UNITED NATIONS ENVIRONMENT PROGRAMME

Programme des Nations Unies pour l'environnement | Programa de las Naciones Unidas para el Medio Ambiente

Программа Организации Объединенных Наций по окружающей среде | برنامج الأمم المتحدة للبيئة

联合国环境规划署

UNEP

PROJECT DOCUMENT

SECTION 1: PROJECT IDENTIFICATION

1.1	**Project title:**	**Establishing the Tools and Methods to Include the Nine New POPs into Global Monitoring Plan**
1.2	**Project number:**	**GFL/**
		PMS:
1.3	**Project type:**	**Medium Size Project (MSP)**
1.4	**Sub-programme title:**	
	GEF strategic long-term objective:	**CHEMs-OBJ1 Phase out POPs and reduce POPs releases**
	Strategic Objective for GEF V:	**CHEMs-OBJ1 Phase out POPs and reduce POPs releases**
1.5	**UNEP priority:**	**Harmful Substances and Hazardous Waste**
1.6	**Geographical scope:**	**Global**
1.7	**Mode of execution:**	**Internal**
1.8	**Project executing organization:**	**UNEP Chemicals Branch**
1.9	**Duration of project:**	**24 months (2 years)** **Commencing: July 2011** **Completion: June 2013**

Cost of project	**US$**	**%**
Cost to the GEF Trust Fund	**700,000**	**32**
Co-financing	**1,516,340**	**68**
Cash		
Secretariat of Stockholm Convention	755,000	34
Sub-total	755,000	34
In-kind		
Secretariat of Stockholm Convention	298,340	14
Expert from UN regions working for SSC	300,000	14
National experts' travel	36,000	1
Environment Canada	50,000	2
UNEP	77,000	3
Sub-total	761,340	34
Total	**2,216,340**	**100**

1.10 Project summary

According to Article 16 of the POPs Convention, its effectiveness shall be evaluated starting four years after the date of entry into force of the Convention and periodically thereafter. The Conference of the Parties (COP) has completed its first effectiveness evaluation at its fourth meeting in 2009 (COP-4), and has agreed upon the essential modalities for the environmental monitoring component of subsequent evaluations. Further, COP-4 has listed nine additional new POPs into Annexes A, B, or C of the Convention (decisions SC-4/10-18). By its decision SC-4/31 on global monitoring plan for effectiveness evaluation the Conference among others requested updating the guidance document for the global monitoring plan[1] with additional chapters on long-range transport, specimen banking and the impact of listing new chemicals in the Convention. This project will create the necessary basis to address the analysis of the nine new POPs according to international standards, identify laboratories in a position to undertake such analysis, train developing country laboratories in the analysis of new POPs where feasible, and lay down the scientific and practical modalities at regional level to provide global monitoring data for environmental concentrations and human exposure. The results will be updated and amended guidance documents and input into regional reports and regional POPs monitoring systems and provide environmental and human data in the regional reports to the Conference of the parties for the first time.

1 UNEP/POPS/COP.3/INF/14/Rev.1

TABLE OF CONTENTS

ACRONYMS AND ABBREVIATIONS

BFR	Brominated flame retardants
COP	Conference of Parties
GCG	Global coordination group (under Stockholm Convention to advise on modalities of the Global Monitoring Plan)
CVUA	Chemisches Untersuchungsamt Freiburg
DGEF	Division of GEF Coordination (of UNEP)
DTIE	Division of Technology, Industry and Economics (of UNEP)
EA	Executing Agency
EC	Environment Canada or European Commission
GAPS	Global Atmospheric Passive Samplers
GEF	Global Environment Facility
GMP	Global Monitoring Plan
HCH	Hexachlorocyclohexane
IA	Implementing Agency
IVM	Institute for Environmental Studies (of Free University Amsterdam, VU, The Netherlands)
MTM	Man, Technology, and Environment Centre (of Örebro University, Sweden)
NIP	National Implementation Plan
PBB	Polybrominated biphenyls
PBDE	Polybrominated diphenyl ethers
PFOS	Perfluorooctanesulfonic acid(s)
PIR	Project Implementation Review
POPs	Persistent Organic Pollutants
PTS	Persistent Toxic Substances
QA/QC	Quality Assurance/Quality Control
Recetox	Research Centre for Environmental Chemistry and Ecotoxicology, Brno, Czech Republic
ROG	Regional Organisation Group(s) (under Stockholm Convention to represent the UN regions in support of implementation of GMP; one member of each group is also member of the GCG)
SOP	Standard Operating Procedure
UNEP	United Nations Environment Programme
UNIDO	United Nations Industrial Development Organisation
WHO	World Health Organisation

SECTION 2: BACKGROUND AND SITUATION ANALYSIS (BASELINE COURSE OF ACTION)

2.1 Background and context

Article 16 of the Stockholm Convention indicates that the effectiveness of the Convention shall be evaluated four years after the date of entry into force of the Convention and periodically thereafter. The Effectiveness Evaluation consists of monitoring the presence of POPs in the environment as well as their regional and global transport. The Conference of Parties (COP) has completed its first effectiveness evaluation at its fourth meeting in 2009 (COP-4), and has agreed upon the essential modalities for the environmental monitoring component of the subsequent evaluations.

At the fourth meeting of the Conference of the Parties to the Stockholm Convention in May 2009 nine new POPs chemicals were added into Annexes A, B and C of the Convention (Decisions SC-4/10-18). The nine new chemicals have been assessed by a scientific subsidiary body to the Stockholm Convention – the POPs Review Committee – and were found to fulfil the criteria for inclusion into either of the annexes A, B, or C of the Convention. By listing the nine new POPs into the annexes of the Convention, it is recognised at international level – by the parties to the Convention that these nine chemicals fulfil the POPs criteria, namely, be

- Persistent and therefore, do not readily break down under environmental conditions;
- Bioaccumulative and therefore, build up concentrations at higher trophic levels such as in humans;
- Undergo long-range environmental transport and therefore, occurring at locations far away from their place of production, use or emission, and
- Exhibiting adverse effects and therefore, having the potential for damage to human health or to the environment.

By its decision SC-4/31 on global monitoring plan for effectiveness evaluation the Conference requested, among others, updating the guidance document for the global monitoring plan[2] with additional chapters on long-range transport, specimen banking and the impact of listing new chemicals in the Convention. The adoption of nine new chemicals also implies the updating of national implementation plans under Article 7 of the Convention. Initial Guidance on the Global Monitoring Plan for Persistent Organic Pollutants have been developed under the Convention to provide Parties with the necessary tools to enable them to monitor POPs in a harmonized and sound manner for the original 12 POPs. The addition of new chemicals to the list of POPs implies the updating and development of relevant guidance for POPs monitoring under the Effectiveness Evaluation activities.

Based on scientific evidence and the request to address environmental global exposures and human exposures, the Conference of the Parties at its second meeting has decided to use air and human milk/human blood as core matrices for the first evaluation. Therefore, the Global Monitoring Plan (GMP) initially focused on the twelve initial POPs and the core media mother's milk/human blood to examine human exposure, and ambient air to examine long-range transport. The Global Monitoring Plan also requests that background concentrations being analysed rather than hot spots or special exposures. COP-4 confirmed these objectives to be maintained and updated for the new POPs.

Whereas the new chemicals adopted during COP-4 fulfil the general POPs criteria, it should be noted that chemically not all of the them are chlorinated, therefore, these brominated and fluorinated chemicals pose additional challenges. Although PBB and the PBDE are lipophilic as the initial POPs, they have different

2 UNEP/POPS/COP.3/INF/14/Rev.1

physical-chemical properties that need new analytical approaches. It is assumed that mothers' milk will be an adequate matrix to determine human exposure. The group of the perfluorinated compounds, *e.g.*, perfluorooctane sulfonic acid (PFOS) and precursors do not follow the classic pattern of other POPs by accumulating into fatty tissues, but instead bind to proteins in the blood and liver. PFOS also is water-soluble and not typically transported through air. In these cases, air and mother's milk sampling will not be the optimal media; it would require to amend the core matrices and to consider human blood and water. Brominated compounds require a complex analytical method that will be developed and included in the revised guidelines.

In order to include new POPs, this project will update existing guidance for POPs monitoring in the environment and human matrices at background levels. The usefulness of the matrices is as follows: air or water receive the emissions of the POPs from the source and transport them around the globe; mothers' milk or blood characterizes human exposures at a significant stage in development. In order to compare data and apply a harmonized approach, milk or blood is taken from mothers that have delivered their first child. Mothers' milk has the advantage that samples can be taken by a non-invasive sampling method whereas human blood needs special equipment and a nurse or doctor for taking the sample. Experiences from mainly WHO but also national health institutions have shown that mothers' milk and maternal blood are useful markers of exposure of humans to POPs and that time trends as well as regional data can be established. Further, they provide relevant information on POPs transfer from the mother to infants and potential health effects.

A sister projects, developed by the United Nations Industrial Development Organisation (UNIDO) will address issues of screening methods to identify new POPs and provide the tools to sample and analyse new POPs in products.

2.2 Global significance

The global environmental benefit has to be seen in the context of the efforts of the COP to establish an effective global system for monitoring of the effectiveness of the implementation of the Stockholm Convention. The project does not explicitly take UNDAF initiatives as a baseline or criteria to execute activities, the project contributes to the national efforts by strengthening the regions through training and capacity building programmes on analytical methods for testing new POPs in environment and biota, strengthening the monitoring capacity at national and regional level and with this enabling the participating countries to contribute national data to the GMP in a regionally and internationally agreed and harmonized approach, following harmonized guidelines and tools provided that meet the minimum requirements established for comparable data in the GMP guidance document.

By its decision SC-4/31 the Conference mandated the global coordination group (GCG) "updating the guidance on the global monitoring plan for POPs with the assistance of invited experts as necessary" and requested the Secretariat of the Stockholm Convention "to support the global coordination group in updating the guidance document for the global monitoring plan with additional chapters on long-range transport, specimen banking and the impact of listing new chemicals in the Convention". The Conference requested further the financial mechanism of the Stockholm Convention and invites other donors "to provide sufficient financial support to further step-by-step capacity enhancement".

2.3 Threats, root causes and barrier analysis

The COP noted, with high priority, needs for guidance and technical/financial support for developing countries and countries with economies in transition to fully implement the new obligations. Review and updating the national implementation plans is the consolidated process for the Parties to initiate the actions towards full implementation. Presently, the situation is as follows:

- Guidance to analyse the initial POPs in relevant matrices has been developed and schemes are under implementation, among others through UNEP-GEF projects to qualify

laboratories for such analysis or build capacity that they can perform such analysis in the future;
- However, such guidance, training and qualification schemes are not in place for the new POPs;
- Regional data are available for the 12 initial POPs but are not available for the new POPs.

The existing guidelines under the Convention do not provide sufficient and specific guidance to Parties necessary to fulfil their obligations about the nine new POPs. In anticipation of needs for technical assistance, Parties will have to fulfil their new obligations and the Secretariat of the Stockholm Convention is facilitating development and supplement and updating of the existing guidance documents on NIP updating and POPs monitoring. In addition, the Conference of the Parties has mandated its subsidiary bodies such as the global coordination group for the global monitoring plan to update the existing guidance documents or develop new ones.

Parties are obliged to transmit their national implementation plans for the nine new POPs by August 2012. In absence of appropriate guidance, development of NIPs for new POPs as well as implementation of the relevant obligations under the Convention will be delayed.

Regarding the capacity for chemical analysis of the new POPs, countries have not yet agreed on the criteria that constitute sustainable POPs analysis at international standards; neither have they identified laboratories that have the necessary instrumentation and experience to analyse these new POPs. Whereas it is anticipated that the laboratories presently listed in the UNEP POPs Laboratory Databank will be able to analyse new basic POPs such as hexachlorocyclohexane isomers (α-HCH β-HCH, γ-HCH), pentachlorobenzene or chlordecone, it cannot be assumed that the same laboratories are also capable to analyse polybrominated or perfluorinated compounds without assistance.

2.4 Institutional, sectoral and policy context

Specific objective of the project is to provide Parties and the COP with guidance on monitoring of new POPs under the global monitoring plan for POPs. Besides the new POPs, also the core matrices need further specifications to allow the determination of the new POPs therein. This guidance will enable Parties to include new POPs in their national POPs monitoring activities and national, regional, and global monitoring plans.

2.5 Stakeholder mapping and analysis

The responsible institutions in this project will consist of expert laboratories, national scientists with expertise in any of the new groups of POPs (such as PFOS, BFR) in combination with the core matrices (such as air, water, mothers' milk/human blood). The backbone of them will be from the countries participating in the four UNEP-GEF projects on GMP. It is assumed that through the new POPs and new matrices, further experts will be included (especially from East Asia; where a UNEP workshop proposed approaches to cover the new POPs in analytical and monitoring work[3]).

The PSC will monitor progress made and will provide substantial input to the project. The Project Steering Committee will be kept small but efficient and include the directly concerned stakeholders. The Steering Group will comprise DTIE Chemicals, DGEF, Secretariat of Stockholm Convention, WHO, regional organizations coordinating the current GEF GMP projects in four sub-regions, and the involved bilateral donors.

