



# REQUEST FOR MEDIUM-SIZED PROJECT APPROVAL (1-STEP PROCEDURE)

TYPE OF TRUST FUND: GEF Trust Fund

## PART I: PROJECT IDENTIFICATION

Project Title:	Continuing regional Support for the POPs Global Monitoring Plan under the Stockholm Convention in the Pacific Region.		
Country(ies):	Fiji, Kiribati, Marshall Islands, Niue, Palau, Samoa, Solomon Islands, Tuvalu, Vanuatu	GEF Project ID: <sup>1</sup>	
GEF Agency(ies):	UNEP	GEF Agency Project ID:	1308
Other Executing Partner(s):	UNEP/DTIE Chemicals Branch	Submission Date:	16/06/2014
GEF Focal Area (s):	Chemicals and Wastes	Project Duration (Months)	48
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/> Corporate Program: SGP <input type="checkbox"/>		
Name of parent program:	N/A		

### A. FOCAL AREA STRATEGY FRAMEWORK AND PROGRAM<sup>2</sup>:

Focal Area Objectives/programs	Focal Area Outcomes	Trust Fund	(in \$)	
			GEF Project Financing	Co-financing
CW-1 Program 2	Outcome 2.4: Global monitoring for POPs strengthened and established for Mercury	GEFTF	1,753,000	6,153,945
(select) (select) (select)	Others	(select)		
	Sub-Total		1,753,000	6,153,945
	Project Management Cost	GEFTF	172,000	225,659
	Project Evaluation Cost	GEFTF	70,000	69,000
	Total Project Cost		1,995,000	6,448,604

### B. PROJECT FRAMEWORK

Project Objective: To strengthen the capacity for implementation of the updated POPs Global Monitoring Plan (GMP) and to create the conditions for sustainable monitoring of POPs in the Pacific Islands Region.						
Project Components	Financing Type <sup>3</sup>	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Confirmed Co-financing
1. Securing conditions for successful project implementation.	TA	Relevant stakeholders for project implementation in the Pacific Islands region are committed to carry out the agreed responsibilities.	Technical and administrative support provided for the implementation of the project and organization of process established in the Pacific Islands Region	GEFTF	162,000	314,359
2. Capacity building and data generation on analysis of core abiotic matrices (air and water).	TA	Regional network and national capacity to carry out air and water sampling is enhanced in the Pacific Islands region, and high quality data is generated on the presence of initial	Training reports and sectoral reports on POPs analysis undertaken on two abiotic core matrices (i.e., air and water) in the Pacific Islands Region	GEFTF	747,000	1,103,876

<sup>1</sup> Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions

<sup>2</sup> When completing Table A, refer to the GEF Website, [Focal Area Results Framework](#) which is an [Excerpt from GEF-6 Programming Directions](#)

<sup>3</sup> Financing type can be either investment or technical assistance.

		and new POPs in the region.				
3. Capacity building and data generation on analysis of core biotic matrices (human milk).	TA	Regional network and national capacity to carry out human milk sampling is enhanced in the Pacific Islands region, and high quality data is generated on the presence of initial and new POPs in the region.	Training reports and sectoral report on POPs analysis undertaken on one biotic core matrix (6th round of human milk survey) in the Pacific Islands Region	GEFTF	335,000	3,330,809
4. Assessment of existing analytical capacities and reinforcement of national POPs monitoring.	TA	Accuracy of POPs assessment in the Pacific Islands region is consolidated by performance evaluation of national laboratories, as well as by analysis of additional matrices of major national interest.	Assessment report of existing analytical capacities prepared and report on POPs analysis undertaken in samples of national priority (other than core matrices) in the Pacific Islands Region	GEFTF	256,000	1,090,543
5. Securing conditions for sustainable POPs monitoring.	TA	Contribution to regional report for the GMP is performed, and a roadmap for sustainable POPs monitoring for the Pacific Islands region in global context is developed.	Assessment reports contributing to regional report for the GMP undertaken, and a roadmap for sustainable POPs monitoring developed for the Pacific Islands region	GEFTF	253,000	314,358
Subtotal					1,753,000	6,153,945
Project Management Cost (PMC) <sup>4</sup>				GEFTF	172,000	225,659
Project evaluation costs				GEFTF	70,000	69,000
<b>Total Project Costs</b>					1,995,000	6,448,604

