of the Government and labs.	• Countries selected; • MoU with countries signed	• That more than one country per region applies and no agreement on final selection can be reached
Activity 5: Feasibility study in at least one country			
Organise Start-up workshop to determine the details of the feasibility study	• Agreement of the stakeholders on the scope and workplan	• Workshop report, which includes list of participating stakeholders and their roles and commitments to the project	• Not all relevant stakeholders participate in the start-up workshop; • No agreement reached; • Lack of cofinancing.
Identify political, technical, financial, human resources conditions	• Agreement between national stakeholders on the political, technical, financial and human resources conditions.	• Commitment received and shown in a letter of commitment	• Out-side drivers to impede successful implementation
Perform the components of the feasibility study; *e.g.*, train laboratory personnel, test the guidance document as indicated in the project document, upgrade laboratories, participate in round robins	• Activities undertaken	• Report of experiences and outcomes achieved.	• Lack of cooperation of laboratories and other stakeholders; • Absence of adequate round robins

Annex 2. Summary co-finance information and a statement of project expenditure by activity

2.1. Co-financing

Co financing (Type/Source)	IA own Financing (US$)		Government Canada (US$)		Other* GEF (US$)		Total (US$)		Total Disbursement (*) (US$)	
	Planned	**Actual**	**Planned**	**Actual**	**Planned**	**Actual**	**Planned**	**Actual**	**Planned**	**Actual**
– Grants			429,400	429,400	395,000	384,266	824,400	813,666	824,400	813,666
– Loans/Concessional (compared to market rate)										
– Credits										
– Equity investments										
– In-kind support (UNEP)	115,000	115,000					115,000	115,000	115,000	115,000
– Other (**)										
- Japan	146,900	119,581					146,900	119,581	146,900	119,581
- IGOs	60,000	60,000					60,000	60,000	60,000	60,000
- In-kind participating countries	170,000	170,000					170,000	170,000	170,000	170,000
Totals	491,900	464,581	429,400	429,400	395,000	384,266	1,316,300	1,278,247	1,316,300	1,278,247

2.2. Leveraged Resources

In addition to the financial resources directly committed to the project since its approval (see above), other contributions from the private sector and the participating institutions were leveraged by the project.

These were in the form of direct expenditures, donation of consumables, travel expenses and dedicated time from different personnel.

In this respect:

- MTM University of Örebro, Sweden, provided a second expert for the inspection tours to Fiji and Vietnam, and analysed at no cost additional samples from Fiji;
- IVM, VU Amsterdam (Free University Amsterdam), the Netherlands, provided an additional expert to travel to Kenya to train the local laboratory as well as overtime at the back-up laboratory;
- SGE Europe Ltd., Courtaboeuf, France, donated spares and consumables to the laboratories in Fiji and Vietnam, and granted substantial price reductions for the other developing country laboratories;
- Wellington Laboratories, Guelph, Canada, and Cambridge Isotope Laboratories, Andover, MA, USA, also granted substantial price reductions in the procurement of analytical standards;
- SGS, Institute for Applied Chromatography, Antwerp, Belgium, provided an expert to serve as resource person at the three regional workshops;
- UNEP staff offered extra hours for transferring the information from questionnaires to the databank, including contacting laboratories and evaluation of information for correctness and consistency;
- IT people in UNEP also spent time for maintaining the Webpage;
- Finally, the Steering group provided time and travel costs; and all POPs contact points facilitated the diffusion of the laboratory databank questionnaire.

The direct financial contributions to the project can be estimated as follows:

From private sector through donations and reduced prices to the developing country laboratories to improve their performances

Laboratory materials		
Spares/consumables from SGE company (Australia/France)	$	21,217.00
Analytical standards from Wellington Laboratories (Canada)	$	6,240.00
Analytical standards from Cambridge Isotope Laboratories (USA)	$	24,830.00
Direct cash savings from private sector	**$**	**52,287.00**

Travel and human resources for attending regional workshops or instructing at training courses in the developing countries

SGS company, Belgium		
5 days honorarium for expert at 3 regional workshops (@500 USD/day)	$	7,500.00
Air ticket and hotel to Uruguay, South Africa, China	$	4,500.00
Hotel and DSA in Uruguay, South Africa, China	$	3,000.00
Subtotal SGS	**$**	**15,000.00**
Umea University, Sweden		
honorarium: 5 days Fiji, 5 days Vietnam	$	5,000.00
Air ticket to Fiji and Vietnam	$	4,300.00
DSA for 5 days, each Fiji and Vietnam	$	1,500.00
Total Umea University	**$**	**10,800.00**
Free University Amsterdam		
Honorarium (7 days Kenya)	$	3,500.00
Air ticket to Kenya	$	1,200.00
DSA for 7 days Kenya	$	1,680.00
Total VU Amsterdam	**$**	**6,380.00**
Total (human resources)	**$**	**32,180.00**

In addition, the time committed by IT people at UNEP to maintain the databank and the project Webpage was estimated in 200 hours.

Half-time of a L3 position was also devoted between Sep 2005-Jul 2007 to transfer the information from the questionnaires to the databank, including the evaluation of information for correctness and consistency.

2.3 Budget expenditure by activity

2.3.1 As indicated in the project document

Activity	**Costs**				
	GEF	***BMZ***	***Other***	***In-kind***	***Total***
Al. 2 Core group meetings	15,000			15,000	30,000
Al. Development of assessment criteria, analysis of experience, needs, requirements, sustainability conditions, 3 mm	30,000				30,000
Al. total	***45,000***	***-***	***-***	***15,000***	***60,000***
A2. Preparation and analysis of a questionnaire on inventory capacity 3 mm				30,000	30,000
A2. total	***-***	***-***	***-***	***30,000***	***30,000***
A3. Workshops, 40 participants x 3 (travel + DSA)	260,000				260,000
A3. In-kind countries (time for preparation/WS follow-up), 1 mm/country				150,000	150,000
A3. Invited experts' participation	30,000				30,000
A3. In-kind UNEP (time for preparation/WS follow-up), 1 mm/country				30,000	30,000
A3. In-kind other IGOs participation to WS				60,000	60,000
A3. Misc. WS: room rental, hospitality etc	60,000				60,000
A3. total	***350,000***	***-***	***-***	***240,000***	***590,000***
A4. Site visits UNEP + experts			30,000	10,000	40,000
A4. total	***-***	***-***	***30,000***	***10,000***	***40,000***

A5. Feasibility study in a developing country in one region; start up workshop, 20 participants		30,000			30,000
A5. Co-ordination of activities, 4 mm		10,000	30,000		40,000
A5. Country activities, including training workshops for laboratory personnel e.g. in sister labs in donor country		30,000	70,000		100,000
A5. Upgrading of equipment and infrastructure		20,000	80,000		100,000
A5. Regional travel		10,000	20,000		30,000
A5. Expert support for feasibility study, 3 mm		10,000	20,000		30,000
A5. Guidance document testing and participation in round-robin tests, including sampling, preparation and analysis		50,000	100,000		150,000
A5. In-kind country				20,000	20,000
A5. In-kind UNEP (time for visits, training etc.) 3 mm				30,000	30,000
A5. total	**-**	***160,000***	***320,000***	***50,000***	***530,000***
Subtotal	**395,000**	**160,000**	**350,000**	**345,000**	**1,250,000**
13 % implementing agency fee		20,800	45,500		66,300
Total	**395,000**	**180,800**	**395,500**	**345,000**	**1,316,300**

2.3.2 As spent by 18 November 2008 (GEF, German and Canadian budget administered by UNEP).

Activity	2005	2006	2007	2008	Total
Development of assessment criteria, etc.	14,000	-	-		**14,000**
Staff & Regional travel (within the countries)	-	4,219		17,270	**21,489**
Core Group meetings	-	(39,380)	5,200		**(34,180)**
A1. Sub-total					***1,309***
3 WS in 3 regions, incl. expert participation	335,056	-	42,947		**378,003**
Hospitality	-	-		224	**224**
A3. Sub-total					***378,227***
Site visits (for selection)	5,184	34,586	2,837		**42,607**
Coordination of regional activities	-	12,500			**12,500**
Guidance document testing (IVM Training)		18,000	12,800 (14)		**30,800**
Training and workshops for country experts	-	123,071	16,153 (1,431)		**137,793**
Expert support for feasibility study	-	23,750	5,125		**28,875**
Feasibility study, start-up WS	-	15,285			**15,285**
Spares/Consumables for pilot Labs	-	12,338	98,093	1,596	**112,027**
POPs analysis in relevant matrices & writing report	-	-	12,150		**12,150**
Reports, printing, translation	-	7,000	3,230	3,238	**13,468**
A5. Sub-total					***405,491***
UNOG Admin. fee	-	-	1,013		**1,013**
Total Expenditures	**354,240**	**211,369**	**198,104**	**22,328**	**786,040**
Approved Budget					**824,400**
Unspent funds*					**38,360**

*Unspent funds will then be utilised to absorb the costs of Terminal Evaluation.
Upon receipt of Terminal Report, final expenditures will be ascertained.