[3] Report of final workshop on "First Worldwide UNEP Intercalibration Study on Persistent Organic Pollutants – Asia Region", Hongkong SAR, China, 26-28 February 2010

The Steering Group will meet back-to-back with the technical meetings, i.e., inception workshop and final workshop. The Steering Group will monitor the progress of the project and give advice as to implementation issues.

Since this project will enter into new territory, the selection of stakeholders in this project needs careful thinking. The Stockholm Convention Secretariat has close linkages to the Parties and the members of their expert groups including the regional representation. Expert laboratories have their own academic or institutional networks that will assist in the identification of stakeholders in the regions and allow the creation of new networks for efficient project implementation. For example, institutions dealing with brominated flame-retardants will be brought together with institutions dealing with chlorinated pesticides; experts in air sampling will be linked to water researchers. Expert laboratories already familiar with the conditions in developing countries and network coordinators already active in developing country regions will intensify their networks and train developing country partners in this project. In response, developing country partners will communicate their local and regional conditions to the project and especially provide the access to the samples and have full responsibility in the maintenance of the networks to be established and the integrity of the samples. It is the objective of the project to generate high quality and meaningful results to serve the implementation of the Stockholm Convention.

UNEP Chemicals has the technical expertise and the cooperation with expert laboratories and developing country laboratories and stakeholders in place through the on-going projects. UNEP Chemicals will work in close cooperation and in consultation with the groups and activities that are already operating under the coordination of the Secretariat of the Stockholm Convention such as Global Coordination Group, Regional Organisation Groups, or GMP Expert Group.

UNEP Chemicals and the Secretariat of the Stockholm Convention will closely cooperate and implement complementary activities, such as:

1. Develop the GMP guidance through joint meetings and expert groups (GCG workshops will be organized by SSC; project workshops will be organized by UNEP Chemicals with the other partner actively participating and contributing);
2. Develop the strategies for the future global monitoring plan;
3. Share capacity building and data generation through GEF-funded activities (*e.g.*, in developing country regions) and Secretariat-supported projects (such as MONET, GAPS, mothers' milk study, Recetox Summer School);

UNEP Chemicals, in cooperation with the Secretariat of the Stockholm Convention, and assisted by a coordinator for the regional activities, will undertake the following activities:

1. Establish the project arrangements and make contractual arrangements within the regional pilot countries to ensure the regional delivery according to project outputs including assignment of the sub-regional backstopping laboratory in this project (including identification of national executing institutions/individuals in participating countries);
2. Organize workshops to prepare detailed work plan for the project implementation according to matrices and type of POP and to agree on Standard Operational Procedures (SOPs);
3. Liaise with the national coordinators in all participating countries, the experts responsible for the air, water, mothers' milk and human blood monitoring networks, and the national laboratories in participating countries and enter into an agreement with them;
4. Coordinate the available sub-regional information for designing the work plan of this project such as existing analytical manuals and procedures, and subsequently assist in the joint development of the training and capacity building needs;

5. Coordinate provision of the necessary infrastructure to collect relevant samples in all participating countries;
6. Write a final report summarizing the activities undertaken in this project including future needs;
7. Provide regular updates on project progress to UNEP Chemicals and assist UNEP in the day-to-day work of project implementation;
8. Write the financial statement on expenditures occurred during project implementation.

UNEP Chemicals, in cooperation with the Regional Representatives (GMP coordinators or with the assistance of the ROG/GCG), will assist in the coordination with the pilot countries and the capacity building at all levels shown below for the participating institutions. It should be noted that a global workshop will define and select the pilot countries according to monitoring needs and capacities available at regional level. Therefore, it can be assumed that not all of the UNEP-GEF project countries will be among the pilot countries for obvious regions; *e.g.,* for the monitoring of PFOS in water, large standing water bodies like lakes and oceans have been proposed. Subsequently, the number of locations/countries for pilot testing will be limited.

Further, participating institutions/laboratories in pilot countries will undertake the following activities:

1. Liaise with the national/regional coordinator and the experts for the national ambient air, water, mothers' milk and human blood monitoring networks;
2. Provide the necessary information for designing the work plan of this project such as existing analytical manuals and procedures, and subsequently assist in the joint development of the SOPs, the training and capacity building needs;
3. Receive or respond to the expert back-up laboratory and UNEP Chemicals for the inspection tour at the onset of the project and convene relevant meetings with governmental sectors concerned with POPs analysis;
4. Grant access for the back-up laboratory to the laboratory/laboratories for the training course and ensure participation of relevant staff at the training course;
5. Coordinate provision of the necessary infrastructure to collect relevant samples;
6. Analyse the agreed samples and submit the results to the expert back-up laboratories and UNEP Chemicals;
7. Participate at the final global workshop to discuss results and exchange views;
8. Write a final report on the activities undertaken by the laboratory (at national level) including the results and future needs;
9. Write the financial statement on expenditures occurred for the national activities undertaken during project implementation for this laboratory.

The **Global coordination group**, in its role is to assist the Secretariat in coordinating and overseeing the implementation of the global monitoring plan and to produce the global monitoring report for submission to the COP will assist the Executing Agency especially in the following activities:

1. Participate and contribute to the Expert Workshops through submission of draft chapters for the updated GMP guide, review and amend the guide where necessary;
2. Propose the elements of the capacity building and pilot testing activities in support of the GMP implementation at regional and global levels;
3. Propose elements of further activities under the step-by-step capacity building plan in support of the second GMP phase for all eligible regions;

4. A member of the GCG will organize the Summer School of Environmental Chemistry and Ecotoxicology, which will be coordinated through the Secretariat.

Partner Laboratories and Institutions/Consultants in the other participating countries:

All partner countries have laboratories with experiences on POPs analysis at different levels and are running air monitoring networks and most of them have experience in the execution of the UNEP-WHO mothers' milk study. .

Partner Laboratories and National Coordinators (for the environmental and human networks) in the other participating countries will:

1. Identify and assign national (sectorial) coordinator and national laboratories and identify the experts for the national ambient air, water, mothers' milk and human's blood monitoring network and enter into an agreement with them;
2. Provide the necessary information for designing the work plan of this project such as existing analytical manuals and procedures, and subsequently assist in the joint development of the SOPs, the training and capacity building needs;
3. Receive the expert back-up laboratory and UNEP Chemicals for the inspection tour at the onset of the project and convene relevant meetings with governmental sectors concerned with POPs analysis (where POPs laboratories exist);
4. Grant access for the back-up laboratory to the laboratory/laboratories for the training course and ensure participation of relevant staff at the training course (where POPs laboratories exist adequately equipped to participate with chemical analyses in this project);
5. Coordinate provision of the necessary infrastructure to collect relevant samples in the respective participating countries;
6. Analyse the agreed samples and submit the results to the expert back-up laboratories and UNEP Chemicals (where POPs laboratories exist adequately equipped to participate with chemical analyses in this project);
7. Participate at the final workshop to discuss results and exchange views;
8. Write a final report on the activities undertaken by the laboratory (also for laboratories where only sampling may be performed) including the results and future needs as well as from the national experts for air, water, mothers' milk and human's blood networks;
9. Write the financial statement on expenditures occurred for the national activities undertaken during project implementation for this country and submit to the sub-regional coordinator.

The Expert Laboratory/ies will provide the following services:

1. Participate at the first regional workshop and provide input to the Standard Operating Procedure (SOP) development;
2. Undertake an inspection tour to the developing laboratories to verify infrastructure and operation of the laboratory (this activity is foreseen back-to-back with item 1 above);
3. Define needs for upgrading the laboratory with respect to spares, consumables, and training needs;
4. Prepare a report on the inspection tour and a work program for each of the laboratories for the coming months;
5. Undertake the training in the pilot laboratory according to needs identified; provide and analyse samples as a Quality Assurance/Quality Control (QA/QC) tool;

6. Provide the necessary spares and consumables to the laboratories;
7. Prepare training manuals and final report on work undertaken in the feasibility study;
8. Provide support to the developing country laboratories and to UNEP Chemicals throughout the project.

2.6 Baseline analysis and gaps

The first global monitoring report under the global monitoring plan for effectiveness evaluation (UNEP/POPS/COP.4/33) presented information on air levels and human exposure (breast milk or human blood) from all five United Nations regions to serve as baselines for future evaluations. The baseline was set to determine trends of increase or decrease in persistent organic pollutants levels in both the short and long term. This report took into account the original 12 POPs, not the new POPs adopted at COP4. The baseline for the new POPs, and perhaps for a new matrix, *i.e.*, water, needs to be established. Since time trend analysis is a long-term task, the starting of four years later for the new POPs will not negatively effect the effectiveness evaluation.

From the first report on effectiveness evaluation, some NIPs and the GEF projects, we have a good understanding of existing monitoring networks for air, mother's milk, and the 12 initial POPs. The main players are identified such as the organizers of the air sampling campaigns, the reference laboratory for POPs in mothers' milk, competent laboratories for the 12 POPs around the globe (POPS Laboratory Databank) as well as the gaps that need to be closed. For the new POPs and for the new matrix water and to a large extend for maternal blood, this basis is not known although scattered information exists.

It is well known that governments, laboratories, and institutions work in sectorial areas according to their mandates. Through the addition of the new POPs with different analytical requirements, for the first time, laboratories having gas chromatographs (typical environmental laboratories) will work together with laboratories that have liquid chromatography (typically toxicological laboratories). They will bring their expertise and networks together and provide the information to establish the baseline concentrations in water and in human blood for PFOS, lindane and other new POPs. So far, global assessments for POPs in water and for PFOS or brominated flame-retardants have not been undertaken by any UN organisation. This project will establish the necessary networks and provide the baseline data to create a global picture that will be enhanced in the following years. Establishment of time trends and regional trends as well as identification of the main transport pathways are the objectives of the Stockholm Convention.

Through blood sampling and analysis and the need to interpret the data, the public health sector will become a more prominent partner in the Stockholm Convention issues.

One of the main conclusions of the report is that there are data on air and human milk or blood in all five United Nations regions. However, it was noted that data were missing in some significant sub regions. The report concluded that in some regions the baseline levels are provided by new nationally supported persistent organic pollutant monitoring activities. Furthermore, in several regions where major data gaps have been identified, initial air monitoring and human milk data have been generated through strategic partnerships; however, continuation of these activities will depend on further capacity building and support.

The report draws some recommendations, as follows:

- Established national and international POPs monitoring programmes should be maintained. Long-term monitoring programmes are lacking in entire sub-regions and even in entire continents.
- Systematic capacity building through strategic partnership should receive sufficient support from the Stockholm Convention financial mechanism and other donors.
- Ambient air and human milk or blood are suitable media for evaluating changes in POPs levels over time on a global scale.

- Data collected within a programme should be comparable, even if air data is hard to compare, taking into account the different air monitoring systems and climatic conditions. However, mother's milk analysis is possible by using the WHO harmonized sampling protocol and a single laboratory.

Regarding availability of data and capacities on new POPs, regions have not assessed their capacities to analyse these nine new POPs. Whereas the new chlorinated basic POPs – HCHs, chlordecone, pentachlorobenzene – do not pose any challenges different to this encountered with the OCP analysis undertaken for the initial POPs, perfluorooctane sulfonic acid (PFOS) and their precursors and the polybrominated new POPs pose additional challenges. Although PBB and the PBDE are lipophilic as the initial POPs, they have different physical-chemical properties that need new analytical approaches. It needs to be explored if the presently used PUF samplers for ambient air can be used. It is assumed that mothers' milk will be an adequate matrix to determine human exposure. The group of the perfluorinated compounds, *e.g.*, perfluorooctane sulfonic acid and precursors do not follow the classic pattern of other POPs by accumulating into fatty tissues, but instead binds to proteins in the blood and liver. PFOS also is water-soluble and not typically transported through air. In these cases, air and mother's milk sampling will not be the optimal media; it would require to revise the core matrices and to consider human blood and water. Brominated compounds require a complex analytical method that will be developed and included in this project.

2.7 Linkages with other GEF and non-GEF interventions

Coordination with the following related initiatives will be ensured:

SSC programmes: The outcomes of this project will become part of the overall technical assistance strategy and programme developed and implemented by the Stockholm Convention Secretariat to support Parties in their efforts to implement the Stockholm Convention**.**

Past and on-going relevant activities and projects: The project will consider all relevant passed and on-going activities (such as the GEF laboratory project, the regional GEF MSPs supporting GMP implementation, the EC project in support of GMP and effectiveness evaluation); for more information, see: http://www.chem.unep.ch/Pops/laboratory/Final%20report%20POPs%20Lab%20Cap_text.pdf

The GEF, in close cooperation with UNEP DTIE is currently implementing a GEF funded Global Monitoring Plan for POPs Monitoring. This project complements the current on-going efforts (by the Secretariat of Stockholm Convention and under the SAICM Quick Start Programme) to provide reliable data for effectiveness evaluation of the Convention. The GEF funded Programme on GMP includes four regional projects: Latin America and Caribbean; West Africa; Southern and Eastern Africa, and the Pacific. This project will be under the umbrella of the GEF funded GMP projects. UNEP DTIE will ensure that project results are identified and shared among all GEF GMP projects.