### C. SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE

Please include confirmed co-financing letters for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
National Government	Fiji	In-kind	200,000
	Kiribati	In-kind	200,000
	Marshall Islands	In-kind	400,000
	Palau	In-kind	100,000
	Niue	In-kind	200,000
	Samoa	In-kind	200,000
	Solomon Islands	In-kind	400,000
	Tuvalu,	In-kind	200,000
	Vanuatu	In-kind	400,000
GEF Agency	UNEP	In-kind	200,000

<sup>4</sup> For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

IGO	Secretariat of the Basel, Rotterdam and Stockholm conventions	In-kind	75,000
	Secretariat of the Basel, Rotterdam and Stockholm conventions	Cash	25,000
	WHO		0
Other/bilateral	SPREP	In-kind	78,504
Academic institutions	University of Queensland, Australia	In-kind	139,500
	IVM VU Amsterdam		0
	MTM Centre Oerebro		300,000
	CVUA	In-kind	2,235,600
	USP/IAS	In-kind	500,000
	Recetox	In-kind	595,000
<b>Total Co-financing</b>			<b>6,448,604</b>

#### D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND PROGRAMMING FUNDS

GEF Agency	Trust Fund	Country Name/Global	Focal Area	Programming of Funds	(in \$)		
					Grant Amount (a)	Agency Fee (b) <sup>2</sup>	Total c=a+b
UNEP	GEFTF	Regional	Persistent Organic Pollutants	POPs	1,995,000	189,525	2,184,525
<b>Total Grant Resources</b>					1,995,000	189,525	2,184,525

a) Refer to the [Fee Policy for GEF Partner Agencies](#)

#### E. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS<sup>5</sup>

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	<i>(Enter number of hectares)</i>
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>(Enter number of hectares)</i>
3. Promotion of collective management of trans-boundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	<i>(Enter number of freshwater basins)</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	<i>(Enter percent of fisheries, by volume)</i>
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO <sub>2e</sub> mitigated (include both direct and indirect)	<i>(Enter number of tons)</i>
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	<i>(Enter number of tons)</i>
	Reduction of 1000 tons of Mercury	<i>(Enter number of tons)</i>
	Phase-out of 303.44 tons of ODP (HCFC)	<i>(Enter number of tons)</i>
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	<i>(Enter number of countries)</i>

<sup>5</sup> Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period..

national policy, planning financial and legal frameworks	Functional environmental information systems are established to support decision-making in at least 10 countries	9 developing countries 1 regional organization unit
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**F. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? (Select)**

(If non-grant instruments are used, provide an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF Trust Fund) in Annex B.

N/A

**PART II: PROJECT JUSTIFICATION**

**A. PROJECT OVERVIEW**

**A.1 PROJECT DESCRIPTION.**

*Briefly describe the project, including ; 1) the global environmental problems, root causes and barriers that need to be addressed; 2) the baseline scenario and any associated baseline projects, 3) the proposed alternative scenario, with a brief description of expected outcomes and components of the project, 4) incremental cost reasoning and expected contributions from the baseline , the GEFTF, LDCF/SCCF and co-financing; 5) global environmental benefits (GEFTF, NPIF) and adaptation benefits (LDCF/SCCF); 6) innovativeness, sustainability and potential for scaling up.*

**1. Global environmental problems, root causes and barriers that need to be addressed**

Persistent organic pollutants (POPs) are a group of chemicals including those that had/have been widely used in agricultural and industrial practices and those unintentionally produced and released from many anthropogenic activities around the globe. POPs are characterized by persistence – the ability to resist degradation in various media such as air, water, sediments and organisms for months and even decades; bioaccumulation - the ability to accumulate in living tissues at levels higher than those in the surrounding environment; harmfulness – the toxicity to human and/or wildlife to give adverse effects to human health and the environment, and potential for long range transport – the potential to travel long distances from the source of release through various media such as air, water and migratory species. Specific health effects of POPs include cancer, allergies and hypersensitivity, damage to the central and peripheral nervous systems, reproductive disorders, and disruption of the immune system. Some POPs are also considered to be endocrine disruptors which can damage reproductive and immune systems of the exposed individuals as well as their offspring by altering the hormonal system. The ability of these toxic compounds to transport to remote areas of the globe, such as the Arctic, and to bioaccumulate through food webs has raised concerns for the health of humans and the environment, particularly for indigenous people that rely on traditional diets of marine mammals and fish. Because of the international scope of manufacture, use and unintentional releases, and the long distance movement, Stockholm Convention on Persistent Organic Pollutants was established in May 2001 to “protect human health and the environment from persistent organic pollutants by reducing or eliminating releases to the environment”. The substances presently being addressed under the Convention are aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, hexachlorobenzene, mirex, PCB PCDD/PCDF, toxaphene, chlordecone, hexabromobiphenyl, pentachlorobenzene, lindane (gamma hexachlorocyclohexane), alpha hexachlorocyclohexane, beta hexachlorocyclohexane, tetrabromodiphenyl ether and pentabromodiphenyl ether (commercial pentabromodiphenyl ether), hexabromodiphenyl ether and heptabromodiphenyl ether (commercial octabromodiphenyl ether), perfluorooctane sulfonic acid, its salts and perfluorooctane sulfonyl fluoride (PFOS), endosulfan and hexabromocyclododecane.