Annex 3. The Evaluation Terms of Reference

Terminal Evaluation - Assessment of Existing Capacity and Capacity Building Needs to Analyse POPs in Developing Countries GFL / 2328-2760-

1. PROJECT BACKGROUND AND OVERVIEW

The Stockholm Convention requires Parties to monitor for Persistent Organic Pollutants (POPs) in the environment across the globe. The Convention contains provisions for research, development and monitoring (Article 11). Parties are requested to encourage or undertake research, development, monitoring and cooperation pertaining to POPs, their alternatives and candidate POPs. The request for research covers many areas, e.g., sources and releases into the environment; levels and trends in humans and the environment; environmental transport, fate and transformation; effects on human health and the environment; socio-economic and cultural impacts; release reduction and/or elimination; and harmonized methodologies for making inventories of POPs by-product sources and analytical techniques for the measurement of releases. Lastly, Parties have to define best available techniques (BAT) and best environmental practices (BEP) to minimize or eliminate by-product releases.

The entry into force of the Stockholm Convention increased demand for POPs analysis in all areas exceeding the existing capacity for such research. The most demanding requirements for the analysis of POPs are with PCDD/PCDF and dioxin-like PCBs. For these chemicals, situation was such that laboratory capacity for POPs analysis and monitoring existed in a few OECD countries. The geographic coverage for POPs pesticides, PCBs, and HCB was much better although no judgment could be made as regards to the quality of the data. The need for analysis of these compounds was likely to increase the imbalance between developing countries/countries with economies in transition (DC/EIT) and developed countries and could lead to a south to north cash flow with OECD countries as net beneficiaries. The engagement of developing countries and countries with economies in transition in the Convention would decrease and they would also be deprived of a "business opportunity" as their products may not be found acceptable on international markets. On the other hand, certified POPs-free products from developing countries may have excellent market opportunities. There were several laboratories existing in developing countries and countries with economies in transition that could form the basis of enhanced laboratory capacity if additional resources were provided for equipment, training and start-up costs.

In addition, Article 16 of the Convention requires that the Conference of the Parties undertake an effectiveness evaluation four years after the entry into force. This is a collective undertaking by all Parties acting in unison. Parties from some regions, e.g., North America and Northern Europe would be able to provide adequate and comparable monitoring and other data, obtained under existing regional arrangements. However, Parties from regions, e.g., Sub-Saharan Africa or CIS countries would not be able to provide similar data to complete the global evaluation, since arrangements in their regions would be inadequate or lacking. Without data from all regions the global effectiveness evaluation my not proceed.

Therefore, the overall objective of the project was to assess the convention-driven country needs for laboratory analysis and the conditions necessary to conduct them in a sustainable manner, including on a regional basis if appropriate. Based on this and on a thorough analysis of past experience and lessons learned, the economic and qualitative feasibility of establishing a fully equipped regional laboratory in a developing country that may be able to analyze all twelve POPs, including dioxins and furans in relevant matrices were to be explored through a pilot study. In addition, the project was to assist Parties in developing country regions or regions with economies in transition to provide their contribution to the global evaluation. This did not only apply to those Parties in which POPs laboratories would be established or existing facilities strengthened. Also the other countries in the region were to contribute to the global effectiveness evaluation by providing samples from their territory, gathered according to internationally accepted procedures established through this project or other similar activities e.g., the POPs Global Monitoring Network, thus adding national and regional content to the global evaluation.

Linkages with other projects and UNEP regular work programme

International Development Agencies such as AUSAID, CIDA, the Danish EPA, The Swiss Agency for Development and Co-operation have been assisting activities for capacity building of environmental laboratories

in the developing world for decades This project was to link to these and other identified laboratories with on going POPs analytical activities to identify possible overlaps with laboratories in the ongoing work to establish a POPs inventory.

The United Nations University (UNU) established a programme in 1996 entitled "Environmental Monitoring and Governance in the East Asian Hydrosphere: Monitoring of POPs in Water" to build capacity of selected laboratories in East Asia for environmental monitoring. Nine countries participate: China, Indonesia, Japan, Korea (Republic of), Malaysia, the Philippines, Singapore, Thailand, and Viet Nam. The project has received instruments, training and money from the Shimadzu Corporation. Links were to be made to the UNU network in the present project through the Japanese project on POPs monitoring in East Asia, in which UNU is one of the partners.

WHO-GEMs undertook an Analytical Quality Assurance study on pesticide residues in cooperation with the GTZ Pesticide Service Project. Several laboratories from developing countries participated and some of these produced acceptable data. These laboratories were to be considered for the regional labs. WHO-GEMS is a member of a UNEP Chemicals Advisory Group for a POPs Global Monitoring Programme (GMP). Discussions were ongoing about establishing a Letter of Agreement that would include the accessibility of WHO-GEMS data on POPs to a wider audience.

The GTZ Improving Pesticide Management in Developing Countries Programme established a project to strengthen the national accreditation schemes according to international standards entitled "Quality Assurance in Analytical Laboratories in Morocco, Jordan, and Turkey." During 1996 to 1999, the existing national accreditation systems were evaluated within Morocco, Jordan and Turkey, and pesticide residue laboratories were supported to achieve accreditation on the basis of ISO Guide 25 or EN 45001. These and other laboratories were to be included in the identification phase.

Executing Arrangements

The project was managed by a Core Group led by UNEP, the World Bank, MEDPOL, Canada and GTZ as the major donors to the second phase of the project assisted by the secretariats of the Basel, Rotterdam and Stockholm Conventions. Other IGOs, e.g. FAO, UNIDO, UNDP, UNITAR and WHO were invited to participate in the workshops, as well as representatives of relevant regional agreements on waste and chemicals. UNEP DTIE Chemicals Branch in Geneva was Executing Agency.

Programme Activities

The project duration was 24 months and was expected to:

1. Establish a Core Group and hold 2 Core Group Meetings; one at the start of the project and one before starting the feasibility study;
2. Analyze past experience and lessons learnt to establish what has worked and what has not;
3. Analyze existing capacity worldwide and regionally based on earlier efforts and responses to the UNEP Chemicals questionnaire;
4. Analyze and compare the needs and requirements for analysis from a national point of view with those of the Stockholm Convention effectiveness evaluation;
5. Evaluate the needs for (i) harmonization of analytical sampling/identification/ quantification methods, (ii) accreditation of laboratories, (iii) quality assurance/quality control (QA/QC) and (iv) round robins for POPs;
6. Identify technical and political conditions for sustainability, including the economic and qualitative feasibility of regional labs, especially with regard to keeping technical expertise, to ensure that the regional laboratories would be sufficiently used;
7. Identify suitable countries with urgent data development needs e.g. in the Southern hemisphere and convene 3 regional workshops with participants from countries with either existing laboratories (to be upgraded) or from countries interested in setting up laboratories;
8. Perform a feasibility study based on the outcome of the above in a developing country in one region;

The feasibility study under 8) would include:

i) a start up workshop in the selected country for the countries in the region, to identify the specific conditions for political and technical sustainability in the region;
j) co-ordination by a study manager;

k) country activities, e.g. national meetings, infrastructure strengthening;
l) travel to other countries in the region to ensure buy-in and commitment;
m) support from external international experts;
n) strengthening capacity by acquiring supplementary hardware, e.g. retrofitting equipment and investment in infrastructure;
o) trainings workshop for laboratory personnel, preferably in co-operation with "sister lab" in donor country;
p) testing of draft guidance document for a POPs GMP and participation in round robin tests for quality assurance and quality control;
q) sampling, preparation and analysis of samples selected according to UNEP Chemicals draft guidance document for POPs GMP.