It should be mentioned that two more GEF projects are being developed that will complement the efforts undertaken by the global community to implement the monitoring and national components for the Stockholm Convention:

1. UNEP with the support of the Secretariat of the Stockholm Convention is developing the project "Supporting the Implementation of the Global Monitoring Plan of 12 initial and 9 new POPs in East and South East Asia" to be executed by the Vietnam Environment Administration. This project is intended to complete the global picture on POPs monitoring and to complement the on-going four region UNEP-GEF projects on POPs monitoring. Whereas the present four GEF projects only address the 12 initial POPs, this Asia project will also pilot test the identification of laboratories for PFOS and brominated flame-retardants and proposals of water as a matrix for environmental presence and transport as well as human blood for human exposure. This project is under development with the endorsement letters from six countries received.

2. A sister project "Development of the Guidelines for the updating of national implementation plans (NIPs) under the Stockholm Convention taking into account the new POPs added to the Convention" " to this proposed project is being developed by UNIDO to develop a set of guidance documents for identification of new POPs in products, updating the national implementation plans (NIPs), and to ensure the implementation of Article 3 of the convention, to handle illegal trafficking, and to handle disposal operations. This project will be linked to this UNEP proposal for the analytical compound whereby UNEP's project will develop the performance-based criteria for new POPs analysis whereas the UNIDO project will develop the methods to identify products for confirmatory analysis for the new POPs.

The project will also contribute to UNEP's priority area of minimizing the impact of harmful substances and hazardous waste to the environment and human beings and the Bali Strategic Plan on capacity building.

SECTION 3: INTERVENTION STRATEGY (ALTERNATIVE)

3.1 Project rationale, policy conformity and expected global environmental benefits

The global environmental benefit has to be seen in the context of the efforts of the COP to establish an effective global system for monitoring of the effectiveness of the implementation of the Stockholm Convention. The project contributes to these efforts by strengthening the monitoring capacity at national level and with this enabling the participating countries to contribute national data to the GMP in a regionally and internationally agreed and harmonized approach.

This project will develop guidance on monitoring of the new POPs and define conditions for generating acceptable results in relevant matrices. It will establish baseline concentrations of new POPs in environmental and human matrices that will allow assessing changes over time and evaluating the effectiveness of the measures taken through the implementation of the Convention. Through this, the project will achieve global environmental benefit.

3.2 Project goal and objective

The goal of the project is to build capacity on analysis and data generation for new POPs in core matrices for the Global POPs Monitoring (GMP) to enable all regions to comply with Article 16 of the Stockholm Convention.

3.3 Project outcomes and expected outputs

This project will assist countries to monitor and assess the presence of new POPs in humans and the environment in their countries and region. Participating countries and regions have expressed, through different international fora and in their NIPs, their need for assistance to assess new POPs. This request has been clearly confirmed by the conference of the Parties. In line with the request, the project has the following expected outcomes, outputs and main indicators (for more details see Appendix 1: Project Logical Framework):

1: Instrumentation and methods for analysis of new POPs in core matrices, POPs lab databank amended and laboratories identified

Expected outcomes:

- Instrumentation and methods for analysis of new POPs in core matrices established and POPs Laboratory Databank amended and laboratories identified

  Expected output:

- POPs analytical guidance amended
- POPs laboratory databank updated includes information on new POPs

Main indicator of achievement:

- New guidance on methods for POPs analysis published as IOMC report available within 3 months of project start
- Databank on POPs laboratory adequately amended within 6 months of project start

2: Development of guidance to analyse new POPs in relevant core matrices

Expected outcomes:

Guidance for the analysis of new POPs in relevant matrices updated and available

Expected output:

- SOPs available for abiotic and biotic matrices
- Pilot countries identified for sampling and analysis in core matrices
- Guidance documents including new POPs and relevant core matrices available

Main indicator of achievement:

- Draft updated GMP guidance available by month 9
- Expert workshop for Guidance document evaluation held and document adopted
- Standard Operation Procedures (SOPs), that includes guidance for POPs sampling, will be available and accessible nine months after project start.

3: Capacity building at global level for sampling and analysis of new POPs in core matrices

Expected outcomes:

- Capacity built at global level for sampling and analysis of new POPs in core matrices

Expected output:

- Global training workshop organized
- Methodology for new POPs analysis in air and water field tested
- Methodology for new POPs analysis in mothers' milk/human blood tested
- Needs for spares and consumables identified
- Analysis from expert back-up laboratories available
- Collection of mother's milk, blood as well as air and water samples

Main indicator of achievement:

- 80% of staff officially assigned trained for new POPs sampling by month 12
- Reports on analysis of back laboratories available and accessible 18 months after project start

4: International intercalibration study for new POPs

Expected outcome:

- Capacity and performance of laboratories in analysing new POPs provided by countries

Expected output:

- Organization and participation in an intercalibration study

Main indicator of achievement:

- POPs laboratories participate in intercalibration studies and results from study are available by month 22 of project start

5: Availability of regional data for new POPs in core matrices

Expected outcome:

- Regional data available for new POPs

Expected outputs:

- Sectoral reports (air, water, blood or PFOS, BFR) produced
- Expert lab mirror analysis results available

Main indicator of achievement:

- For each participating country, at least one air and one water sample analysed for water-soluble POPs, (*e.g.*, PFOS and HCHs) and one human sample (mother's milk or blood) samples collected and analysed. Results available 18 months after the project starts.

Project key deliverables are summarized in Appendix 3.

3.4 Intervention logic and key assumptions

In the participating countries, the laboratory facilities will be strengthened to reliably analyse new POPs. The project will build upon existing laboratories that have a basic understanding of the procedures and methods to analyse POPs or to take samples. It is assumed that these laboratories will have an interest in expanding their expertise and include more chemicals into their "repertoire" and also be interested in new matrices such as human blood (for public health institutions) or water (for environmental labs and institutions). Further, it is assumed that the training and capacity building by expert laboratories will result in a number of laboratories in developing countries that will be able to successfully participate in international intercomparison studies and thus, have their results recognized at international level and for use in the Global Monitoring Plan.

Participating countries will contribute by provision of samples and laboratory facilities and benefit by training in sampling, analytical procedures, quality assurance and data management and interpretation as well as learning more about the POPs situation in their countries. The project will assist in establishing the baseline for new POPs present in the regions.

Development of detailed guidelines, protocols and manuals, as well as training of staff in participating laboratories and strengthening the performance of sampling and analysis will enable the national and/or regional partners to have the infrastructure in place to sample and analyse new POPs according to international standards consistent with GMP Guidelines. Within this, the project will strengthen the capacity of the participating countries and regions for monitoring new POPs concentration in the key media and will facilitate reporting under the effectiveness evaluation and will enhance the first regional and global report.

The key assumptions are that the COP Decisions SC-2/13, SC-3/19 and SC-4/31remain unchanged in their main objectives beyond COP 5, and that the participating countries can ensure during the project and beyond the stability in personnel and provision of spares and consumables to maintain operation of new POPs sampling sites and the POPs laboratory.

3.5 Risk analysis and risk management measures

A programme involving four sub-regions and more than 15 countries has obvious logistical risks. The project will work in coordination with the Sub-regional Organizations already working on the GEF Sub-regional projects (West Africa, South East Africa, Pacific and Latin America and Caribbean) and use the established infrastructure. Since not all of the presently participating countries will have the geographic conditions required for PFOS sampling, *i.e.*, large standing waters such as lakes or oceans, the number of pilot countries is expected to be smaller than the sum of all participating countries from the present GEF projects.

WHO has been a long-term partner in POPs work in the regions and with UNEP. All sub-regions and countries have WHO focal points. Based on this, the project builds on an already existing network with proven capacity to carry out the project activities. However, it should be noted that with respect to POPs, the protocol for human exposure assessment only exists for human milk; there is no protocol for human blood. The lack of an approved and well established protocol by the competent UN organisation on human health poses a risk especially at national level. Subsequently, the number of blood donors may be hard to achieve. Another risk is higher costs for blood sampling than for human milk collection since a professional must take the blood (nurse or doctor).

Shipment of blood samples across borders and precautions at the chemical analytical laboratory are at higher level than for mother's milk, especially with a view on infections such as HIV or hepatitis.

The other major risk is the ability to find laboratories that have the necessary equipment to do PFPS analysis. The necessary instrumentation is typically not found in environmental laboratories but in toxicological laboratories. The latter ones cannot be found under the auspices of Ministries of Environment, the typical stakeholders/focal points for the Stockholm Convention. The expert laboratories that will assist UNEP in the implementation of the project should be able to identify such laboratories through their networks rather than through the political process. For Quality Assurance purposes, a number of samples will be analysed in an experienced expert laboratory.

Finally, communication of data on contamination, especially in humans and mothers, represents a delicate task to all partners in the project.

Lastly, the timeframe for this ambitious project may appear too short. This project is bound to the timetable established by the COP and therefore, the results, fully or partially achieved, have to be ready for the second reporting under the effectiveness evaluation, which is scheduled for COP-6 in April/May 2013. This project ending in June 2013, will make the preliminary results available for the Global Coordination Group for consideration at their meeting in fall 2012 and for inclusion into the global report. The Global report will also highlight the needs and present a roadmap for the next period of Global Monitoring and, if necessary, propose corrective actions.

Table 1: Summary of risks and mitigation measures

Risks	**Mitigation Measures**
Not all regions working at the same pace **Medium risk**	The selection of the country partners and understanding of project goals and objectives will need special attention. The project will pay special attention to the setup of the coordinating mechanism and will ensure that all players have the tools readily available to implement the project smoothly.
Guidance materials are not considered appropriate for particular situations **Low risk**	This project will update guidance material available or developed within SSC. The close partnership with the SSC will ensure that the guidance materials will be of use and useful for all countries. This project will engage interested and affected parties in each region and consultation bodies to share their experiences and update

	the available guidance or develop new guidance, as needed
Lab capacity in the regions not suitable for the project purposes **Medium risk**	Laboratories will be assessed and if there is not capacity in any of the regions, the project will propose alternatives to perform optimal and high quality analysis of new POPs in support of the global monitoring programme
Timeframe too short to deliver expected outputs **Medium risk**	Timeframe for this project will be managed with special attention. Partners participating in this project have sufficient experience in this kind of activities and will make everything possible to meet deadlines. However, unexpected events may happen and delays cannot be avoided.
Selected matrices not necessarily the best media to monitor POPs **Low risk**	The Conference of the Parties and its specialized working groups decides on whether a matrix will be considered for the Monitoring Programme. By involving the Global Coordination Group (setup by the SSC) and the SSC, the project will ensure a close linkage with the COP and will inform the COP regularly on the progress made.

3.6 Consistency with national priorities or plans

At its third meeting in May 2007, the COP of the Stockholm Convention, by Decision SC-3/19 on effectiveness evaluation, provisionally adopted the amended GMP for POPs (UNEP/POPS/COP.3/22/Rev.1, annex II) and adopted the amended implementation plan for the GMP (UNEP/POPS/COP.3/23/Rev.1). Decision SC-3/19 also established a regional organization group for each of the five United Nations regions to facilitate regional implementation of the GMP and invited Parties to nominate members to those groups with expertise in monitoring and data evaluation. The main objectives of the regional organization group is to define and implement the regional strategy for information gathering, including capacity building, and to prepare the regional monitoring report for the first effectiveness evaluation which was presented at the fourth Conference of the Parties in May 2009.

At its fourth meeting in May 2009, The COP of the Stockholm Convention, by Decision 4/31 on Global Monitoring plan for effectiveness evaluation, adopted the global monitoring plan for persistent organic pollutants, provisionally adopted during COP3, and also adopted the terms of reference and mandate of the regional organization groups and the global coordination group on POPs monitoring. The same COP Decision mandated the global coordination group "updating the guidance on the global monitoring plan for POPs with the assistance of invited experts as necessary" and requested the Secretariat of the Stockholm Convention "to support the global coordination group in updating the guidance document for the global monitoring plan with additional chapters on long-range transport, specimen banking and the impact of listing new Chemicals in the Convention. This decision also request the financial mechanism of the Stockholm Convention and invites other donors to provide sufficient funds to further support step-by-step capacity enhancement, including through strategic partners and to support new monitoring initiatives that will support the first monitoring report.

3.7 Incremental cost reasoning

Without GEF support, the countries and regions would not be able to provide national, regional and global data on new POPs to the effectiveness evaluation under the Stockholm Convention. More importantly, without training and provisions to be able to analyse the key GMP matrices air, human milk, human blood and water, they also will not be able to contribute to future evaluations. With GEF support and technical assistance of UNEP, these regions and countries will gradually enhance their capacities by implementing new methods to analyse the – for these countries – new matrices and to increase the spectrum to all of the POPs. Strengthening of the analytical performance and international acceptance of the analytical data will

significantly increase the monitoring and analytical capacity and thus, these parties will become active contributors to the GMP and with this complying with the requirements set by the Stockholm Convention. The most important step for POPs monitoring has already been set through the earlier UNEP/GEF POPs laboratory and monitoring projects, which responded on the priority issue for analytical capacity from the NIPs. Accordingly, the COP responded and mandated the global POPs monitoring at global basis and established respective networks for mothers' milk (blood to a lesser extend) and air, and for laboratories. Networks for mother's milk and air have been established for the initial POPs and are being strengthened; the addition of a new matrix (water) and some new POPs presents a rather small increment compared to the initial efforts. Through the provision of more information at high quality, trust will be built between countries and a more profound basis be created for assessment of the effectiveness of interventions. The analytical capacity build under this project and the global guidance documents for POPs analysis will also serve the UNIDO sister project on updating of NIPs and other guidance development for new POPs. The UNEP POPs Laboratory Databank will serve both new POPs projects.