**2. Baseline scenario and any associated baseline projects**

## The Global Monitoring Report

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 includes a Global Monitoring Plan (GMP), which monitors the presence of POPs in the environment and in humans. Such monitoring and subsequent assessment should be undertaken at regional basis. One of the objectives of the GMP is to assess POPs regional and global transport.

The GMP focuses initially on the core media mother's milk/blood to examine human exposure, and ambient air to examine long-range transport. The Conference of Parties (COP) has completed its first effectiveness evaluation at its fourth meeting in 2009 (COP4) based in part on the Regional Monitoring Reports, summarized in the Global Monitoring Report. Among other things, the Monitoring Report stresses the limited data available and constrained capacity for sustained monitoring in the Pacific sub-region. In order to improve this situation for future assessments, the report stresses that *“Capacity building for persistent organic pollutant monitoring programmes for most countries in the region remains the top priority recommendation”* and provides some detailed recommendations in this regard. These include in particular: *“performance of intercalibration tests; improving skills for sampling and analysis; strengthening the infrastructure in existing laboratories to provide capability to analyse the core media; and financial assistance to establish long term programmes and self-sufficient laboratories.”* (Stockholm Convention on Persistent Organic Pollutants (December 2008), *First Regional Monitoring Report Asian Pacific Region report*, see <http://chm.pops.int/Portals/0/Repository/GMP/UNEP-POPS-GMP-RMR-ASIAPACIFIC.English.PDF>) .

The COP4 also agreed upon the essential modalities for the environmental monitoring component of the subsequent evaluations and included 9 new chemicals in the POPs list (Decision SC-4/10-18; Annexes A, B, and C) The COP5 added endosulfan as a POP to be listed in Annex A (Decision SC-5/3) and the COP6 added hexabromocyclododecane as a POP to be listed in Annex A (Decision SC-6/13). As Parties to the Convention, Pacific developing countries are eligible for application of GEF funds to strengthen the monitoring capacity at national level and so to contribute with national data to the GMP. A first project entitled *“Supporting the implementation of the POPs Global Monitoring Plan in the Pacific Islands Region”* was conducted in the Pacific sub-region by UNEP/DTIE Chemicals Branch with financial assistance from the GEF from 2009 to 2011, in parallel to three other regional projects (East-South Africa, West Africa, and GRULAC). This project enabled provision of quality data on human exposure and environmental concentration of the 12 POPs originally included for the effective evaluation.

This series of projects have generated an abundance of results and **lessons learned** that were used to develop the guidelines for GMP 2. **Highlights include:**

### Capacity building at POPs Laboratories:

In the four UNEP/GEF GMP project participated 28 countries from the Pacific Islands, African and GRULAC regions. Four more countries from the GRULAC region – Bahamas, Barbados, Cuba, and Haiti – received similar training from UNEP financed by the SAICM QSP programme. This served as co-financing to the GRULAC GEF MSP project. In the Pacific region, there is only one POPs laboratory at Fiji, the USP/IAS, which received a 2-weeks training course. The main objective was to start up the new GC/ECD instrument and train the laboratory staff in the analysis of the core matrices- (ambient air; human milk and / or human blood).

This complementarily resulted in the following training courses that UNEP organized in the regions through its Expert Laboratories:

Table 1: Training courses organized by UNEP in the regions

Region	Funding	Number of training courses for POPs	Number of countries participating in the
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		Labs	project
Pacific project	GEF	1	8
West Africa project		3	6
South-East Africa project		5	6
GRULAC Project		7	8
GRULAC Project	SAICM QSP	2	4
Regional WS (AMS, BCN)	GEF	2	
<b>Total:</b>		<b>20</b>	<b>32</b>

In addition, developing country laboratories have been provided with consumables and small materials such as GC columns, analytical standards, solvents or sorption materials.