Budget

The total budget was US$ 1,316,300 with US$ 395,000 funded by GEF, Co-financing US$576,300 and In-kind US$1345,000.

TERMS OF REFERENCE FOR THE EVALUATION

1. Objective and Scope of the Evaluation

The objective of this terminal evaluation is to examine the extent and magnitude of any project impacts to date and determine the likelihood of future impacts. The evaluation will also assess project performance and the implementation of planned project activities and planned outputs against actual results. The evaluation will focus on the following main questions**:**

5. Did the project identify, analyse and establish the needs of countries to fulfil the requirements of the Stockholm convention to monitor POPs?

6. Did the project support countries to develop capacity to monitor and analyze several of the POPs, and to participate in the controlled sampling of different media for further processing and analysis

7. Did the project assist developing country regions and regions with economies in transition to provide their contribution to the global effectiveness evaluation undertaken by the Conference of the Parties using internationally accepted procedures?

8. Are countries which were assisted by the project able to more fully implement the Convention and also assist other countries in the region in their efforts to do the same?

2. Methods

This terminal evaluation will be conducted as an in-depth evaluation using a participatory approach whereby the UNEP/DGEF Task Manager, key representatives of the executing agencies and other relevant staff are kept informed and consulted throughout the evaluation. The consultant will liaise with the UNEP/EOU and the UNEP/DGEF Task Manager on any logistic and/or methodological issues to properly conduct the review in as independent a way as possible, given the circumstances and resources offered. The draft report will be circulated to UNEP/DGEF Task Manager, key representatives of the executing agencies and the UNEP/EOU. Any comments or responses to the draft report will be sent to UNEP / EOU for collation and the consultant will be advised of any necessary or suggested revisions.

The findings of the evaluation will be based on the following:

1. A desk review of project documents including, but not limited to:
   (a) The project documents, outputs, monitoring reports (such as progress and financial reports to UNEP and GEF annual Project Implementation Review reports) and relevant correspondence.
   (b) Project Country Reports
   (c) Other project-related material produced by the project staff or partners.
   (d) Relevant material published on web-sites maintained by GEF.

2. Interviews with project management and technical support including the Project Management in UNEP Chemicals, collaborators, Country Coordinators and members of the Steering Group.

3. Interviews and telephone interviews with intended users for the project outputs and other stakeholders involved with this project, including in the participating countries. The Consultant shall determine whether to seek additional information and opinions from representatives of donor agencies and other organisations. As appropriate, these interviews could be combined with an email questionnaire.

4. Interviews with the UNEP/DGEF project task manager and Fund Management Officer, and other relevant staff in UNEP dealing with POPs related activities as necessary. The Consultant shall also gain broader perspectives from discussions with relevant GEF Secretariat staff if deemed of added value.

5. Field visits to project staff and project site: Global project management unit in Geneva, and Kenya and Ecuador (see three participating laboratories)

Key Evaluation principles.

In attempting to evaluate any outcomes and impacts that the project may have achieved, evaluators should remember that the project's performance should be assessed by considering the difference between the answers to two simple questions ***"what happened?***" and ***"what would have happened anyway?"***. These questions imply that there should be consideration of the baseline conditions and trends in relation to the intended project outcomes and impacts. In addition it implies that there should be plausible evidence to **attribute** such outcomes and impacts **to the actions of the project**.

Sometimes, adequate information on baseline conditions and trends is lacking. In such cases this should be clearly highlighted by the evaluator, along with any simplifying assumptions that were taken to enable the evaluator to make informed judgements about project performance.

3. Project Ratings

The success of project implementation will be rated on a scale from 'highly unsatisfactory' to 'highly satisfactory'. In particular the evaluation shall assess and rate the project with respect to the eleven categories defined below:[1]

A. Attainment of objectives and planned results:

The evaluation should assess the extent to which the project's major relevant objectives were effectively and efficiently achieved or are expected to be achieved and their relevance.

- *Effectiveness:* Evaluate how, and to what extent, the stated project objectives have been met, taking into account the "achievement indicators". In particular, the analysis of outcomes achieved should include, *inter alia*, an assessment of the extent to which the project has directly or indirectly assisted policy- and decision-makers to apply information supplied by the project in their national planning and decision-making.

  As far as possible, also assess the potential longer-term impacts considering that the evaluation is taking place upon completion of the project and that longer-term impact is expected to be seen in a few years time. Frame recommendations to enhance future project impact in this context. Which will be the major 'channels' for longer term impact from the project at the national and international scales? The evaluation should formulate recommendations that outline possible approaches and necessary actions to facilitate an impact assessment study in a few years time.
- *Relevance*: In retrospect, were the project's outcomes consistent with the focal areas/operational program strategies? Ascertain the nature and significance of the contribution of the project outcomes to the wider portfolio of the UNEP.
- *Efficiency*: Was the project cost effective? Was the project the least cost option? Was the project implementation delayed and if it was, then did that affect cost-effectiveness? Assess the contribution of cash and in-kind co-financing to project implementation and to what extent the project leveraged additional resources. Did the project build on earlier initiatives, did it make effective use of available scientific and / or technical information. Wherever possible, the evaluator should also compare the cost-time vs. outcomes relationship of the project with that of other similar projects.

B. Sustainability:

Sustainability is understood as the probability of continued long-term project-derived outcomes and impacts after the project funding ends. The evaluation will identify and assess the key conditions or factors that are likely to contribute or undermine the persistence of benefits after the project ends. Some of these factors might be outcomes of the project, e.g. stronger institutional capacities or better informed decision-making. Other factors will include contextual circumstances or developments that are not outcomes of the project but that are relevant to the sustainability of outcomes. The evaluation should ascertain to what extent follow-up work has been initiated and how project outcomes will be sustained and enhanced over time.

[1] However, the views and comments expressed by the evaluator need not be restricted to these items.

Four aspects of sustainability should be addressed: financial, socio-political, institutional frameworks and governance, and ecological. The following questions provide guidance on the assessment of these aspects:

- *Financial resources.* Are there any financial risks that may jeopardize sustenance of project outcomes? What is the likelihood that financial and economic resources will not be available once the GEF assistance ends (resources can be from multiple sources, such as the public and private sectors, income generating activities, and trends that may indicate that it is likely that in future there will be adequate financial resources for sustaining project's outcomes)? To what extent are the outcomes of the project dependent on continued financial support?
- *Socio-political:* Are there any social or political risks that may jeopardize sustenance of project outcomes? What is the risk that the level of stakeholder ownership will be insufficient to allow for the project outcomes to be sustained? Do the various key stakeholders see that it is in their interest that the project benefits continue to flow? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project?
- *Institutional framework and governance.* To what extent is the sustenance of the outcomes of the project dependent on issues relating to institutional frameworks and governance? What is the likelihood that institutional and technical achievements, legal frameworks, policies and governance structures and processes will allow for, the project outcomes/benefits to be sustained? While responding to these questions consider if the required systems for accountability and transparency and the required technical know-how are in place.
- *Ecological.* What is the likelihood that project achievements will lead to sustained ecological benefits?

C. Achievement of outputs and activities:

- Delivered outputs: Assessment of the project's success in producing each of the programmed outputs, both in quantity and quality as well as usefulness and timeliness.
- Assess the soundness and effectiveness of the methodologies used for developing the technical documents and related management options in the participating countries and targeted project area.
- Assess to what extent the project outputs produced have the weight of scientific authority / credibility, necessary to influence policy and decision-makers, particularly at the local, national and regional level.