3.8 Sustainability

Countries in the regions participating in this project are Parties to the Stockholm Convention and will have to comply with Convention's obligations on monitoring, reporting and information dissemination. In May 2007, with participants from all regions, the COP adopted the amended implementation plan for the GMP, which is now the basis for all related activities even beyond the lifetime of this project. In May 2009, the COP adopted the Global Monitoring Plan for POPs and Terms of Reference and mandate of the regional organizations groups and the global coordination group. All project countries will have included sustainability measures into their national planning and budgeting processes as indicated in their National Implementation Plans. See as well section 3.10 on Mainstreaming.

3.9 Replication

This project builds upon the experiences in the global UNEP/GEF Pilot Project on "Assessment of Existing Capacity and Capacity Building Needs to Analyse POPs in Developing Countries" and on the on-going projects on Global Monitoring of POPs in Latin America and Caribbean, South-East Africa, West Africa and Pacific. Results from this project reflecting now the aspects of a regional approach will be identified and shared with other Partners. Results will be shared through the regional and global GMP coordination processes. The meetings of the Conference of the Parties to the Stockholm Convention have been identified as places where the results of this project can be shared and presented. It is expected that following this first phase the GMP will be further developed; respective global follow-up concepts and projects will build on the capacity developed during this project.

3.10 Public awareness, communications and mainstreaming strategy

National Implementation Plans in participating countries in the four sub-regions have been developed through a multi-stakeholder processes, where representatives from key ministries participated and endorsed the final NIP. In those NIPs the development of an information exchange, monitoring and reporting system has been identified as national priorities. There is a direct interest and commitment of the countries to follow-up on the project activities on a longer term to serve the national efforts to comply with the Stockholm Convention.

3.11 Environmental and social safeguards

Sampling and analytical work in the participating laboratory will be carried out according to international safety standards and quality control. The POPs laboratory will apply the standards as established in "Good Laboratory Practices" (GLP) which includes the laboratory management of human resources, data reporting and storage, operation of equipment, and disposal of waste. In addition, the POPs Analytical Guidelines developed under the UNEP/GEF POPs Analytical Capacity Assessment project provide

information as to safe laboratory operations including handling and storage of samples and materials or quality control criteria.

Generation of data and reporting of results will follow the guidelines that were established under the UNEP/GEF project on laboratory capacity to analyse POPs and according to UNEP's GMP guidelines (Adopted by Stockholm Convention COP-3).

Countries participating in the mothers' milk and blood study will sign the statement of interest by both, health and environment sector as required by WHO. The mothers' milk and blood sampling will use the WHO agreed protocols, which establish the guidelines and standards to take mothers' samples in a safe manner and to inform these women on the results.

In line with the UNDAF outcome, the project is aimed to assist Parties in the implementation of their national priorities when implementing chemicals related multilateral environmental agreements. Emphasis is given to environmental development and capacity building. The project will strengthen the national institutions and coordinate chemical analyses across political and economic sectors and thus, strengthen national policies through cooperation within the government and across countries. In this way, the project will reinforce and enhance the capacities at individual, institutional, and societal levels to participate and manage the development process. Women and children are especially susceptible to POPs, and the project, through its role in underpinning national POPs management, contributes to the improving their well-being. The project will empower women in their responsibilities within the laboratory management and will be strengthened further through training activities at international level. Since in-line with the COP decision the project addresses baseline exposures, no group in the population will be targeted.

- This project will take into account environmental considerations at all stages. The project will adopt preventing measures rather than curative actions. The environmental safeguards will be applied at different stages of the project, such as: **Project coordination and management**: reduced impact on greenhouse emissions by restricting the number of travel to the necessary. Most communication and coordination will be made through telephone or internet. Reduce the use of paper to the minimum; meeting documents will be circulated to participants through email rather than sending hard copies.
- **Sample taking**: the WHO standardised protocols for sampling will be used in order to avoid accidents and spill of samples. During the collection of samples, safe and reliable transportation will be used. Taking environmental samples will respect nature and will not disrupt natural habitats and ecosystems.
- **Shipping samples and sending them to the back-up laboratories**: internationally recognised and standardised methods for shipping and handling will be used.
- **Used samples**: will be treated as wastes and as such will be managed adequately in the respective laboratories.

SECTION 4: INSTITUTIONAL FRAMEWORK AND IMPLEMENTATION ARRANGEMENTS

UNEP/DTIE Chemicals Branch will be the executing agency and international coordinator. It will provide administrative and technical supervision in the implementation of the project. UNEP Chemicals will closely liaise with the Stockholm Convention Secretariat and its associated expert groups/team, other co-funding partner, including the World Health Organization who is implementing a global mothers' milk survey.

For the delivery of pilot testing in the regions, the regional coordinators under the current UNEP/GEF GMP projects in each sub-region will assist in the coordination of this project and will be interacting and possibly sub-contracting pilot countries. These Regional Coordination Centres will report to UNEP Chemicals. Presently regional executing coordinators are as follows:

1. **Eastern and Southern Africa**: Department of Chemistry/University of Nairobi (UoN), Kenya. Participant countries: Egypt, Ethiopia, Kenya, Mauritius, Uganda, Zambia.
2. **West Africa:** Environmental Toxicology and Quality Control Laboratory, Mali. Participating countries: DR Congo, Ghana, Mali, Nigeria, Senegal, Togo.
3. **Latin America and the Caribbean:** Stockholm Centre Uruguay. Participating Countries: Antigua and Barbuda, Brazil, Chile, Ecuador, Jamaica, Mexico, Peru, and Uruguay.
4. **Pacific Islands:** Institute of Applied Sciences/ University of South Pacific. Participating countries: Fiji, Kiribati, Niue, Samoa, Palau, Solomon Islands, Tuvalu.

Further, close linkages will be established between UNEP Chemicals and the Regional Organization Groups under the Stockholm Convention Effectiveness Evaluation (ROGs). At global level, the Global Coordination Group (CGC) after consultation with the Secretariat will be assisting in the development of the guidance documents, pilot testing in the regions, and final assessment and strategy development.

It is envisaged to build upon the experiences in the UNEP/GEF Project on "Assessment of Existing Capacity and Capacity Building Needs to Analyse POPs in Developing Countries" and on the different POPs Monitoring initiatives in the region and around the globe. In order to provide highest technical standards, it is envisaged that UNEP Chemicals will subcontract the expert laboratories for PFOS and brominated flame-retardants at Örebro University-MTM Centre, Sweden, and Free University Amsterdam-IVM VU, the Netherlands, and for analytical training and mirror analysis of samples, and organization of intercalibration studies. For human matrices, the WHO Reference laboratory at Chemisches Untersuchungsamt Freiburg (CVUA Freiburg), Germany, and a laboratory specialized in blood analysis will assist in matters related to these core matrices. Further ordination will be done with the programs implementing air-monitoring activities such as Environment Canada (GAPS), RECETOX and CSIC; laboratories experienced in the analysis of PFOS (and HCH isomers) in water will be contacted. It is expected to find these in the Europe, North America, and Asia.

SECTION 5: STAKEHOLDER PARTICIPATION

Key stakeholders and beneficiaries are Governmental Ministries and Agencies including the national focal points for the Stockholm Convention, research institutions, and to a lesser extend private institutions. The main beneficiary is the Conference of the Parties to the Stockholm Convention and especially all Parties to the Convention that have adopted the listing of the nine new POPs in 2009 and endorsed the further development of the GMP guidance and monitoring plan. The international scientific community will benefit through field testing of newly developed methods, the governments in the pilot countries will benefit through better insight into the issue of the new POPs in general and the laboratories in the developing countries will be trained in the analysis of the new POPs; both of them serving as regional focal points for provision of expertise. The pilot countries will be able to provide significant input to Article 16 of the Stockholm Convention by providing sub regional data to the effectiveness evaluation and the Global Monitoring Plan for POPs.

The main direct beneficiaries will be the participating laboratories receiving training and consumables/spares. Other direct beneficiaries are the environment and health sectors in all participating countries. Jointly, they will collect/organize the collection of mothers' milk and blood samples for the GMP through the mothers donating the breast milk and blood.

Ministries of Environment or other related institutions from the participating countries involved in the implementation of the monitoring component of the NIP will enhance their experiences in ambient air monitoring and interpretation of data.

Indirect beneficiaries are the general public since for most of the countries the first time, national data will be generated in a systematic and comparable way that will characterize their exposure to POPs. The ambient air data will provide information as to the "import" of POPs from neighbouring regions and the human data will provide information as to the present exposure at the top of the food chain. The staff operating the networks together with the laboratories in the region but also in cooperation with the expert laboratories will share experiences and mutually assist each other.

SECTION 6: MONITORING AND EVALUATION PLAN

The project will follow UNEP standard monitoring, reporting and evaluation processes and procedures. Reporting requirements and templates are an integral part of the UNEP legal instrument to be signed by the executing agency and UNEP.

The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Project Logical Framework presented in Appendix 1 includes SMART indicators for each expected outcome as well as mid-term and end-of-project targets. These indicators along with the key deliverables and benchmarks as outlined in the work plan and project timetable included in Appendix 2 will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification to track the indicators are summarized in Appendix 1. Other M&E related costs are also presented in the costed M&E Plan (Appendix 4) and are fully integrated in the overall project budget.

The M&E plan will be reviewed and revised as necessary during the project inception workshop to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. Day-to-day project monitoring is the responsibility of the project management team but other project partners will have responsibilities to collect specific information to track the indicators. It is the responsibility of the Project Manager to inform UNEP DGEF (GEF IA) of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

The project Steering Committee will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E plan. Project oversight to ensure project meets UNEP and GEF policies and procedures is the responsibility to the Task Manager in UNEP-GEF. The Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

Project supervision will take an adaptive management approach. The Task Manager will develop a project supervision plan at the inception of the project, which will be communicated to the project partners during the inception workshop. The emphasis of the Task Manager supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring. Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by project partners and by UNEP. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

An independent terminal evaluation will take place at the end of project implementation. The Evaluation and Oversight Unit (EOU) of UNEP will manage the terminal evaluation process. A review of the quality of the evaluation report will be done by EOU and submitted along with the report to the GEF Evaluation Office not later than 6 months after the completion of the evaluation. The standard terms of reference for

the terminal evaluation are included in Appendix 5. These will be adjusted to the special needs of the project.

SECTION 7: PROJECT FINANCING AND BUDGET

7.1. Budget by project component and UNEP budget lines

The following table shows the overall budget (GEF and co-finance) by activity. For GEF budget by UNEP budget lines, please see Appendix 6.

Table 2: Project budget by project component

Project Components	GEF	Co-finance	TOTAL
1: Instrumentation and methods for analysis of new POPs in core matrices, POPs lab databank amended and laboratories identified	**34,000**	**15,000**	**49,000**
1.1 Set-up the management structure for the project			0
1.2 Amendment of the POPs analytical guidance document to incorporate instrumental and qualification needs for the new POPs	20,000	7,500	27,500
1.3 Expansion of the POPs laboratory databank for new POPs	14,000	7,500	21,500
2: Guidance for the analysis of new POPs in relevant core matrices updated and in place	**92,000**	**321,000**	**413,000**
2.1 Expert workshops to discuss and amend the GMP guidance doc		174,000	174,000
2.2 SOPs for abiotic matrices and new POPs developed (air, water)	50,000	147,000	197,000
2.3 SOPs for biotic matrices (mother's milk and human blood)	20,000		20,000
2.4 Global final evaluation workshop (for guidelines and field results)	22,000		22,000
3: Capacity building at global level for sampling and analysis of new POPs in core matrices	**288,000**	**822,000**	**948,000**
3.1 Thematic or POPs-specific training workshops	90,000		90,000
3.2 Field testing of methodology for analysis of new POPs in air and water (abiotic matrices)	70,000		70,000
3.3 Field testing of methodology for analysis of new POPs in mothers' milk/human blood (biotic matrices)	40,000		40,000
3.4 Identification and supply of spare consumables, standards to developing country labortories, including shipment, communication	56,000		56,000
3.5 Back-laboratories analytical work	32,000		32,000
3.6 collection of national air/water and mother's milk/blood samples and preparation of pools were applicable		822,000	660,000
4: International Intercalibration study for new POPs	**100,000**	**0**	**100,000**
4.1 Participation in international intercalibration studies	100,000		100,000
5: Availability of regional data for new POPs in core matrices	**102,000**	**0**	**102,000**
5.1 Sectoral reports (air, water, blood or PFOS, BFR, incl. Data reporting)	28,000		28,000
5.2 Expert labs for mirror analysis	74,000		74,000

6: Project Management, Monitoring and Evaluation	**84,000**	**358,340**	**442,340**
7.1 Project Management and Supervision	64,000	358,340	422,340
7.2 Monitoring and Evaluation Plan	20,000	0	20,000
TOTAL	**700,000**	**1,516,340**	**2.216,340**

7.2. Co-financing details

(See Appendix 11)

7.3. Project cost-EFFECTIVENESS

The project will use the current analytical structure present in the regions and will request participation of the Advisory Panels set up by the Stockholm Convention Secretariat in order to deliver the planned outputs. This project will also rely on the existing reference laboratories to develop, according to their capacity, training materials and modules for a harmonized approach on the analysis of new POPs.