#### Human milk:

the WHO/UNEP protocol for the collection and analysis of pooled human milk has been adapted by the regional coordinator, University of South Pacific in the regional Pacific Islands project, to the national needs. Where necessary, advice and courses were given. The WHO/UNEP Reference laboratory in Freiburg, Germany, provided the countries with glassware where necessary. It can be considered a great success of the UNEP/GEF MSP in the Pacific Islands region that ALL countries participating in the first GMP in the Pacific were able to collect milk from first time mothers (note: some countries are extremely small in population; e.g., Niue with a population less than 2,000). POPs could be detected in all samples from all regions; however at different scales. Highest concentrations were observed for DDT, followed by PCB. Dioxin-like POPs were detected in all samples with PCDD/PCDF and dioxin-like PCB (dl-PCB) contributing to the total toxic equivalent (TEQ). Interestingly, there were countries with higher contribution through PCDD/PCDF; others had more PCB. Mirex and toxaphene were detected only in few cases and at low concentrations; aldrin and endrin were not identified in any sample.

In the Pacific Islands region, the high concentrations of DDT in some countries, such as Solomon Islands, were striking. The result makes sense since DDT application was and is still needed for malaria control.

#### Ambient air with passive air samplers (PAS):

All countries in the GEF GMP (and the SAICM QSP) projects were equipped with passive air samplers (PAS) to set-up a PAS network. Within the project, samples were taken for one year. Each sampler did carry one PUF, which was exposed for 3 months according to the recommendation from the GMP guidance document, then exchanged and stored until analysis. The projects showed great cooperation from the participating countries and a total of 129 PUFs were analysed for POPs pesticides and indicator PCB. The results show large differences between POPs and regions. For example: Africa and Pacific Islands region was high in DDT and drins (aldrin, endrin, dieldrin) whereas in GRULAC region all concentrations were extremely low. On the other hand, mirex was only detected – although at very low concentrations – in the GRULAC region. PCB were present in all countries but at different concentrations: the highest concentrations throughout the year were observed in La Havana, Cuba (SAICM QSP project) due to the fact that the sampler was positioned at the entry to the harbor and the industrial zone. For PCDD/PCDF and dl-PCB, the four 3-months PUFs were combined into one result to provide an annual average. All samplers gave quantifiable results. The concentrations in the Pacific Islands States were securely detected and relatively low; however, another small islands state – Barbados – had quite high concentrations. The highest TEQs were observed in Cuba, Peru and Democratic Republic of Congo. It should be noted that the PUFs from PAS are snapshots and characteristic of the collection capacity of the sampler but also of the location where the PAS is placed. From the results and the feedback from the countries it became evident that further harmonization is needed to have a better representativeness of the sampling site. Some countries have placed the samplers in urban areas (DR Congo, Cuba) whereas others placed them in (the most) remote site of the country (defined as background). Further definition and generic characterization is necessary for better comparison of the results.

Presently, we can only use the data that were generated by the expert laboratories in developed countries, since the developing country laboratories still have some problems with this matrix (which was new to all laboratories). As the interlaboratory study did show, the difference between the laboratories is still too large to allow more than one laboratory to report results.

#### Interlaboratory comparison assessment:

In order to determine the "true" concentration of POPs in a sample, a chemical laboratory must be able to prove that it is capable to identify and quantify chemicals (=analytes) of interest at concentrations of interest. Such accuracy and precision in the determination of POPs is required by article 16 of the convention and subsequent guidance developed for the Global Monitoring Plan (GMP). The needs and support are documented in COP decisions SC-3/16, SC-4/31 and 5/18. To provide reliable monitoring information for the Parties to the Stockholm Convention, the guidance in the GMP document aims to "confirm a 50% decline in the levels of POPs within a 10 year period". This means that POPs laboratories must be capable – at any time – to analyze samples for POPs within a margin of  $\pm 12.5\%$ .