D. Assessment of Monitoring and Evaluation systems.

The evaluation shall include an assessment of the quality, application and effectiveness of project monitoring and evaluation plans and tools, including an assessment of risk management based on the assumptions and risks identified in the project document. The Terminal Evaluation will assess whether the project met the minimum requirements for 'project design of M&E' and 'the application of the Project M&E plan' (see minimum requirements 1&2 in Annex 4). GEF projects must budget adequately for execution of the M&E plan, and provide adequate resources during implementation of the M&E plan. Project managers are also expected to use the information generated by the M&E system during project implementation to adapt and improve the project.

M&E during project implementation

M&E design. Projects should have sound M&E plans to monitor results and track progress towards achieving project objectives. An M&E plan should include a baseline (including data, methodology, etc.), SMART indicators (see Annex 4) and data analysis systems, and evaluation studies at specific times to assess results. The time frame for various M&E activities and standards for outputs should have been specified.

- *M&E plan implementation.* A Terminal Evaluation should verify that: an M&E system was in place and facilitated timely tracking of results and progress towards projects objectives throughout the project implementation period (perhaps through use of a logframe or similar); annual project reports and Progress Implementation Review (PIR) reports were complete, accurate and with well justified ratings; that the information

provided by the M&E system was used during the project to improve project performance and to adapt to changing needs; and that projects had an M&E system in place with proper training for parties responsible for M&E activities.

- *Budgeting and Funding for M&E activities.* The terminal evaluation should determine whether support for M&E was budgeted adequately and was funded in a timely fashion during implementation.

E. Replicability/Catalytic role:

Replication and catalysis. What examples are there of replication and catalytic outcomes? Replication approach, in the context of GEF projects, is defined as lessons and experiences coming out of the project that are replicated or scaled up in the design and implementation of other projects. Replication can have two aspects, replication proper (lessons and experiences are replicated in different geographic area) or scaling up (lessons and experiences are replicated within the same geographic area but funded by other sources). Specifically:
Evaluation should describe the catalytic or replication actions that the project carried out.

Assess whether the project has potential to be replicated, either in terms of expansion, extension or replication in other countries and/or regions and whether any steps have been taken by the project to do so and the relevance and feasibility of these steps

F. Preparation and Readiness

Were the project's objectives and components clear, practicable and feasible within its timeframe? Were the capacities of executing institution and counterparts properly considered when the project was designed? Were lessons from other relevant projects properly incorporated in the project design? Were the partnership arrangements properly identified and the roles and responsibilities negotiated prior to project implementation? Were counterpart resources (funding, staff, and facilities), enabling legislation, and adequate project management arrangements in place?

G. Country ownership/driveness:

This is the relevance of the project to national development and environmental agendas, recipient country commitment, and regional and international agreements. The evaluation will:

- Assess the level of country ownership. Specifically, the evaluator should assess whether the project was effective in providing and communicating information that catalyzed action in participating countries to improve decisions relating to POPs in each country.
- Assess the level of country commitment to address the integrated management of issues concerning POPs.

H. Stakeholder participation / public awareness:

This consists of three related and often overlapping processes: information dissemination, consultation, and "stakeholder" participation. Stakeholders are the individuals, groups, institutions, or other bodies that have an interest or stake in the outcome of the UNEP financed project. The term also applies to those potentially adversely affected by a project. The evaluation will specifically:

- Assess the mechanisms put in place by the project for identification and engagement of stakeholders in each participating country and establish, in consultation with the stakeholders, whether this mechanism was successful, and identify its strengths and weaknesses.
- Assess the degree and effectiveness of collaboration/interactions between the various project partners and institutions during the course of implementation of the project.
- Assess the degree and effectiveness of various public awareness activities that were undertaken during the course of implementation of the project.

I. Financial Planning

Evaluation of financial planning requires assessment of the quality and effectiveness of financial planning and control of financial resources throughout the project's lifetime. Evaluation includes actual project costs by activities compared to budget (variances), financial management (including disbursement issues), and co- financing. The evaluation should:

- Assess the strength and utility of financial controls, including reporting, and planning to allow the project management to make informed decisions regarding the budget and allow for a proper and timely flow of funds for the payment of satisfactory project deliverables.
- Present the major findings from the financial audit if one has been conducted.

- Identify and verify the sources of co- financing as well as leveraged and associated financing (in co-operation with the IA and EA).
- Assess whether the project has applied appropriate standards of due diligence in the management of funds and financial audits.
- The evaluation should also include a breakdown of final actual costs and co-financing for the project prepared in consultation with the relevant UNON/DGEF Fund Management Officer of the project. (table attached in Annex 2 Co-financing and leveraged resources).

J. **Implementation approach**:

This includes an analysis of the project's management framework, adaptation to changing conditions (adaptive management), partnerships in implementation arrangements, changes in project design, and overall project management. The evaluation will:

- Ascertain to what extent the project implementation mechanisms outlined in the project document have been closely followed. In particular, assess the role of the various committees established and whether the project document was clear and realistic to enable effective and efficient implementation, whether the project was executed according to the plan and how well the management was able to adapt to changes during the life of the project to enable the implementation of the project.
- Evaluate the effectiveness and efficiency and adaptability of project management and the supervision of project activities / project execution arrangements at all levels (1) policy decisions: Steering Group; (2) day to day project management in each of the country executing agencies and UNEP.
- Assess the effectiveness of supervision and administrative and financial support provided by UNEP/GEF.
- Identify administrative, operational and/or technical problems and constraints that influenced the effective implementation of the project.
- Assess whether the logical framework was used during implementation as a management tool and whether feedback from M&E activities more broadly was used for adaptive management.

K UNEP Supervision and Backstopping

- Assess the effectiveness of supervision and administrative and financial support provided by UNEP/DGEF.
- Identify administrative, operational and/or technical problems and constraints that influenced the effective implementation of the project.

The *ratings will be presented in the form of a table*. Each of the eleven categories should be rated separately with brief justifications based on the findings of the main analysis. An overall rating for the project should also be given. The following rating system is to be applied:

HS = Highly Satisfactory
S = Satisfactory
MS = Moderately Satisfactory
MU = Moderately Unsatisfactory
U = Unsatisfactory
HU = Highly Unsatisfactory

4. Evaluation report format and review procedures

The report should be brief, to the point and easy to understand. It must explain; the purpose of the evaluation, exactly what was evaluated and the methods used. The report must highlight any methodological limitations, identify key concerns and present evidence-based findings, consequent conclusions, recommendations and lessons. The report should be presented in a way that makes the information accessible and comprehensible and include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

The evaluation will rate the overall implementation success of the project and provide individual ratings of the eleven implementation aspects as described in Section 3 of this TOR. ***The ratings will be presented in the format of a table*** with brief justifications based on the findings of the main analysis.

Evidence, findings, conclusions and recommendations should be presented in a complete and balanced manner. Any dissident views in response to evaluation findings will be appended in an annex. The evaluation report shall be written in English, be of no more than 50 pages (excluding annexes), use numbered paragraphs and include:

i) An **executive summary** (no more than 3 pages) providing a brief overview of the main conclusions and recommendations of the evaluation;

ii) **Introduction and background** giving a brief overview of the evaluated project, for example, the objective and status of activities; The GEF Monitoring and Evaluation Policy, 2006, requires that a TE report will provide summary information on when the evaluation took place; places visited; who was involved; the key questions; and, the methodology.

iii) **Scope, objective and methods** presenting the evaluation's purpose, the evaluation criteria used and questions to be addressed;

iv) **Project Performance and Impact** providing *factual evidence* relevant to the questions asked by the evaluator and interpretations of such evidence. This is the main substantive section of the report. The evaluator should provide a commentary and analysis on all eleven evaluation aspects (A − K above).

v) **Conclusions and rating** of project implementation success giving the evaluator's concluding assessments and ratings of the project against given evaluation criteria and standards of performance. The conclusions should provide answers to questions about whether the project is considered good or bad, and whether the results are considered positive or negative. The ratings should be provided with a brief narrative comment in a table (see Annex 1);

vi) **Lessons (to be) learned** presenting general conclusions from the standpoint of the design and implementation of the project, based on good practices and successes or problems and mistakes. Lessons should have the potential for wider application and use. All lessons should 'stand alone' and should:

- Briefly describe the context from which they are derived
- State or imply some prescriptive action;
- Specify the contexts in which they may be applied (if possible, who when and where)

vii) **Recommendations** suggesting *actionable* proposals for improvement of the current project. In general, Terminal Evaluations are likely to have very few (perhaps two or three) actionable recommendations.