The national laboratories that have been working in the GMP programmes and that have built some capacities will be considered for this project. This will make a good use of the existing resources and will avoid duplication.

The project will coordinate very closely with the Stockholm Convention Secretariat and with the different GMP programmes and projects in place.

National laboratories in many developing countries have been developed in the past on a sectorial basis with separate laboratories for health, mines, agriculture, water, etc. Most country laboratories are also characterized by:

- an ability to obtain sophisticated machinery via aid but difficulty to operate and maintain them;
- a lack of user-pay principle so that costs of analyses, even requested by outside users, is paid for out of recurrent budgets rather than clients;
- general civil service problems of low pay, lack of strategic planning, lack of funds for equipment maintenance, nepotism and frequent absence for workshops and other non-laboratory duties.

In any laboratory it only makes sense to set up an analysis if the amount of usage warrants the start-up costs and that there are funds available to pay for these analyses. Therefore, only laboratories that have at least the basis analytical equipment and have staff trained in basis analytical procedures will be used to achieve cost-effectiveness for this project. The present project concept does not allow setting up new laboratories and training as this would require several times the cost of using the existing laboratory infrastructure.

APPENDICES

APPENDIX 1: PROJECT LOGICAL FRAMEWORK

Objectives and Outcomes/Outputs	Objectively Verifiable Indicators	Means of Verification	Assumptions
Development Objective			
• Parties to the Stockholm Convention have the capacities and capabilities to meet their obligations under the Convention regarding the monitoring of the new POPs	• POPs sampling and analysis programs in place in each region • Data generated in local or central POPs laboratories submitted for inclusion into the regional GMP reports	• Reports to the Conference of the Parties to the Stockholm Convention	• Decisions SC-2/13, SC-3/19 and SC-4/31 remain unchanged in its main objectives
Immediate Project Objective			
• To build regional capacity for sampling of core matrices and generation of high quality POPs results in the core matrices for the Global POPs Monitoring (GMP) with emphasis on the nine new POPs	• Networks for air, water, mother's milk or blood established	• National POPs data sent to regional coordination group for inclusion into global report.	• Financial and human resources available to implement this additional component of the GMP at global level
Outcomes			
1. Instrumentation and methods for the analysis of new POPs in core matrices established and POPs Laboratory Databank amended and laboratories identified	• Laboratories and stakeholders agree on developed and/or updated internationally acceptable methods and guidance by month 6	• Guidance documents for POPs analysis and manual for POPs Laboratory Databank available; • Databank accessible	• Laboratories constantly update their information; • Core matrices agreeable by Parties and scientifically acceptable
2. Guidance for the analysis of new POPs in relevant core matrices updated and available	• 2 Meeting reports of GMP Expert Group by month 9 • SOPs for all matrices available by month 9	• Amended GMP Guidance published demonstrating inclusion of new POPs	• Regions and laboratories willing to cooperate and agree on criteria
3. Capacity built at global level for sampling and analysis of new POPs in core matrices established	• National laboratories provide results for new POPs for all regions by month 15	• Report from field testing and capacity building activities	• Stability in personnel and infrastructure to sustainably maintain operation of the laboratories (including accessibility to spares and consumables)

Objectives and Outcomes/Outputs	Objectively Verifiable Indicators	Means of Verification	Assumptions
			• Political stability and interest in GMP at national/regional level
4. Capacity and performance of laboratories in analysing new POPs assessed and enhanced at the global level	• 80% or the registered laboratories able to submit data by month 12	• Report on results of intercalibration studies with statistical relevance	• Successful participation in international intercalibration studies; • Sufficient number of laboratories participating to allow statistical evaluation
5. Regional data available for new POPs	• Reports on sectoral sampling (mothers' milk, blood, air/water) or deployment protocols for air and water samplers for at least one country per region available by month 18	• Reports and publications authored; • Quantitative data available	• Implementation of national programs on sampling of core matrices possible financially and with human resources
Outputs for Outcome 1: Instrumentation and methods for the analysis of new POPs in core matrices established and POPs Laboratory Databank amended and laboratories identified			
1.1 Amendment of the POPs Analytical Guidance Document to incorporate the instrumental and qualification needs for the nine new POPs	• Publications on analysis of the new POPs assessed by month 3;	• New guidance document published as IOMC report	• Experts agree on criteria for identification and quantification of new POPs • Parties are interested in analysing new POPs
1.2 Expansion of the POPs Laboratory Databank to accommodate the new POPs and matrices	• Structure of the Databank adequately amended by month 3; • Filled questionnaires from Labs analysing new POPs received by month 6;	• POPs Laboratory Databank web-accessible;	• POPs Laboratory Databank continues to serve as useful tool for POPs analysis and UNEP's clients; • POPs laboratories operational and willing to update information
Outputs for Outcome 2: Guidance for the analysis of new POPs in relevant core matrices updated and available			
2.1 Expert workshops to discuss and finally	• At least one draft available for	• Reports of Expert Group	• Commitment of scientists to

Objectives and Outcomes/Outputs	Objectively Verifiable Indicators	Means of Verification	Assumptions
agree on content of the amended GMP document	relevant chapters by month 9 • At least two reports from members of the expert group by month 9	meetings; • GMP document amended and Web-accessible	contribute; • Coordination by SSC; • Scientific basis sound and practicable
2.2 SOPs for abiotic matrices and new POPs developed (air, water)	• At least two publications demonstrating the suitability of air and water for PFOS and BFR available by month 9	• Relevant chapters in updated GMP guide published	• Commitment of scientists to contribute; • Coordination by SSC; • Scientific basis sound and practicable
2.3 SOPs for biotic matrices and new POPs developed (mothers' milk, human blood)	• 2 Publications demonstrating the suitability of mothers' milk and human blood for PFOS and BFR available by month 12	• Relevant chapters in updated GMP guide published	• Commitment of scientists to contribute; • Process coordinated by SSC; • Scientific basis sound and practicable
2.4 Global final evaluation workshop (for guidelines and field results)	• Final evaluation workshop by month 22	• Logistics for workshop and workshops materials available	• Funding available • Timeframe acceptable for implementation
Outputs for Outcome 3: Capacity build at global level for sampling and analysis of new POPs in core matrices established			
3.1 Thematic or POPs-specifc training workshops	• Official nomination of 80% of participants received by month 9 • Programme and workshop materials available by month 7	• Workshop report and timetable for workshops; • Official nominations from participating countries or institutions	• Funding available • Commitment of scientists and countries to contribute
3.2 Field testing of methodology for analysis of new POPs in air and water (abiotic matrices)	• Reports of methodology testing for air and water at 80% by month 12	• testing reports available in UNEP wesbite	• Cooperation of the POPs laboratories and relevant institutions
3.3 Field testing of methodology for analysis of new POPs in mothers' milk/human blood (biotic matrices)	• Report of methodology testing for mothers' milk/human blood at 80% by month 15	• Testing reports available in UNEP website	• Cooperation of the POPs laboratories and relevant institutions
3.4 Identification and supply of spares consumables, standards to the laboratories to equip them for POPs analysis in the relevant	• List of needs prepared by month 7 • Procurement carried out by month 9	• Procurement documents authorized	• Infrastructure sufficiently developed so that only minor components are

Objectives and Outcomes/Outputs	Objectively Verifiable Indicators	Means of Verification	Assumptions
matrices and samplers for abiotic and biotic samples			needed
3.5 Back-laboratories analytical work	• Standards and methods for analytical work developed by month 11	• Standards and methods available • Contract for expert to develop standards and methodology available	• Developing country laboratory ready and willing to be trained; • Back-up laboratory prepared and having access to developing country laboratory
3.6 Collection of national air/water and mothers' milk/blood samples and preparation of pools where applicable	• All protocols or written instructions by month 11	• Photos of samplings sites • Shipment documents to show transfer from samplings site to laboratory	• Protocols available • Necessary materials and information received in-time • Funding available • Between country shipment possible
Outputs for Outcome 4: Capacity and performance of laboratories in analysing new POPs assessed and enhanced at the global level			
4.1 Participation in international intercalibration study	• POPs laboratories inscribes to the intercalibration study and 80% of the registered laboratories submit data by month 15	• Results certificates from organizer of intercomparison study issues and sent to participating laboratories	• Relevant international intercalibration study existing; • Participation fee be paid (at least for developing countries)
Outputs for Outcome 5: Regional data for new POPs provided by countries			
5.1 Sectoral reports (air, water, blood or PFOS, BFR including data reporting)	• 70% of samples analysed by media or compound by month 15 • For each participating country, at least one air and one water sample analysed for water-soluble POPs, (*e.g.*, PFOS and HCHs) and one human sample (mother's milk or blood) samples collected and analysed. Results available 22	• Results from expert lab available and distributed to participating labs • Table of results from back-up laboratory • Results reflected in UNEP POPs Laboratory Databank	• POPs laboratories operational at required quality • Data will be made available by all parties

Objectives and Outcomes/Outputs	Objectively Verifiable Indicators	Means of Verification	Assumptions
	months after the project starts.		
5.2 Expert laboratories for mirror analysis	• Report of mirror analysis available by month 20	• Consolidated data report • Publication including laboratories performance in participating regions	• Participating countries send samples to expert lab for analysis in due time
Outputs for outcome 6: Partnership established and in place to properly supervise, monitor and manage the project			
6.1 Set-up the management structure for the project	• Internal UNEP arrangements made by month 1; • Information exchange mechanisms between DTIE and its partners and SSC and its committee's established by month 2; • Key stakeholders and participating institutions identified by month 3	• ICA between UNEP DGEF and UNEP DTIE; • Agreements between UNEP and participating institutions signed	• GEF funding and co-financing readily available

APPENDIX 2: Work plan and timetable

Activities \ months after project start	1–3	4–6	7–9	10–12	13–15	16–18	19-2
1: Instrumentation and methods for analysis of new POPs in core matrices, POPs lab databank amended and laboratories identified							
1.1 Amendment of the POPs analytical guidance document to incorporate instrumental and qualification needs for the new POPs							
1.2 Expansion of the POPs laboratory databank for new POPs							
2: Guidance for the analysis of new POPs in relevant core matrices updated and in place							
2.1 Expert workshops to discuss and amend the GMP guidance doc							
2.2 SOPs for abiotic matrices and new POPs developed (air, water)							
2.3 SOPs for biotic matrices (mother's milk and human blood)							
2.4 Global final evaluation workshop (for guidelines and field results)							
3: Capacity building at global level for sampling and analysis of new POPs in core matrices							
3.1 Thematic or POPs-specific training workshops							
3.2 Field testing of methodology for analysis of new POPs in air and water (abiotic matrices)							
3.3 Field testing of methodology for analysis of new POPs in mothers' milk/human blood (abiotic matrices)							
3.4 Identification and supply of spare consumables, standards to the labs for abiotic and biotic samples							
3.5 Back laboratories analytical work							
3.6 Collection of national air/water and mother's milk/blood samples and preparation of pools were applicable							
4: International Intercalibration study for new POPs							
4.1 Participation in international intercalibration studies							
5: Availability of regional data for new POPs in core matrices							
5.1 Sectoral reports (air, water, blood or PFOs, BFR, (inluding data reporting)							
5.2 Expert labs for mirror analysis							
6: Project Management							
7.1 Set-up the management structure for the project							
7.2 Monitoring and Evaluation							

Appendix 3: Key deliverables and benchmarks

Key Deliverables	Time line (months after project start)
1. Identify sub-regional coordinator, suitable laboratory and institutions in participating countries to collaborate in the project and enter into agreement with them - Agreement will be signed between UNEP Chemicals and the sub-regional coordinating institutions - The coordinator will be identified to coordinate all sub-regional activities; - Sub-regional laboratories having adequate infrastructure for new POPs analysis will be identified and agreed between project partners; - National institutions in all participating countries having the human resources, the infrastructure to undertake the sampling of the relevant matrices or the need for POPs analysis will be identified - The sub-regional coordinators will make agreements with the participating institutions	1-3
2. Identify and contract back-up laboratories for training of the laboratories and institutions in the participating countries: • The back-up laboratories will be identified by UNEP in collaboration with the sub-regional coordinator including criteria such as: • It is anticipated to have more than one back-up laboratory because of the complexity of the POPs and the matrices (basic POPs *vs*. dioxin-like POPs and PFOs and flame retardants POPs; biotic *vs*. abiotic matrices, *i.e.*, air, water *vs.* mother's milk and human blood) • The back-up laboratories will have proven expertise in POPs analysis through successful participation in international intercalibration studies, and excellent communication and teaching skills.	1-3
3. Hold an experts' workshop to; • discuss and amend the GMP guidance; • discuss progress made on the project; • discuss integration with existing initiatives	4-9
4. Develop analytical protocols and training materials for sampling and analysis • Protocols for sampling program to identify meaningful samples; • Analytical protocols/training materials will be developed based on existing national procedures and the guidance from Stockholm Secretariat, WHO (for mothers' milk and human blood) and the air and water monitoring programs included in the GMP. The protocols will be adapted to national conditions.	4-9
5. Provide the necessary spares and consumables to the participating laboratories • A list of necessary spares and consumables will be prepared jointly, purchased and shipped; • Containers for milk sampling and air samplers will be purchased and shipped to the participating countries; • Analytical standards and reference materials will be identified, purchased, and shipped to the laboratories.	7-9
6. Networks for collection of air, water, and mothers' milk and human blood samples will be set-up:	7-9