With the assistance of GEF funding, so far the largest interlaboratory study on persistent organic pollutants, named the "Bi-ennial Global Interlaboratory Assessment on Persistent Organic Pollutant – First Round" has been implemented during 2010-2011. Its goal was to test the capabilities of laboratories in the analysis of the twelve initial POPs listed in the Stockholm Convention. The UNEP Interlaboratory Assessment was performed according to internationally agreed standards (following ISO-International Organization for Standardization and ILAC-International Laboratory Accreditation Cooperation). Such proficiency tests are valuable management tools to allow external quality controls of the performance of a laboratory that undertakes chemical analysis.

The basis for the interlaboratory assessment is laid down in the Databank of Operational POPs Laboratories, which was developed by the UNEP/GEF Global project on POPs laboratory capacity building from 2005 to 2007. The databank is being maintained by UNEP/DTIE Chemicals Branch and is made available on the Web-site (<http://212.203.125.2/databank/Home/Welcome.aspx>). Presently there are more than 230 POPs laboratories registered. Of these, 103 subscribed to the First Round of the Bi-ennial Global Interlaboratory Assessment on Persistent Organic Pollutants, which offered a number of test samples for analysis (i.e., standards, solutions for POPs pesticides, for PCB, and for dioxin-like POPs; and real samples such as sediment, fish, human milk and fly ash).

Finally, this proficiency test had 83 POPs laboratories from 47 countries representing all UN regions reporting results for at least one POP and one sample type back to UNEP. The distribution of the laboratories per group of POPs and region was as follows:

- i. Simple POPs (PCB and organochlorine pesticides), 12 laboratories came from WEOG region and 61 laboratories came from the other four UN regions (10 from Africa, 35 from Asia, 3 from CEE, and 23 from GRULAC);
- ii. Complex POPs (polychlorinated dibenzo-p-dioxins, polychlorinated dibenzofurans, dioxin-like polychlorinated biphenyls), 10 laboratories came from WEOG region and 40 came from the other four UN regions (3 from Africa, 32 from Asia, 1 from CEE, and 4 from GRULAC).

The assessment showed that while the measurement of test solutions was largely satisfactory, results for real sample matrices - sediment, fish, and human milk - more frequently were unsatisfactory. Particular difficulties were experienced in the analysis of matrices with high lipid contents (fish, human milk) and for the lower chlorinated PCB and organochlorine pesticides (including DDT). Laboratories from developed countries did not necessarily show a better performance than the developing country laboratories. Especially the overall very good performance of dioxin laboratories from China was stunning.

UNEP has established criteria to generate high quality POPs data through the 2005-2007 Global POPs Capacity building project, which include presence of analytical equipment, identification of analytes for reporting, orientation for data acceptance. These criteria are being further developed for the revised

Guidance document for the Global Monitoring Plan (GMP) together with the regional and global coordination groups under the auspices of the Secretariat of the Stockholm Convention (see document UNEP/POPS/COP.6/INF/31 at [www.pops.int](http://www.pops.int) ). In order to be able to establish time trends for POPs concentrations in the environment and humans, it was agreed that for a given POP chemical, the variance between laboratories analysing the same sample should be less than 25% (see above: from 12.5% above the true value to 12.5% below the true value). It was further agreed that POPs laboratories should prove their performance regularly in interlaboratory comparison studies; preferentially on an annual basis.

However, the results of the First round has demonstrated that in all UN regions, the quality of the POPs data are not yet at the desired or necessary level. Especially for true samples – sediment, fish, human milk – the relative standard deviations range up to 250 %, which indicates that certain laboratories still have severe difficulties.

### **Other lessons learned from phase 1**

Typically **the national reports and the regional report** contain conclusions and recommendations as well as lessons learned. These include the following for the Pacific Islands region (all available from the projects' website )

Analytical capacity: [Before the UNEP/GEF project GMP1] The PIR did not have a reference POPs analytical laboratory and through the GMP project analytical capacity was built for analysis of basic POPs. This was possible through specialized training, improved clean-up procedures and the use of dedicated gas chromatograph for POPs analysis. In the future, the PIR can rely on both regional and international cooperation to undertake monitoring of the dirty dozen as well as the newly added POPs from COP 4.

Political implications: The most notable outcomes of the project were that the personnel at the IAS laboratory in Fiji has a greater awareness of international standards for POPs analyses and will be able to submit high quality data to the GMP in the future. Additionally, the PIR can now actively participate in the monitoring of POPs and become an active contributor to future effectiveness evaluations of the Stockholm Convention.

Recommendations: To maintain a strict quality control and quality assurance (QA/QC) criteria so that quality data is submitted to the GMP in future.