Prior to each recommendation, the issue(s) or problem(s) to be addressed by the recommendation should be clearly stated.

A high quality recommendation is an actionable proposal that is:

1. Feasible to implement within the timeframe and resources available
2. Commensurate with the available capacities of project team and partners
3. Specific in terms of who would do what and when
4. Contains results-based language (i.e. a measurable performance target)
5. Includes a trade-off analysis, when its implementation may require utilizing significant resources that would otherwise be used for other project purposes.

viii) **Annexes** may include additional material deemed relevant by the evaluator but must include:

1. The Evaluation Terms of Reference,
2. A list of interviewees, and evaluation timeline
3. A list of documents reviewed / consulted
4. Summary co-finance information and a statement of project expenditure by activity
5. The expertise of the evaluation team. (brief CV).

TE reports will also include any response / comments from the project management team and/or the country focal point regarding the evaluation findings or conclusions as an annex to the report, however, such will be appended to the report by UNEP EOU.

Examples of UNEP GEF Terminal Evaluation Reports are available at www.unep.org/eou

Review of the Draft Evaluation Report

Draft reports submitted to UNEP EOU are shared with the corresponding Programme or Project Officer and his or her supervisor for initial review and consultation. The DGEF staff and senior Executing Agency staff are allowed to comment on the draft evaluation report. They may provide feedback on any errors of fact and may

highlight the significance of such errors in any conclusions. The consultation also seeks feedback on the proposed recommendations. UNEP EOU collates all review comments and provides them to the evaluators for their consideration in preparing the final version of the report.

5. Submission of Final Terminal Evaluation Reports

The final report shall be submitted in electronic form in MS Word format and should be sent to the following persons:

Segbedzi Norgbey, Chief,
UNEP Evaluation and Oversight Unit
P.O. Box 30552-00100
Nairobi, Kenya
Tel.: (254-20) 7623387
Fax: (254-20) 7623158
Email: segbedzi.norgbey@unep.org

With a copy to:

Maryam Niamir-Fuller
Director
UNEP/Division of GEF Coordination
P.O. Box 30552
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Tel: + 254-20-7624165
Fax: + 254-20-624041/4042
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Carmen Tavera
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United Nations Environment Programme (UNEP)
Division of GEF Coordination (DGEF)
PO Box 30552
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Matthias Kern
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00100, Nairobi, Kenya
Tel:+254 20 762 4088
Fax:+254 20 762 4041 / 762 4042
E-mail: matthias.kern@unep.org

The final evaluation report will be published on the Evaluation and Oversight Unit's web-site www.unep.org/eou and may be printed in hard copy. Subsequently, the report will be sent to the GEF Office of Evaluation for their review, appraisal and inclusion on the GEF website.

6. Resources and schedule of the evaluation

This final evaluation will be undertaken by an international evaluator contracted by the Evaluation and Oversight Unit, UNEP. The contract for the evaluator will begin on **8 November 2008** and end on **10 February 2009** (6 weeks) spread over 13 weeks. The evaluator will submit a draft report on 22 December 2008 to UNEP/EOU, the UNEP/GEF Project Manager, and key representatives of the executing agencies. Any comments or responses to the draft report will be sent to UNEP/EOU for collation and the consultant will be advised of any necessary

revisions. Comments to the final draft report will be sent to the consultant by 14 January 2009 after which, the consultant will submit the final report no later than 10 February 2009.

The evaluator will after an initial telephone briefing with EOU and UNEP/GEF travel to Geneva and meet with project staff at the beginning of the evaluation. The evaluator will visit two other project sites Kenya and Ecuador.

In accordance with UNEP policy, all UNEP projects are evaluated by independent evaluators contracted as consultants by the EOU. The evaluators should have the following qualifications:

The evaluator should not have been associated with the design and implementation of the project. The evaluator will work under the overall supervision of the Chief, Evaluation and Oversight Unit, UNEP. The evaluator should be an international environmental expert. The consultant should have the following minimum qualifications: (i) experience in POPs-related issues (ii) experience with management, implementation and evaluation of projects (iii) experience in chemistry and analytical methods and procedures (quality assurance, quality control), preferentially in POPs analysis. Knowledge of UNEP programmes and GEF activities and activities is desirable. Fluency in oral and written English is a must.

7. Schedule of Payment

Lump-Sum Option
The evaluator will receive an initial payment of 30% of the total amount due upon signature of the contract. A further 30% will be paid upon submission of the draft report. A final payment of 40% will be made upon satisfactory completion of work. The fee is payable under the individual Special Service Agreement (SSA) of the evaluator and is **inclusive** of all expenses such as travel, accommodation and incidental expenses.

In case, the evaluator cannot provide the products in accordance with the TORs, the timeframe agreed, or his products are substandard, the payment to the evaluator could be withheld, until such a time the products are modified to meet UNEP's standard. In case the evaluator fails to submit a satisfactory final product to UNEP, the product prepared by the evaluator may not constitute the evaluation report.

Annex 3.1. OVERALL RATINGS TABLE

Criterion	Evaluator's Summary Comments	Evaluator's Rating
A. Attainment of project objectives and results (overall rating) Sub criteria (below)		
A. 1. Effectiveness		
A. 2. Relevance		
A. 3. Efficiency		
B. Sustainability of Project outcomes (overall rating) Sub criteria (below)		
B. 1. Financial		
B. 2. Socio Political		
B. 3. Institutional framework and governance		
B. 4. Ecological		
C. Achievement of outputs and activities		
D. Monitoring and Evaluation (overall rating) Sub criteria (below)		
D. 1. M&E Design		
D. 2. M&E Plan Implementation (use for adaptive management)		
D. 3. Budgeting and Funding for M&E activities		
E. Catalytic Role		
F. Preparation and readiness		
G. Country ownership / drivenness		
H. Stakeholders involvement		
I. Financial planning		
J. Implementation approach		
K. UNEP Supervision and backstopping		

RATING OF PROJECT OBJECTIVES AND RESULTS

Highly Satisfactory (HS): The project had no shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Satisfactory (S): The project had minor shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Moderately Satisfactory (MS): The project had moderate shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Moderately Unsatisfactory (MU): The project had significant shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Unsatisfactory (U) The project had major shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Highly Unsatisfactory (HU): The project had severe shortcomings in the achievement of its objectives, in terms of relevance, effectiveness or efficiency.

Please note: Relevance and effectiveness will be considered as critical criteria. The overall rating of the project for achievement of objectives and results may not be higher than the lowest rating on either of these two criteria. Thus, to have an overall satisfactory rating for outcomes a project must have at least satisfactory ratings on both relevance and effectiveness.

RATINGS ON SUSTAINABILITY

A. Sustainability will be understood as the probability of continued long-term outcomes and impacts after the GEF project funding ends. The Terminal evaluation will identify and assess the key conditions or factors that are likely to contribute or undermine the persistence of benefits after the project ends. Some of these factors might be outcomes of the project, i.e. stronger institutional capacities, legal frameworks, socio-economic incentives /or public awareness. Other factors will include contextual circumstances or developments that are not outcomes of the project but that are relevant to the sustainability of outcomes.

Rating system for sustainability sub-criteria

On each of the dimensions of sustainability of the project outcomes will be rated as follows.

Likely (L): There are no risks affecting this dimension of sustainability.

Moderately Likely (ML). There are moderate risks that affect this dimension of sustainability.

Moderately Unlikely (MU): There are significant risks that affect this dimension of sustainability

Unlikely (U): There are severe risks that affect this dimension of sustainability.