• Agreed protocols will be applied and air and water samplers deployed accordingly; preferably in all pilot countries; • Clinics and other institutions will be contacted and a list of mothers' willing to donate their breast milk and blood to the project; • Institutions and donors will sign the ethical agreement; • Air, water, mothers' milk and blood samples will be collected accordingly and shipped to the respective laboratories at national level or internationally/centrally. Eventually, pools will directly be shipped to the WHO Reference laboratory for official analysis.	
7. Train the laboratory staff in POPs analysis according to international standards: o Two staff from the back-up laboratory will undertake a training course at the developing country laboratory according to the priority needs and interest of the laboratory;	10-12
8. Analysis of core matrices o After/at the training national samples of interest will be analysed in the participating laboratory; o Mirror analysis will be undertaken by the expert laboratory/laboratories (these samples will put an emphasis on the four GMP core matrices)	16-18
9. Undertake an international intercalibration study to compare the local results at international level o Well characterized samples from intercalibration studies will be analysed by the participating laboratories o An intercalibration study between the laboratories will be undertaken o Authoring relevant chapters for regional GMP reports	10-21
10. High quality sample results will be submitted to regional coordination group for consideration of inclusion into the next global GMP report.	22-24
11. Write final report.	24

The following reports and publications will be produced:

Technical Reports: Technical Reports are documents of technical scientific nature covering specific areas within the overall project. It is envisaged to prepare technical reports on key areas of activity during the course of the project such as on sampling strategies and study design, analytical protocols, and final data on POPs analysis. The Technical reports will be made publicly available and made available to the stakeholders, *i.e.,* the Regional Coordinating Group for the GMP under the effectiveness evaluation of the Stockholm Convention. The technical reports will feed into the Global Report.

Publications/Conference: It is envisaged that Project Publications will form a key method of crystallizing and disseminating the results and achievements of the project. These publications may be scientific or informational texts on the activities and achievements of the project, in the form of journal articles, multimedia publications, etc. These publications can be based on Technical Reports, depending upon the relevance, scientific worth, etc. of these Reports, or may be summaries or compilations of a series of Technical Reports and other analyses. The project team will determine if any of the Technical Reports merit formal publication, and will also, in consultation with UNEP and other relevant stakeholder groups, plan and produce these Publications in a consistent and recognizable format. Any publications need prior clearance from UNEP and the participating countries. Project resources will need to be defined and allocated for these activities as appropriate and in a manner commensurate with the project's budget.

Project Terminal Report: During the last three months of the project, the regional team under the leadership of the regional coordinator will prepare the final regional report as part of the Project Terminal Report. The Project Terminal Report will summarize all activities, achievements, and outputs of the project, objectives met or not achieved, structures and systems implemented, *etc.* and will be the definitive statement of the project's activities during its lifetime. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's activities.

Appendix 4: Costed M&E plan

Day-to-day management and monitoring of the project activities will be the responsibility of the executing agency, UNEP/DTIE Chemicals. Chemicals will submit half-yearly reports to DGEF and a Project Implementation Report (PIR) once a year.

The half-yearly reports will include progress in implementation of the project, financial report, a work plan and expected expenditures for the next reporting period. It will also include obstacles occurred during implementation period where necessary.

The PIR will be prepared on an annual basis with the first report due one year after project implementation start according to GEF rules. It will be submitted by DTIE Chemicals to the DGEF task manager.

For the implementation of major regional activities, DTIE Chemicals will subcontract the regional organizations currently coordinating the GEF funded GMP projects in four sub-regions in the world. The day-to-day management and monitoring of the regional activities in the participating countries will be the responsibility of the regional teams. The coordinators of the regional teams will report to DTIE Chemicals. The regional team leaders will submit half-yearly technical and financial reports to DTIE Chemicals.

Each regional team will be coordinated by the regional coordinator and is comprised of staff from the regional organization and local experts from the participating countries. The regional organizations will be responsible for the recruitment of local/regional staff and the execution of the activities according to the work plan and expected outcomes.

The Project Steering Committee will be kept small but efficient and include the directly concerned stakeholders. The Steering Group will comprise DTIE Chemicals, DGEF, Secretariat of Stockholm Convention, WHO, regional organizations coordinating the current GEF GMP projects in four sub-regions, and the involved bilateral donors.

The Steering Group will meet back-to-back with the technical meetings, *i.e.,* inception workshop and final workshop. The Steering Group will monitor the progress of the project and give advice as to implementation issues.

Table: Monitoring and Evaluation Budget

M&E activity	Purpose	Responsible Party	Budget (US$)*[1]	Time-frame
Inception workshop	Awareness raising, building stakeholder engagement, detailed work planning with key groups	UNEP	0	Within two months of project start
Inception report	Provides implementation plan for progress monitoring	Project coordinator	0	Immediately following Inception Workshop
Project Review by Steering Committee	Assesses progress, effectiveness of operations and technical outputs; Recommends adaptation where necessary and confirms forward implementation plan.	UNEP	22,000	Month 1, 12 and 24
Project Implementation Review	Progress and effectiveness review for the GEF	UNEP	0	Month 12
Terminal report	Reviews effectiveness against implementation plan Highlights technical outputs Identifies challenges and opportunities and likely	UNEP	0	At the end of project implementation

	design approaches for future projects, assesses likelihood of achieving design outcomes			
Independent Terminal evaluation	Reviews effectiveness, efficiency and timeliness of project implementation, coordination mechanisms and outputs Identifies challenges and opportunities and likely remedial actions for future projects Highlights technical achievements and assesses against prevailing benchmarks	UNEP, Independent external consultant	30,000	At end of project implementation
Independent Financial Audit	Reviews use of project funds against budget and assesses probity of expenditure and transactions	UNEP	0	At the end of project implementation
Total indicative M&E cost*[1]			52,000	

*1: Excluding project team staff time. All costs of workshop are shared because these will be joined with relevant technical and planning meetings.

Appendix 5: Standard Terminal Evaluation TOR

TERMS OF REFERENCE

Terminal Evaluation of the UNEP GEF project …

Project Number GF/…

1. PROJECT BACKGROUND AND OVERVIEW

Project rationale from the project document

Relevance to GEF Programmes

Executing Arrangements

Project Activities

Budget

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: …

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 regularly 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 revisions.

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

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) Review of specific products including the final reports from country executing agencies, workshop proceedings, etc
(c) Notes from the Steering Group meetings.
(d) Other project-related material produced by the project staff or partners.

2. Interviews with project management and technical support staff.

3. Interviews with intended users for the project outputs and other stakeholders involved with this project, including in the participating countries and international bodies. As appropriate, these interviews could be combined with an email questionnaire.

4. The Consultant shall seek additional information and opinions by e-mail, through telephone communication, or by actual meetings.

5. 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.

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 Evaluation Parameters

A. Attainment of objectives and planned results:

The assessment of project results seeks to determine the extent to which the project objectives were achieved, or are expected to be achieved, and assess if the project has led to any other positive or negative consequences. While assessing a project's outcomes the evaluation will seek to determine the extent of achievement and shortcomings in reaching the project's objectives as stated in the project document and also indicate if there were any changes and whether those changes were approved. As the project did not establish an elaborate baseline (initial conditions), the evaluator should seek to estimate the baseline condition so that achievements and results can be properly established (or simplifying assumptions used). Since most GEF projects can be expected to achieve the anticipated outcomes by project closing, assessment of project outcomes should be a priority. Outcomes are the likely or achieved short-term and medium-term effects of an intervention's outputs. Examples of outcomes could include but are not restricted to stronger institutional capacities, higher public awareness (when leading to changes of behaviour), and transformed policy frameworks or markets. 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" specified in the project document and logical framework[4].
- *Relevance:* In retrospect, were the project's outcomes consistent with the focal areas/operational program strategies and country priorities? The evaluation should also assess the whether outcomes specified in the project document and or logical framework are actually outcomes and not outputs or inputs.
- *Efficiency:* Cost-effectiveness assesses the achievement of the environmental and developmental objectives as well as the project's outputs in relation to the inputs, costs, and implementing time. Include an assessment of outcomes in relation to inputs, costs, and implementation times based on the following questions: 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? The evaluation should assess the contribution of cash and in-kind co-financing to project implementation and to what extent the project leveraged additional resources. Comparisons of the cost-time vs. outcomes relationship of the project with that of other similar projects should be made if feasible.

B. Assessment of Sustainability of project outcomes:

Sustainability is understood as the probability of continued long-term project-derived outcomes and impacts after the GEF 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

[4] In case in the original or modified expected outcomes are merely outputs/inputs then the evaluators should assess if there were any real outcomes of the project and if yes then whether these are commensurate with the realistic expectations from such projects.

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. In this case, sustainability will be linked to the continued use and influence of scientific models and scientific findings, produced by the project.

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

- *Financial resources.* To what extent are the outcomes of the project dependent on continued financial support? What is the likelihood that any required financial resources will be available to sustain the project outcomes/benefits once the GEF assistance ends (resources can be from multiple sources, such as the public and private sectors, income generating activities, and market trends that support the project's objectives)? Was the project was successful in identifying and leveraging co-financing?
- *Socio-political:* To what extent are the outcomes of the project dependent on socio-political factors? What is the likelihood that the level of stakeholder ownership will allow for the project outcomes/benefits to be sustained? Is there sufficient public / stakeholder awareness in support of the long term objectives of the project?
- *Institutional framework and governance.* To what extent are 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.* Are there any environmental risks that can undermine the future flow of project environmental benefits? The TE should assess whether certain activities in the project area will pose a threat to the sustainability of the project outcomes.[5]

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 any 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.

C. Catalytic role

The terminal evaluation will also describe any catalytic or replication effect of the project. What examples are there of replication and catalytic outcomes that suggest increased likelihood of sustainability? 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

[5] For example, construction of dam in a protected area could inundate a sizable area and thereby neutralizing the biodiversity related gains made by the project or, a newly established pulp mill might jeopardise the viability of nearby protected forest areas by increasing logging pressures.

scaling up (lessons and experiences are replicated within the same geographic area but funded by other sources). If no effects are identified, the evaluation will describe the catalytic or replication actions that the project carried out. No ratings are requested for the catalytic role.

D. 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 methods and approached used by the project.

E. Assessment of Monitoring and Evaluation Systems:

- **M&E design.** Did the project have a sound M&E plan to monitor results and track progress towards achieving project objectives? 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 (Minimum requirements are specified in Annex 4). 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 M&E plan should include a baseline (including data, methodology, etc.), SMART (see Annex 4) indicators 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.** Was an M&E system in place and did it facilitate tracking of results and progress towards projects objectives throughout the project implementation period. Were Annual project reports complete, accurate and with well justified ratings? Was the information provided by the M&E system used during the project to improve project performance and to adapt to changing needs? Did the Projects have an M&E system in place with proper training for parties responsible for M&E activities to ensure data will continue to be collected and used after project closure?
- **Budgeting and Funding for M&E activities.** Were adequate budget provisions made for M&E made and were such resources made available in a timely fashion during implementation?
- **Long-term Monitoring.** Is long-term monitoring envisaged as an outcome of the project? If so, comment specifically on the relevance of such monitoring systems to sustaining project outcomes and how the monitoring effort will be sustained.

F. Assessment of processes that affected attainment of project results.

The evaluation will consider, but need not be limited to, consideration of the following issues that may have affected project implementation and attainment of project results:

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

- 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: (3) GEF guidance: UNEP DGEF.

ii. **Country ownership/Drivenness.** This is the relevance of the project to national development and environmental agendas, recipient country commitment, and regional and international agreements. Examples of possible evaluative questions include: Was the project design in-line with the national sectoral and development priorities and plans? Are project outcomes contributing to national development priorities and plans? Were the relevant country representatives, from government and civil society, involved in the project? Did the recipient government maintain its financial commitment to the project? Have the government approved policies or regulatory frameworks been in-line with the project's objectives?

Stakeholder involvement. Did the project involve the relevant stakeholders through information sharing, consultation and by seeking their participation in project's design, implementation, and monitoring and evaluation? For example, did the project implement appropriate outreach and public awareness campaigns? Did the project consult and make use of the skills, experience and knowledge of the appropriate government entities, NGOs, community groups, private sector, local governments and academic institutions in the design, implementation and evaluation of project activities? Were perspectives of those that would be affected by decisions, those that could affect the outcomes and those that could contribute information or other resources to the process taken into account while taking decisions? Were the relevant vulnerable groups and the powerful, the supporters and the opponents, of the processes properly involved? Specifically the evaluation will:

- 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 any various public awareness activities that were undertaken during the course of implementation of the project.