More generally, **the evaluation report** for the four UNEP/GEF MSP project from GMP1 include the following lessons learned (for the Pacific Islands project but also for the three sister projects, 2009-2012). The most important lessons learned is that the project should not be too ambitious and consider the realities for implementation. These include:

- Whereas the budgets were adequate for all projects, the time needs were heavily underestimated. All projects had to undergo extensions without requesting additional funds. This aspect has been taken into account for this project with having four years for executing 2-years samplings (*e.g.*, for air and water);
- The issue that staff is moving out of jobs and no proper hand-over takes place at national institution needs to be better embedded in the terms of reference for the national coordinator when subcontracting personnel;
- Having a faster feedback/exchange mechanism between partners, *e.g.*, reports from expert laboratories after training to speed up implementation of procedures in national laboratories;
- Make provisions for exchange of information and experiences and results at regional and international level such as participation in workshops and thus, enhancing south-south cooperation;

Para 14. Valuable lessons emerged during **the terminal evaluation** that include lessons related to technical aspects as well as to overall management of the project (not arranged in any order of priority):

- i. Project documents need careful screening to ensure that they are technically feasible and that



goals and objectives are realistic under the proposed timeframe and are consistent with real capacities at national level.

- ii. Running the same project in one region or in parallel in many regions by the same management team and same technical experts require different time planning.
- iii. Identification and adopting measures that promote efficiency ensures successful implementation of project.
- iv. Clearly defined and agreed roles at all levels avoid delays in project implementation.
- v. The mixed form of agency execution and counterpart execution (through sub-contracts to counterpart institutions e.g. regional coordination institutions) is a very efficient implementation modality when the capacities are sufficient and exist at counterpart level: substantive competence, procurement, financial management, and auditing.
- vi. Recruiting consultants with the appropriate language proficiency ensures better understanding of reports and other documents.

### **The Pacific Islands Region**

In Asia and the Pacific region, many countries historically used Persistent Organic Pollutants (POPs) in many areas such as DDT for vector control. Some POPs are still in use. Despite the threat of POPs, developing countries in the Asia and the Pacific region lacks the capacity to monitor POPs on continuous basis. Due to the lack of capacity, POPs are normally excluded in the national ambient air quality monitoring programs. This project aims to support sustainable POP monitoring in the Pacific region. Therefore, the project is appropriate and timely.

The Pacific Islands region did not have a reference POPs analytical laboratory but through the UNEP/GEF GMP project analytical capacity was built for analysis of basic POPs. This was possible through specialized training, improved clean-up procedures and the use of dedicated gas chromatograph for POPs analysis. For the first time, measured data for basic POPs (organochlorine pesticides and polychlorinated biphenyls) as well as dioxin-like POPs have been generated for ambient air and human milk in the Pacific Islands Region. The only exemption is the human milk data from Fiji and Kiribati as they have already participated in the WHO POPs exposure study. For the first time, passive air samples have been used to determine ambient air concentrations. In the future, the Pacific Islands Region can rely on both regional and international cooperation to undertake monitoring of the dirty dozen as well as the newly added POPs from COP 4, COP 5 and COP 6. At the political level, the most notable outcomes of the project were that the personnel at the IAS laboratory in Fiji has a greater awareness of international standards for POPs analyses and will be able to submit high quality data to the GMP in the future. Additionally, the Pacific Islands Region can now actively participate in the monitoring of POPs and become an active contributor to future effectiveness evaluations of the Stockholm Convention. The laboratory is aware that strict quality control and quality assurance (QA/QC) criteria have to be enforced so that quality data are submitted to the GMP in future and the best service be provided to the region.

In line with the conclusions and recommendations of the 1st monitoring reports, several challenges and capacity-building needs were put forward in order to enable the region to effectively contribute to future monitoring reports and for countries to fulfil their obligations under the Stockholm convention. These include:

- Improve/perfect the process established in phase 1, including improving visibility of the project for policy makers and its value for Sound Management of Chemicals (SMC), improve coordination between national/regional levels, develop mechanisms for South-South collaboration and sharing of experience, more training for laboratory personnel;
- continuity/sustainability of the effort, including continued inter-calibration studies to improve quality of analysis and comparability of data within the region;

- include more countries and sites where data were missing for the first report;
- include new POPs and provide adequate training and capacity-building.