According to the EOU, all the risk dimensions of sustainability are deemed critical. Therefore, overall rating for sustainability will not be higher than the rating of the dimension with lowest ratings. For example, if a project has an Unlikely rating in any of the dimensions then its overall rating cannot be higher than Unlikely, regardless of whether higher ratings in other dimensions of sustainability produce a higher average.

RATINGS OF PROJECT M&E

Monitoring is a continuing function that uses systematic collection of data on specified indicators to provide management and the main stakeholders of an ongoing project with indications of the extent of progress and achievement of objectives and progress in the use of allocated funds. Evaluation is the systematic and objective assessment of an on-going or completed project, its design, implementation and results. Project evaluation may involve the definition of appropriate standards, the examination of performance against those standards, and an assessment of actual and expected results.

The Project monitoring and evaluation system will be rated on ‘M&E Design’, ‘M&E Plan Implementation’ and ‘Budgeting and Funding for M&E activities’ as follows:

- Highly Satisfactory (HS): There were no shortcomings in the project M&E system.
- Satisfactory(S): There were minor shortcomings in the project M&E system.
- Moderately Satisfactory (MS): There were moderate shortcomings in the project M&E system. Moderately Unsatisfactory (MU): There were significant shortcomings in the project M&E system. Unsatisfactory (U): There were major shortcomings in the project M&E system.
- Highly Unsatisfactory (HU): The Project had no M&E system.

“M&E plan implementation” will be considered a critical parameter for the overall assessment of the M&E system. The overall rating for the M&E systems will not be higher than the rating on “M&E plan implementation.”

All other ratings will be on the six point scale.

Performance Description		Alternative description on the same scale
HS	= Highly Satisfactory	Excellent
S	= Satisfactory	Well above average
MS	= Moderately Satisfactory	Average
MU	= Moderately Unsatisfactory	Below Average
U	= Unsatisfactory	Poor
HU	= Highly Unsatisfactory	Very poor (Appalling)

Annex 3.2. Co-financing and Leveraged Resources

Co-financing (basic data to be supplied to the consultant for verification)

Co financing (Type/Source)	IA own Financing (US$)		Government Canada (US$)		Other* GEF (US$)		Total (US$)		Total Disbursement (*) (US$)	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
– Grants										
– Loans/Concessional (compared to market rate)										
– Credits										
– Equity investments										
– In-kind support (UNEP)										
– Other (**) - Japan - IGOs - In-kind participating countries										
Totals										

*as at 13/10/2008. These figures do not include the evaluation costs and the obligations to be closed for 2008.

** Other is referred to contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector and beneficiaries.

Leveraged Resources

Leveraged resources are additional resources—beyond those committed to the project itself at the time of approval—that are mobilized later as a direct result of the project. Leveraged resources can be financial or in-kind and they may be from other donors, NGO's, foundations, governments, communities or the private sector. Please briefly describe the resources the project has leveraged since inception and indicate how these resources are contributing to the project's ultimate objective.

Project expenditure by activity to be supplied by the UNEP Fund management Officer.

Annex 3.3: Review of the Draft Report

Draft reports submitted to UNEP EOU are shared with the corresponding Programme or Project Officer and his or her supervisor for initial review and discussion. The UNEP Division staff and senior Executing Agency staff provide comments on the draft evaluation report. They may provide feedback on any errors of fact and may highlight the significance of such errors in any conclusions. The review also seeks agreement on the findings and recommendations. UNEP EOU collates the review comments and provides them to the evaluators for their consideration in preparing the final version of the report. General comments on the draft report with respect to compliance with these TOR are shared with the reviewer.

Quality Assessment of the Evaluation Report
All UNEP Terminal Evaluation Reports are subject to quality assessments by UNEP EOU. The quality assessment is used as a tool for providing structured feedback to the evaluator.

The quality of the draft evaluation report is assessed and rated against the following criteria:

Report Quality Criteria	UNEP EOU Assessment notes	Rating
A. Did the report present an assessment of relevant outcomes and achievement of project objectives in the context of the focal area program indicators if applicable?		
B. Was the report consistent and the evidence complete and convincing and were the ratings substantiated when used?		
C. Did the report present a sound assessment of sustainability of outcomes?		
D. Were the lessons and recommendations supported by the evidence presented?		
E. Did the report include the actual project costs (total and per activity) and actual co-financing used?		
F. Did the report include an assessment of the quality of the project M&E system and its use for project management?		
UNEP EOU additional Report Quality Criteria	UNEP EOU Assessment	Rating
G. Quality of the lessons: Were lessons readily applicable in other contexts? Did they suggest prescriptive action?		
H. Quality of the recommendations: Did recommendations specify the actions necessary to correct existing conditions or improve operations ('who?' 'what?' 'where?' 'when?)'. Can they be implemented?		
I. Was the report well written? (clear English language and grammar)		
J. Did the report structure follow EOU guidelines, were all requested Annexes included?		
K. Were all evaluation aspects specified in the TORs adequately addressed?		
L. Was the report delivered in a timely manner		

Rating system for quality of terminal evaluation reports

a) *A number rating 1-6 is used for each criterion: Highly Satisfactory = 6, Satisfactory = 5, Moderately Satisfactory = 4, Moderately Unsatisfactory = 3, Unsatisfactory = 2, Highly Unsatisfactory = 1, and unable to assess = 0.*

Quality of the MTE report = 0.3*(A + B) + 0.1*(C+D+E+F)
EOU assessment of MTE report = 0.3*(G + H) + 0.1*(I+J+K+L)
Combined quality Rating = (2* 'MTE report' rating + EOU rating)/3
The Totals are rounded and converted to the scale of HS to HU

Annex 3.4: Minimum requirements for M&E

Minimum Requirement 1: Project Design of M&E[2]

All projects must include a concrete and fully budgeted monitoring and evaluation plan by the time of Work Program entry (full-sized projects) or CEO approval (medium-sized projects). This plan must contain at a minimum:

- SMART (see below) indicators for project implementation, or, if no indicators are identified, an alternative plan for monitoring that will deliver reliable and valid information to management
- SMART indicators for results (outcomes and, if applicable, impacts), and, where appropriate, corporate-level indicators
- A project baseline, with:
  - a description of the problem to address
  - indicator data
  - or, if major baseline indicators are not identified, an alternative plan for addressing this within one year of implementation
- An M&E Plan with identification of reviews and evaluations which will be undertaken, such as mid-term reviews or evaluations of activities
- An organizational setup and budgets for monitoring and evaluation.

Minimum Requirement 2: Application of Project M&E

- Project monitoring and supervision will include implementation of the M&E plan, comprising:
- Use of SMART indicators for implementation (or provision of a reasonable explanation if not used)
- Use of SMART indicators for results (or provision of a reasonable explanation if not used)
- Fully established baseline for the project and data compiled to review progress
- Evaluations are undertaken as planned
- Operational organizational setup for M&E and budgets spent as planned.

SMART INDICATORS UNEP projects and programs should monitor using relevant performance indicators. The monitoring system should be "SMART":

1. Specific: The system captures the essence of the desired result by clearly and directly relating to achieving an objective, and only that objective.
2. Measurable: The monitoring system and its indicators are unambiguously specified so that all parties agree on what the system covers and there are practical ways to measure the indicators and results.
3. Achievable and Attributable: The system identifies what changes are anticipated as a result of the intervention and whether the result(s) are realistic. Attribution requires that changes in the targeted developmental issue can be linked to the intervention.
4. Relevant and Realistic: The system establishes levels of performance that are likely to be achieved in a practical manner, and that reflect the expectations of stakeholders.
5. Time-bound, Timely, Trackable, and Targeted: The system allows progress to be tracked in a cost-effective manner at desired frequency for a set period, with clear identification of the particular stakeholder group to be impacted by the project or program.