Financial planning. Did the project have the appropriate financial controls, including reporting and planning, that allowed management to make informed decisions regarding the budget and allowed for timely flow of funds. Specifically, 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 throughout the project's lifetime.
- Present the major findings from the financial audit if one has been conducted.
- Did promised co-financing materialize? 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 project costs by activities compared to budget (variances), financial management (including disbursement issues), and co- financing. This information will be prepared by the relevant DGEF Fund Management Officer of the project for scrutiny by the evaluator (table attached in Annex 1 Co-financing and leveraged resources).

UNEP Supervision and backstopping. Did UNEP Agency staff identify problems in a timely fashion and accurately estimate its seriousness? Did UNEP staff provide quality support and advice to the project, approved modifications in time and restructure the project when needed? Did UNEP and Executing Agencies provide the right staffing levels, continuity, skill mix, frequency of field visits?
Co-financing and Project Outcomes & Sustainability. If there was a difference in the level of expected co-financing and actual co-financing, then what were the reasons for this? Did the extent of materialization of co-financing affect the project's outcomes and/or sustainability, and if it did affect outcomes and sustainability then in what ways and through what causal linkages?
Delays and Project Outcomes & Sustainability. If there were delays in project implementation and completion, the evaluation will summarise the reasons for them. Did delays affect the project's outcomes and/or sustainability, and if so in what ways and through what causal linkages?

The ***ratings will be presented in the form of a table*** with each of the categories rated separately and with **brief justifications for the rating** based on the findings of the main analysis. An overall rating for the project should also be given. The rating system to be applied is specified in Annex 1:

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 provide information on when the evaluation took place, the places visited, who was involved and be presented in a way that makes the information accessible and comprehensible. The report should include an executive summary that encapsulates the essence of the information contained in the report to facilitate dissemination and distillation of lessons.

Evidence, findings, conclusions and recommendations should be presented in a complete and balanced manner. 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;
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 and should provide a commentary on all evaluation aspects (A − F 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;

vi) **Recommendations** suggesting *actionable* proposals for stakeholders to rectify poor existing situations as well as recommendations concerning projects of similar nature.. In general, Terminal Evaluations are likely to have very few (only two or three) actionable recommendations;

vii) **Annexes** include Terms of Reference, list of interviewees, documents reviewed, brief summary of the expertise of the evaluator / evaluation team, a summary of co-finance information etc. Dissident views or management responses to the evaluation findings may later be appended in an annex.

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 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.

All UNEP GEF Evaluation Reports are subject to quality assessments by UNEP EOU. These incorporate GEF Office of Evaluation quality assessment criteria and are used as a tool for providing structured feedback to the evaluator (see Annex 3).

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:

…

With a copy to:

…

The final evaluation report will be printed in hard copy and published on the Evaluation and Oversight Unit's web-site www.unep.org/eou. 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… The evaluator will submit a draft report on … to UNEP/EOU, the UNEP/DGEF Task 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 … after which, the consultant will submit the final report no later than ...

In accordance with UNEP/GEF policy, all GEF 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. Knowledge of UNEP programmes and GEF activities is desirable. Fluency in oral and written English is a must.

Annex 1. OVERALL RATINGS TABLE

Criterion	Evaluator's Summary Comments	Evaluator's Rating
Attainment of project objectives and results (overall rating) **Sub criteria (below)**		
Effectiveness		
Relevance		
Efficiency		
Sustainability of Project outcomes (overall rating) **Sub criteria (below)**		
Financial		
Socio Political		
Institutional framework and governance		
Ecological		
Achievement of outputs and activities		
Monitoring and Evaluation (overall rating) **Sub criteria (below)**		
M&E Design		
M&E Plan Implementation (use for adaptive management)		
Budgeting and Funding for M&E activities		
Catalytic Role		
Preparation and readiness		
Country ownership / driveness		
Stakeholders involvement		
Financial planning		
UNEP Supervision and backstopping		
Overall Rating		

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.

All the risk dimensions of sustainability are 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 either 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 GEF six point scale.

GEF 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 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 (mill US$)		Government (mill US$)		Other* (mill US$)		Total (mill US$)		Dish (m
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned
– Grants									
– Loans/Concessional (compared to market rate)									
– Credits									
– Equity investments									
– In-kind support									
– Other (*) - - - - -									
4 Totals									

* 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.

Table showing final actual project expenditure by activity to be supplied by the UNEP Fund management Officer. (insert here)

Annex 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 consultation. The DGEF 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 consultation 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 GEF Reports are subject to quality assessments by UNEP EOU. These apply GEF Office of Evaluation quality assessment and are 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:

GEF Report Quality Criteria	**UNEP EOU Assessment**	**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? Did the recommendations specify a goal and an associated performance indicator?		
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		

GEF 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* 'GEF EO' rating + EOU rating)/3
The Totals are rounded and converted to the scale of HS to HU

Rating system for quality of terminal evaluation reports

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.

Annex 4 GEF Minimum requirements for M&E

Minimum Requirement 1: Project Design of M&E[6]

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.

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

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 GEF 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.

Annex 5 List of intended additional recipients for the Terminal Evaluation

Name	Affiliation	Email
Government Officials		
GEF Focal Point(s)		
Executing Agency		

Appendix 6: Budget by project component and UNEP budget lines

RECONCILIATION BETWEEN GEF ACTIVITY BASED BUDGET AND UNEP BUDGET BY EXPENDITURE CODE (GEF FINANCE ONLY)

Project No:

Project Name: **GMP for New POPs**

Executing Agency: **UNEP/DTIE Chemicals Branch** 0.5

0.3

Source of funding (noting whether cash or in-kind): **GEF Trust Fund Cash** 0.7

		BUDGET ALLOCATION BY PROJECT COMPONENT/ACTIVITY *							ALLOCATION BY CALENDAR YEAR **		
		Output 1	**2**	**3**	**4**	**5**	**6**	**Total**	**Year 1**	**Year 2**	**Total**
		Analytical methods guide, databank updated	GMP guidance with SOPs updated	Capacity building at national level in UN regions	Intercalibration study	Field data available	Project management and evaluation				
UNEP BUDGET LINE/OBJECT OF EXPENDITURE		US$	US$	US$	US$	US$	US$	US$	US$	US$	US$
1201	Updating of Labs databank and Website	14,000						14,000	14,000		14,000
2201	Development of analytical guide+classification	20,000						20,000	20,000		20,000
1	**Output total**	**34,000**	**0**	**0**	**0**	**0**	**0**	**34,000**	**34,000**	**0**	**34,000**
2202	Development of PFOS guidance in air, water		20,000					20,000	20,000		20,000
2203	Development of BFR guidance in air		30,000					30,000	30,000		30,000
2204	Development of human matrix guide		20,000					20,000	20,000		20,000
3302	Global final expert evaluation workshop		22,000					22,000		22,000	22,000
2	**Output total**	**0**	**92,000**	**0**	**0**	**0**	**0**	**92,000**	**70,000**	**22,000**	**92,000**
2205	Expert labs for analysis of new POPs			32,000				32,000	32,000		32,000
3201	Field testing air and training sessions			30,000				30,000	15,000	15,000	30,000
3202	Field testing water and training sessions			40,000				40,000	20,000	20,000	40,000
3203	Field sampling milk and			40,000				40,000	20,000	20,000	40,000

	blood										
3204	Travel to capacity building			30,000				30,000	15,000	15,000	30,000
3301	Thematic or POPs-specific workshops			60,000				60,000	30,000	30,000	60,000
4101	Spares, consumables, standards, samplers			24,000				24,000	12,000	12,000	24,000
5301	Communication, shipment, freight, etc.			32,000				32,000	16,000	16,000	32,000
3	**Output total**	**0**	**0**	**288,000**	**0**	**0**	**0**	**288,000**	**160,000**	**128,000**	**288,000**
2207	Intercalibration studies (PFOS, BFR, HCHs)				100,000			100,000		100,000	100,000
4	**Output total**	**0**	**0**	**0**	**100,000**	**0**	**0**	**100,000**	**0**	**100,000**	**100,000**
5201	Sectoral reports (water, air, PFOS, BFR, incl. data reporting)					28,000		28,000	0	28,000	28,000
2206	Expert labs for mirror analysis					74,000		74,000	0	74,000	74,000
5	**Output total**	**0**	**0**	**0**	**0**	**102,000**	**0**	**102,000**	**0**	**102,000**	**102,000**
1101	Project coordinator (UNEP)						40,000	40,000	20,000	20,000	40,000
1601	Travel Project coordinator (UNEP)						24,000	24,000	12,000	12,000	24,000
5501	Final evaluation						20,000	20,000		20,000	20,000
6	**Output total**	**0**	**0**	**0**	**0**	**0**	**84,000**	**84,000**	**32,000**	**52,000**	**84,000**
TOTAL COST		**34,000**	**92,000**	**288,000**	**100,000**	**102,000**	**84,000**	**700,000**	**296,000**	**404,000**	**700,000**

Appendix 10: Co-finance by source and UNEP budget lines

Project No:

Project Name: **GMP for New POPs**

Executing Agency: **UNEP/DTIE Chemicals Branch** 0.5

0.3

Source of funding (noting whether cash or in-kind): **Cofinance** 0.7

		BUDGET ALLOCATION BY PROJECT COMPONENT/ACTIVITY *							**ALLOCATION BY CALENDAR YEAR ****		
		Output 1	**2**	**3**	**4**	**5**	**6**	**Total**	**Year 1**	**Year 2**	**Total**
		Instrumentation and methods, databank updated	Analytical guidance updated	Capacity bulding at national level	Intercalibration study	Field data available	Project management and evaluation				
UNEP BUDGET LINE/OBJECT OF EXPENDITURE		US$	US$	US$	US$	US$	US$	US$	US$	US$	US$
5101	Rental & maint. of computer equip.	3,000						3,000	1,500	1,500	3,000
5102	Rental & maint. of copiers	3,000						3,000	1,500	1,500	3,000
5103	Repair & maint. of vehicles & insurance	3,000						3,000	1,500	1,500	3,000
5104	Rental & maint. of lab equip	3,000						3,000	1,500	1,500	3,000
5105	Rental of meeting rooms & equip.	3,000						3,000	1,500	1,500	3,000
1	**Output total**	**15,000**	**0**	**0**	**0**	**0**	**0**	**15,000**	**7,500**	**7,500**	**15,000**
2202	Development of PFOS guidance in air, water		147,000					147,000	147,000		147,000
3301	Thematic or POPs-specific workshops		36,000					174,000	105,000	69,000	174,000
2	**Output total**	**0**	**321,000**	**0**	**0**	**0**	**0**	**321,000**	**252,000**	**69,000**	**321,000**
3201	Field testing air and training sessions			660,000				660,000	330,000	330,000	660,000
3302	Global final expert evaluation workshop			40,000				40,000		40,000	40,000
4101	Spares, consumables, standards, samplers			2,000				2,000		2,000	2,000
5202	Translation of essential			120,000				120,000	60,000	60,000	120,000

	documents										
3	**Output total**	**0**	**0**	**822,000**	**0**	**0**	**0**	**822,000**	**390,000**	**432,000**	**822,000**
								0	0		0
4	**Output total**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
								0			0
5	**Output total**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
1101	Project staff SSC						298,340	298,340	149,170	149,170	298,340
1101	Project coordinator (UNEP)						50,000	50,000	25,000	25,000	50,000
1301	Administrative assistant						10,000	10,000	5,000	5,000	10,000
6	**Output total**	**0**	**0**	**0**	**0**	**0**	**358,340**	**358,340**	**179,170**	**179,170**	**358,340**
TOTAL COSTS		**15,000**	**321,000**	**822,000**	**0**	**0**	**358,340**	**1,516,340**	**828,670**	**687,670**	**1,516,340**

Appendix 11: Summary of reporting requirements and responsibilities

1. Day-to-day management and monitoring of project activities at the global level, will be the responsibility of the Executing Agency (UNEP DTIE Chemicals). At the regional level, it will be the responsibility of the regional coordinating organization in the four sub-regions conducting GEF GMP projects.

2. During the course of the project, the Executing Agency teams will be responsible for the preparation of regular progress reports (financial and technical) and for the preparation of forward plans and budgetary estimation. The Executing Agency is responsible to compile the regional reports and to produce global reports to be submitted to the Implementing Agency (UNEP DGEF). The timely preparation and submission of mandatory report forms are integral part of the monitoring process. Reporting requirements are summarized below:

Summary of Reporting Requirements and project monitoring

Report and Content	Format	Timing	Responsibility
Inception report			
Detailed implementation plan for progress monitoring	Agreed format allowing progress tracking	Following inception workshops	UNEP
Technical Progress reports			
Documents progress & completion of activities; Describes progress against annual work plan; Reviews implementation plans, summarizes problems and adaptive management; Provides activity plans for following period; Provides project outputs for review	UNEP Progress Reporting Formats;	Biennial, within 30 days of each reporting period	UNEP
Financial Progress Reports			
Documents project expenditure according to established project budget and allocations; Provides budgetary plans for following reporting period; Requests further cash transfers; Requests budget revision as necessary; Provides inventory of non-expendable equipment procured for project	UNEP Financial reporting formats; Inventory of non-expendable equipment	Biennial, within 30 days of each reporting period	UNEP
Financial Audit			
Audit of project accounts and records, if applicable	Approved audit report format	At project completion	UNEP
Co-financing report			
Reports co-financing provided to the project; Reviews co-financing inputs against GEF approved financing plan	UNEP reporting format	Annual	UNEP, SSC
Project Implementation Review (PIR) reports			
Summary implementation review	GEF M&E format	Annual	UNEP (DTIE and DGEF)
Terminal report			
Review of effectiveness of the project, its technical outputs and progress towards outcomes	UNEP reporting format	At project completion	UNEP
Terminal Evaluation			
Provides detailed independent evaluation of project management, actions, outputs and impacts	GEF M&E format	At project completion	Independent Evaluator UNEP GEF, UNEP DTIE

3. The ***Inception report*** will include a detailed narrative on the institutional roles and responsibilities of the project partners, identify stakeholder engagement commitments developed during the inception workshops, set out progress on project establishment and start-up activities, provide a detailed implementation plan suitable for progress tracking purposes. The report will be submitted by UNEP DTIE to UNEP-GEF and used as a benchmark against which regular progress reports are reviewed.

4. ***Technical Progress reports*** will be prepared by the project coordinator in BCRC in English within 30 days of the end of each semester. Regional progress reports will be submitted to UNEP DTIE by regional coordinators. Reports will be prepared using the standard UNEP format. The reports will be approved by the UNEP DTIE and submitted to UNEP-GEF. These reports form the principal tools of regular project monitoring and will contain:

- an account of actual implementation activities undertaken during the reporting period and an assessment of progress against the implementation plan
- an identification of barriers to project implementation and recommendations for corrective actions during the following period, including any revision to the implementation plan
- a detailed and costed work plan for the following reporting period, including a forward project of the status of funds held locally and, when necessary, a request for further cash transfers to the project
- an updated inventory of non-expendable equipment and items of attraction procured for the project
- copies of project meeting reports and participants lists, technical outputs submitted to the project team

5. ***Financial progress reports (Project Expenditure Accounts)***: will be prepared by the Executing Agency within 30 days of the end of each semester. Reports will be prepared in US$ using the project budget codes and in the standard UNEP format. They will contain an account of actual expenditure in support of the activities undertaken. The reports will be approved by a duly authorized official of the UNEP DTIE and submitted to UNEP-GEF.

6. A ***terminal financial audit, if applicable,*** is required within 180 days of the completion of the project. UNEP DTIE will supply UNEP DGEF with a final statement of account in the same format as for the periodic financial statements, certified by a recognized firm of public accountants. If requested, the BCRC shall facilitate an audit by the United Nations Board of Auditors and/or the Audit Service of the accounts of the Project. In particular, the auditors should be asked to report whether, in their opinion:

- Proper books of account and records have been maintained;
- All project expenditures are supported by vouchers and adequate documentation;
- Expenditures have been incurred in accordance with the objectives outlined in the project document;
- The Expenditure reports provide a fair view of the financial condition and performance of the project

7. ***Unspent funds*****:** Any portion of cash advances remaining unspent or uncommitted by UNEP DTIE on completion of the project will be reimbursed to UNEP DGEF within one month of the presentation of the final statement of accounts. In the event of any delay in such reimbursement, UNEP DTIE will be financially responsible for any adverse movement in the exchange rates.

8. ***Co-finance report***: The Executing Agency will report annually on the co-finance received and used to advance the project activities. The report will show:
    - The amount of co-financing realized compared with the amount of co-financing committed to at the time of project approval, and

- Co-financing reporting by source and by type[7].

9. ***Annual Progress reports*** will be prepared by the project coordinator in English at the end of each 12 month period of project implementation and will feed the ***Project Implementation Review (PIR)***. The PIR is an annual monitoring process mandated by the GEF and for which the independent GEF M&E unit provides the scope and content. Individual PIRs are collected, reviewed and analyzed by UNEP-GEF by focal area, theme and region to extract common issues, challenges and opportunities. Focal area PIRs are discussed at the GEF Interagency Focal Area Task Forces with consolidated reports by focal area then being transferred to the independent GEF M&E unit.

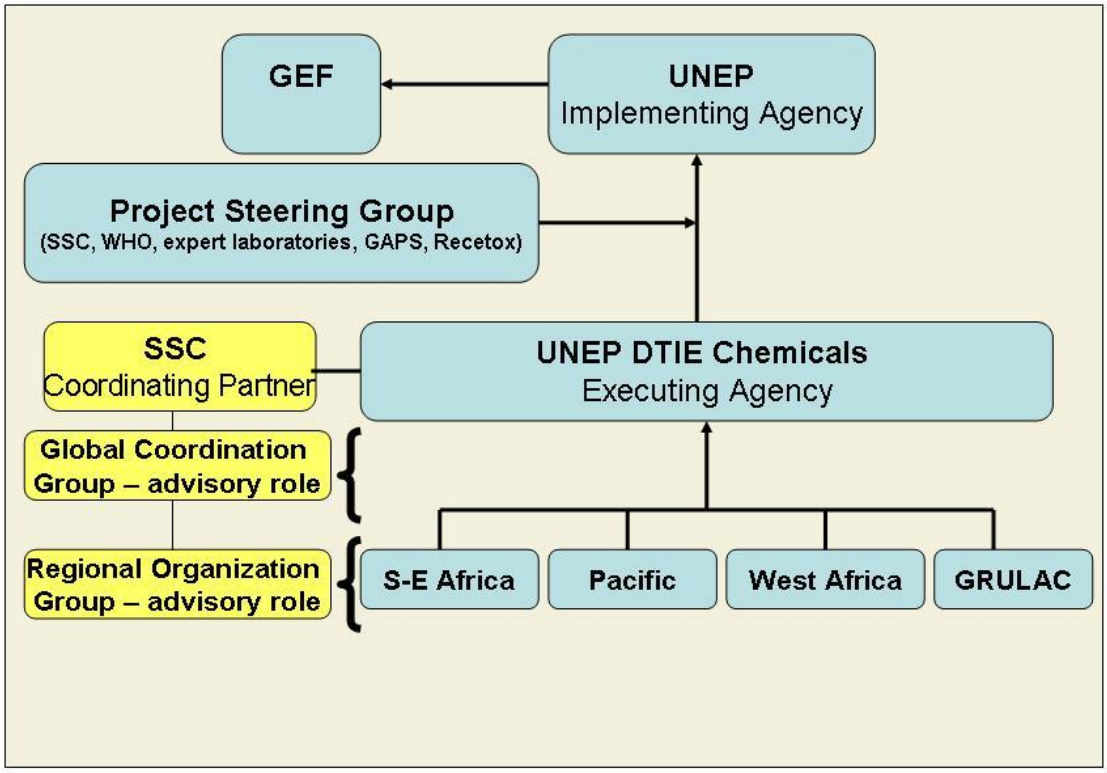
10. The ***Terminal Report*** is prepared by the Executing Agency and the regional coordinators in English immediately within the 60 days following the end of project implementation. It is submitted to UNEP-GEF, to the Chief, Budget and Financial Management Service, and to the Chief, Programme Coordination and Management Unit. It provides a review of the effective operation of the project and of its achievements in reaching its designed outputs. The report will assess the likelihood of the project achieving its design outcomes. It provides a basis for the independent ***Terminal Evaluation*** of the project. This evaluation reviews the impact and effectiveness of the project, the sustainability of results and whether the project has achieved its immediate, development and global objectives. Indicators for the evaluation of the effective operation of the project are given in the table below:

Indicators for evaluation of effective operation of the project

Indicator	Means of verification
Biennial and annual progress and financial reports prepared in a timely and satisfactory manner	Arrival of reports at UNEP
Performance targets, outputs, and outcomes are achieved as specified in the implementation plan and any agreed revisions to it	Progress reports
Deviations from the implementation plans are corrected promptly and appropriately.	Work plans, minutes of BCRC meetings
Biennial financial reports are timely and accurate	Arrival of reports at UNEP
Disbursements are made on a timely basis	IMIS system of UNEP and Bank statements of national executing agency
Procurement is achieved according to procurement plan and reflected in non-expendable equipment inventory	Progress reports
Requests for deviations from approved budgets are submitted in timely manner	Timely submission of revised budget to UNEP for approval
Audit reports and other reviews showing sound financial practices	Audit reports

[7] Sources include the agency's own co-financing, government co-financing and contributions mobilized for the project from other multilateral agencies, bilateral development cooperation agencies, NGOs, the private sector, and beneficiaries.
Types of co-finance include Cash (grants, loans, credits, and equity investments) and In-Kind resources (limited to those dedicated uniquely to this project and valued as the lesser of the cost and the market value of the required inputs they provide for the project and monitored with documentation available for any evaluation or project audit

Appendix 12: Organizational Chart



Appendix 13: Terms of Reference for the Project Coordinator

Project Coordinator
Terms of Reference
Job Description
Project: Establishing the Tools and Methods to include the nine new POPs into the Global Monitoring Plan

Post title: Project Coordinator
Duration: 24 Months
Date Required: 1 February 2011
Duty station: Geneva, Switzerland
Counterpart: UNEP DTIE Chemicals

Duties: Working within the UNEP DTIE premises and with recruited experts, the Project Coordinator will be responsible for the supervision, coordination and execution, of the above mentioned project.

The main duties are as follows:

	Main Duty	Output	Timing
1	Elaborate a detailed work plan and budget for the MSP project.	Work Plan and budget	For consideration at the 1st meeting of the Steering Group
2	Liaise with the parties participating and countries in the project and assist them to: • Establish national coordinating mechanisms (NCCs) • Link project activities to the Governments' broader implementation of their Stockholm Convention National Implementation Plans (NIPs)	Terms of Reference for NCCs NCCs established and operational	At project start to provide national representatives for the Steering Committee
3	Prepare, in consultation with UNEP DTIE, SSC and UNEP DGEF, draft Terms of Reference for the experts to be contracted in the context of the MSP project	Draft Terms of Reference	For consideration at the 1st meeting of the Steering Group
4	Provide a secretariat function for the Steering Committee of the project including: • Prepare necessary documents and logistics for the meetings of the Committee; • Facilitate meetings, providing progress and draft technical papers for consideration • Prepare formal reports of meetings	Meeting papers and Reports	Meetings of the Steering Committee are envisaged at the inception and late stage (2 meetings) of the MSP implementation. Exact timing to be determined in the work plan.
5	Prepare, lead and report regional and stakeholder consultation workshops planned in the context of the project	Meeting papers and reports	As determined in the work plan
6	Prepare, in conformity with the project document, periodic progress and financial reports of the project	Progress and financial reports in UNEP format Terminal report of the MSP project	At the end of each semester Within 60 days of the end of the MSP project
7	Coordinate, in close collaboration with the UNEP DTIE, the SSC and the country	Regular supervision and	24 months

	Main Duty	Output	Timing
	partners, all activities under the MSP project, as stated in appendix 2 of the project document	coordination	
8	Prepare in collaboration with the UNEP DTIE and SSC and recruited expert(s) or expert labs; • a regional/national training curriculum; • a regional/national training plan for the full project phase; • updated guidance materials to conduct monitoring and analysis of new POPs • sample and analysis of new POPs	Training curriculum Regional/national training plan Data from analysis	Training curriculum and plan to be considered at the 1st Steering Committee Meeting During the first year of the project
9	Conduct an intercalibration study for new POPs in participating countrie/regions	Global report on the intercalibration study on new POPs	To be undertaken during the fisrt year of the project
10	Compile data from countries/regions and exchange information among participating countries and beyond	data from analysis and interpretation	At month 18 of the project

Expected Outputs/ Outcomes

- Reports of meetings of the Steering Committee and regional and national consultation meetings organized as part of the project
- Approved biennial and terminal progress and financial reports in UNEP formats as specified in the project document
- Terms of Reference for experts to be recruited to (for?) the project
- Terms of Reference for National Coordinating Committees linked to the project
- Coordination and final delivery of reports as stated in Appendix 11 of the Project document
- Training Curriculum, Regional Training Plan and intercalibration study programme.
- Terminal report to UNEP

Final written outputs will be required in English.

Reporting

The Global Coordinator will report to UNEP DGEF, Steering Committee, Partner countries and SSC.

Qualifications

At least 15 years experience with proven records as project coordinator in the field of POPs analysis and monitoring including all regions in the world.

Expert knowledgeable on the following matters:

- Knowledge of analysis of newly adopted POPs;
- Knowledge of good practices to monitor POPs and experience in setting up a network of experts on POPs;
- Guidelines on POPs monitoring and POPs Convention papers (including COP decisions);
- Internation standards for POPs monitoring;

Language:

Excellent command of spoken and written English

Background

The duties and tasks of the Regional Coordinator as set out above are derived from the project document approved by the GEF. This document will be provided to the Global Coordinator.
All the countries participating in the project are Parties to the Stockholm and have completed their National Implementation Plans.