[2] http://gefweb.org/MonitoringandEvaluation/MEPoliciesProcedures/MEPTools/meptstandards.html

Annex 3.5 List of intended additional recipients for the Terminal Evaluation (to be completed by the IA Task Manager)

Name	Affiliation	Email
Aaron Zazuetta	GEF Evaluation Office	azazueta@thegef.org
Government Officials		
Ms. Marita Steinke	Federal Ministry for Economic Cooperation, Germany (cofinance)	marita.steinke@bmz.bund.de andrea.laux@bmz.bund.de; vomkolke@bmz.bund.de
Ms. Cheryl Heathwood	Environment Canada, Air Pollution Prevention Directorate (cofinance)	cheryl.heathwood@ec.gc.ca
Mr. Eisaku Toda	Ministry of the Environment Japan (cofinance)	eisaku_toda@env.go.jp
Ms Xiaoling Yang	MEP/SEPA, China	Yang.xiaoling@sepafeco.org.cn
Subsecretario de Calidad Ambiental – Ing. Roberto Urquiza and Ms. Maricruz Hernandez	Ministerio del Ambiente del Ecuador	calidadambiental@ambiente.gov.ec, rurquizo@ambiente.gov.ec;
Mrs. Liudmila Marduhaeva and Mr. Ion Barbarasa	Ministry of Ecology and Natural Resources, Republic of Moldova	liudmila@moldovapops.md; ibarbarasa@moldovapops.md
Ms Silvia Aguinaga	DINAMA, Uruguay	silvia.aguinaga@dinama.gub.uy; suspel@adinet.com.uy
Mr. Francis Kihumba	NEMA, Kenya	kihumbafn@yahoo.com
Dr. Tran The Loan, and Mr. Yen Nguyen Thanh	VEPA, Vietnam	tloan@nea.gov.vn, yenglobe@nea.gov.vn
Ms. Razia Zahina Zariff Muhammed	Ministry of Local Government and Environment, Fiji	popsfiji@connect.com.fj
GEF Focal Point(s)		
China		
Ecuador		
Fiji		
Kenya		
Moldova		
Uruguay		
Vietnam		
Executing Agency		
Mr. Per M. Bakken	Head, UNEP Chemicals	pbakken@chemicals.unep.ch
Ms. Sylvie Lemmet	Director, DTIE	Sylvie.lemmet@unep.org
Mr. Heidelore Fiedler	UNEP Chemicals Branch, Geneva	hfiedler@chemicals.unep.ch
Implementing Agency		
Alexander Juras	UNEP DGEF Deputy	Alexander.Juras@unep.org

	Director	
Jan Betlem	UNEP DGEF Task Manager	Jan.Betlem@unep.org
Matthias Kern	UNEP DGEF SPO	Matthias.Kern@unep.org

Annex 4. List of interviewees, and evaluation timeline

October 2008

Arrangement of visits to Geneva, Quito and Nairobi by telephone calls to the Institutions.

12-13 November 2008

Visit to UNEP Chemicals – Geneva

Collection of documents and discussion of technical and financial aspects with
Heidlore Fiedler – Project Manager
Ardeshir Zamani – Fund Management Officer

14 November 2008

Emailing of Agenda and Guidelines for Discussion to Quito and Nairobi Institutions

18-20 November 2008

Emailing of questionnaires to Pilot Laboratories, Focal Points and selected laboratories from the Data Bank

23-26 November 2008

Visit to Quito (Ecuador)
Olga Pazmiño Morales - Laboratorios de Plaguicidas del Servicio Ecuatoriano de Sanidad Agropecuaria del Ministerio de Agricultura y Ganadería (SESA/MAG).
Ramiro Castro - Laboratorio de Ecotoxicología, Comisión Ecuatoriana de Energía Atómica (CEEA).
Maricruz Hernandez - Technical Focal Point, Ministerio del Ambiente.
- Ministerio de Agricultura y Ganadería. SESA

9-11 December 2008

Visit to Nairobi (Kenya)
Shem Wandiga, Vincent Madadi, Charles Miriaku – Department of Chemistry, University of Nairobi.
Njuguna Francis Kihumba – NIP Coordinator, Ministry of Environment and Natural Resources
Mathias Kern – Senior Programme Officer (POPs) UNEP Division of GEF Coordination
Segbedzi Norgbey, Jessica Kitakule-Mukungu, Michel Spilsbury - UNEP Evaluation and Oversight Unit

Annex 5. Discussion guidelines for personal and electronic interviews

Participating Laboratories

From the technical point of view:

a) The activities were satisfactorily planned and performed? Adequate? Sufficient?.
b) Which was their incidence in your technical capacities?. Main goals achieved after the completion of the project.
c) Is the present capacity sufficient for proficiently addressing the analysis of POPs?

From the institutional point of view:

a) Had the project any incidence on the external visibility/projection of your laboratory?
b) And with respect to the Administration?
c) With respect to its role at national or regional level, to the provision of external services, etc?

From the future sustainability:

a) How the project contributed to the sustainability of your activities? With respect to the further rising of financial, technical and human resources.

Which are the conclusions/lessons learnt, positive and negative, at the end of the Project?

Which recommendations should you address to UNEP for a better implementation of the Global Monitoring Program of POPs in your country or region?

Finally, which are the strengths (S) and weaknesses (W), the opportunities (O) and threats (T) that have been modified as a result of your participation in the Project, and those which will concern your future activities? (see Annex 6).

National Institutions

From the technical point of view:

a) Which is the level of implementation of the Stockholm Convention in your country?. Do you have an active NIP?. A national POPs monitoring system?
b) Which was the incidence of the Project on it?. Main goals achieved.
c) Is the present capacity sufficient for addressing the needs of your country with respect to the analysis of POPs?

From the institutional point of view:

a) Did the project have any incidence on the national visibility/projection of the participating laboratory?
b) Is it used by the Administration?

From the future sustainability:

a) How the project contributed to the sustainability of your POPs related activities?. With respect to the continued rising of financial, technical and human resources.

Which recommendations should you address to UNEP for a better implementation of the Global Monitoring Program of POPs in your country or in the region?.

Annex 6. SWOT analysis matrix

SWOT stands for strengths, weaknesses, opportunities and threats. Thereby, strengths and weaknesses characterize the present situation, from which future opportunities and threats derive. The general objective of the SWOT analysis – on the basis of (present) strengths and weaknesses analysis and (future) opportunities and threats analysis – is to identify potential advantages and an internal need for action.

Consequently, SWOT analysis offers a wide range of applications, e.g. to develop and analyze strategies and procedures within projects. What SWOT analysis cannot do is to provide answers how future funding may be organized but it provides a systematic way to collect useful information and food for thought.

SWOT analysis is also a powerful tool for awareness building among laboratory participants, because it reflects back problems gathered during planned activities. The SWOT analysis exercise is followed by formulating recommendations and practical guidelines to improve performance of future projects.

SWOT matrix:

	Strengths	**Weaknesses**
Present		
Future		
	Opportunities	**Threats**

The SWOT analysis should be conducted pursuing the following process steps:

1. Collect all information to each aspect of the matrix.
3. Cluster the identified factors and create categories according to the significance of factors.
4. Discuss the identified factors and aspects.
5. Formulate some strategic recommendations on the basis of the SWOT analysis.

Annex 7. A list of documents reviewed / consulted

Project proposals:

Project document (GFL / 2328-2760-): "Assessment of Existing Capacity and Capacity Building Needs to Analyse POPs in Developing Countries".

Revised Workplan for the Second Part of the Project (27.7.06).

Questionnaire for POPs Laboratories.

Project proposal: "Supporting the Implementation of the Global Monitoring Plan of POPs in West Africa" (February 29, 2008)

Project proposal: "Supporting the Implementation of the Global Monitoring Plan of POPs in Eastern and Southern Africa" (February 22, 2008)

Project proposal: "Supporting the Implementation of the Global Monitoring Plan of POPs in Latin America and Caribbean" (February, 2008)

Project proposal: "Supporting the Implementation of the Global Monitoring Plan of POPs in the Pacific Islands Region" (February, 2008)

Project proposal: "Capacity building for POPs analysis to support the Global Monitoring Plan of POPs for effectiveness evaluation of the Stockholm Convention" (Caribbean Islands) (March, 2008)

Project proposal: "Capacity building for Cuban POPs laboratories under multilateral environmental agreements" (March, 2008)

Administrative Reports:

Agreements with Japan (6.5.05) and Germany (29.11.04) for co-financing the Project.

Procurement documents for purchasing spares and consumables

All financial Reports along the Project.

MoU between UNEP and Montevideo, Pretoria and Beijing for the organization of WS in the 1st Phase of the Project.

MoU between UNEP and the Pilot Laboratories in Montevideo (Uruguay), Quito (Ecuador), Suva (Fiji), Chrisinau (Moldova), Hanoi (Viet Nam), Beijing (China), Nairobi (Kenya), in the 2nd Phase of the Project.

MoU between UNEP and the Örebro University (Sweden) and Vrije University of Amsterdam for for activities at pilot laboratories.

Consultancy contracts with individuals for the Intercalibration exercises, Training courses, Inspection visits, preparation of manuals, translation of document, etc.

Minutes of the 1st Core Group Meeting. Geneva, 15-16 February 2005

Minutes of the 2nd Core Group Meeting. Geneva, 13-14 February 2006

Minutes of the 3rd Core Group Meeting. Amsterdam, 8 March 2007

Progress Reports:

Half-Yearly Progress Reports, from January 1, 2005 to July 31, 2008.

UNEP GEF PIR FY 06 (1 July 2005 to 30 June 2006)

UNEP GEF PIR FY 07 (1 July 2006 to 30 June 2007)

UNEP GEF PIR FY 08 (1 July 2007 to 30 June 2008)

Final Report:

Assessment of Existing Capacity and Capacity Building Needs to Analyse POPs in Developing Countries, June 2008, 100 pages.

With 6 Annexes on:

- Questionnaire for POPs Laboratory Databank
- Accreditation Organisations and Arrangements
- Characteristics of the Pilot Laboratories – Questionnaires
- Check-lists from Inspection Tours
- Reports from Pilot Laboratories
- Reports from Back-up Laboratories

Technical Reports:

"Assessment of Existing Capacity and Capacity Building Needs to Analyse Persistent Organic Pollutants (POPs) in Developing Countries"
Regional Workshop for Latin America and the Caribbean
Montevideo, Uruguay, September 5-9, 2005

"Assessment of Existing Capacity and Capacity Building Needs to Analyse Persistent Organic Pollutants (POPs) in Developing Countries"
Regional Workshop for African Countries
Pretoria, South Africa, 4-6 October 2005

"Assessment of Existing Capacity and Capacity Building Needs to Analyse Persistent Organic Pollutants (POPs) in Developing Countries"
Regional Workshop for Asian and Central and Eastern European Countries
Beijing, People's Republic of China, December 13-16, 2005

Joint Workshop on Environmental Monitoring of Persistent Organic Pollutants in East Asian Countries and UNEP/GEF Project on "Assessment of the Existing Capacity and Capacity Building Needs to Analyse POPs in Developing Countries"
Kyoto Workshop, 20-22 September 2006

Final Workshop for UNEP/GEF Project "Assessment of Existing Capacities and Capacity Building Needs to Analyse POPs in Developing Countries"
Amsterdam, the Netherlands, 5-7 March 2007

International Intercalibration Studies: A Global QA/QC Tool for the Analysis of POPs under the Stockholm Convention, December 2005.

Analysis of Persistent Organic Pollutants in Developing Countries: Lessons Learned from Laboratory Projects, February 2006.

Guidance on the Global Monitoring Plan for Persistent Organic Pollutants, UNEP, February 2007.

Guidance for Analysis of Persistent Organic Pollutants (POPs), March 2007.

Criteria for Sustainability of POPs Laboratories and Their Role at Regional Level: Summary from Three Regional Workshops, April 2007.

Handbook for POPs Laboratory Databank, October 2007.

Regionally Based Assessment of Persistent Toxic Substances (RBA PTS). Global Report. UNEP. 2003.

Communication and outreach

Power Point presentations to all scientific and technical meetings.

Papers published:

Organohalogen Compounds, Vol 68 (2006) 245-248
Organohalogen Compounds, Vol 69 (2007) 970-973, 974-977, 1285-1288
Organohalogen Compounds, Vol 70 (2008) 1395-1398, 2360-2363
Analytica Chimica Acta, Vol 617 (2008) 208–215

Posters presented at scientific meetings

Notes by the Secretariat:

May 2006
May 2007

Annex 8. Brief CV of the evaluator

JOAN ALBAIGES

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J. Girona Salgado, 18-26. 08034 Barcelona. Spain
Tel: +34-93-4006152. Fax: +34-932045904.
Email: albqam@cid.csic.es

1984- . Research Professor. Spanish Research Council (CSIC).
1976-92 Professor of Environmental Organic Geochemistry, Faculty of Chemistry, University of Barcelona.
1995 Master on Leadership and Higher Direction. IESE. Barcelona, Spain

Postgraduate courses and Seminars on Environmental Chemistry in more than 20 countries.

More than 100 **invited lectures** in International Symposia on Environmental topics.

Ph.D. Thesis and Publications

Director of 20 Ph.D. Thesis

More than 200 papers in international refereed journals (*Nature, Geochim. Cosmochim. Acta, Environ. Sci. Technol., Arch. Environ. Contam. Toxicol., Environ. Contam. Toxicol., Org. Geochem., Aq. Toxicol., Water Res., Mar. Pollut. Bull., Chemosphere, etc*.) and 14 books on Environmental Chemistry [Pergamon (2), Elsevier (1), Gordon & Breach (10), Hemisphere (1)].

1979- . Member of the Editorial Board of *Chemosphere*, *Water Research*, *Journal of Environmental Science and Health*, *Environmental Geochemistry and Health*, ….

1991- . Editor-in-Chief of the *Intern. J. Environ. Anal. Chem.* (Taylor & Francis)

Main research activity

In 1979 established the Department of Environmental Chemistry at the CID (CSIC), the first one of this type in Spain, where pioneering and internationally well known activities started to develop. The following research groups were subsequently created: Organic geochemistry and Environmnetal analysis (1979-), Biogeochemistry of continental and marine waters (1985-) and Ecotoxicology of organic micropollutants (1988-).

Other relevant activities

1981-1992. Scientific advisor of the UN Regional Seas Program (UNEP)

1983- . Director of many International Workshops on Marine Pollution (Peru, Cuba (2), Mexico, Argentina, Brasil, Barcelona (2) under the sponsorship of the UNEP Regional Seas Program. Director of the Summer School on Marine Pollution (Arab-School of Science and Technology, Damascus, Syria, 1987).

2000-2002 Regional Coordinator (Mediterranean) of the GEF/UNEP Project "Global Assessment of Persistent Toxic Substances".

2003- . Member of the Spanish Advisory Committee on POPs.

2004-2009 Coordinator of the European Network on Accidental Marine Pollution.

1983- . Member of the Group of Experts GEMSI (IOC-UNESCO), of the Steering Committee of the SCOPE Program on "Chemical changes in coastal zones", the EUROTRAC (EUREKA) International Program, the NATO Special Programa Panel on "Global Environmental Change", the Ecotoxicology Program of the European Science Foundation, the Coastal Oceanography Programm of CNRS,...

1985- . Member of the Executive Committee and Vice-President of the International Association of Environmental Analytical Chemistry (IAEAC).

Managerial positions

1983-1985 Director, Institute of Bio-Organic Chemistry, CSIC, Barcelona.
1986-1992 Director, Center of Research and Development, CSIC, Barcelona.
1993-1995 General Director of Research. Catalan Government.
1995-1999 Minister for Universities and Research. Catalan Government.

Awards and distinctions

1973. I Osborne Award for the Conservation of Nature. Spain.
1986. Hewlett-Packard Award on Mass Spectrometry. Spain.
1989. "Narcis Monturiol" Medal to the Scientific Merit. Catalan Government.
1990. Jubilee Medal of the Chromatographic Society. United Kingdom.
2007. National Research Award on Coastal and Marine Pollution Studies. Spain.

1991. Member of the Academia Scientarum et Artium Europea
1992. Member of the Academia Europaea.
1999. Member of the Royal Academy of Sciences. Spain.