### **3. Proposed alternative scenario, with a brief description of expected outcomes and components of the project**

The GMP phase 2 project (hereinafter “GMP2 project”) intends to build on the results of phase 1 (2009-2012) and continue in assisting countries of the Pacific Islands region that are Parties to Stockholm Convention to respect their obligations under Article 16. The project will strengthen the countries’ capacity for implementation of the revised POPs Global Monitoring Plan, generate sufficient high quality data on the presence and transport of POP in the region, and create the conditions for sustainability of the networks (see the Objective tree in Annex B). Hence, the staff in participating laboratories will receive further training to consolidate and extend their performance in sampling and analysis of the initial as well as the new POPs and matrices (*i.e.*, water and matrices of core national interest). The project will also allow national laboratories to improve their ability to analyse POPs according to international standards consistent with GMP Guidelines, will develop detailed guidelines, protocols and manuals, and will facilitate reporting under the GMP. Finally, the project will develop a long-term monitoring plan for the region (through a roadmap). This regional monitoring plan will ensure frequent generation of data and input into the regional and global monitoring plans, which will feed the report to the Conference of the Parties to the Stockholm Convention.

The GMP Guidelines recommends that 15-20 sites per region are equipped with passive air samplers (PAS). This project will establish at least one PAS sampling site in each country. Each sampling site will generate four results for each group of POPs so that each country will be characterized with four measured data sets per year (eight data sets during two-years exposure). Each country will have one PAS network coordinator with people in the field responsible for collecting the exposed PUF samples and exchanging the PUFs in the sampler. The project will build national capacity to maintain the network of PAS.

It is envisaged that the laboratories involved in GMP2 project will participated in the Bi-ennial Global Interlaboratory Assessment on POPs. The interlaboratory assessments are performed according to internationally agreed standards (following ISO-International Organization for Standardization and ILAC-International Laboratory Accreditation Cooperation). Such proficiency tests are valuable management tools to allow external quality controls of the performance of a laboratory that undertakes chemical analysis. The results are laid down in a databank, which is being maintained by UNEP Chemicals and is made available on its website<sup>6</sup>, thus increasing the visibility of qualified laboratories. The first round of interlaboratory assessment (2010-2011) had 83 laboratories from 47 countries participating. The second round to incorporate the newly listed POPs is presently underway, financed by the Global Environment Facility through the MSP project "Developing the methods and tools for the analysis of new POPs" and the European Union through its ENRTP programme. It is envisaged to have two more rounds during the implementation of this project - together with the sister projects in the Africa, in Asia, and in the Latin American and Caribbean countries regions. These two rounds - upon CEO endorsement of this and the sister projects - will be implemented in 2015-2016 and 2017-2018, respectively. The increase in number of countries participating is desirable; however, more important would be the continuous participation of the same laboratories in such proficiency testing to improve already existing capacities but to include more POPs and more matrices. In the Pacific, two new countries, Vanuatu and Marshall Islands will be included. This project will also build capacity in participating countries on monitoring “new” POPs. It is understood that the national laboratories trained for the 12 initial POPs may not be necessarily capable to analyze the 11 “new” POPs. Therefore new partnerships and collaboration with specialized laborato-

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<sup>6</sup> <http://212.203.125.2/databank/Home/Welcome.aspx>

ries may be necessary. With this project, the momentum generated by the First Round of the Bi-ennial Interlaboratory Assessment will be maintained since laboratories and the users of analytical data have understood that the results must be trustworthy between data generators. Laboratories that performed well are aware that they need to continue demonstrating their proficiency and laboratories not yet at the necessary performance level are willing to improve and undergo further tests to finally achieve. All laboratories and clients/ stakeholders are aware that each of the interlaboratory comparison studies is a snapshot and that the proficiency of the laboratories will change upon exterior factors such as change in personnel, acquisition of new equipment and sometimes even procurement of analytical standards or consumables. For each POP or each matrix that will be analyzed for the first time in a POPs laboratory, the laboratory must demonstrate its capabilities on an objective, internationally agreed basis.

Regarding monitoring of POPs concentration in humans, according to the GMP Guidelines, there will be one pooled mothers milk sample collected per country. This sample should comprise milk from 50 donor mothers. Large countries might generate two pooled samples of 50 donors each. Each country anticipates that mothers milk sampling would be led by one senior public health scientist and working together with a team of up to ten nurses or students to establish nation-wide coverage. The teams will receive training in the interviewing and sampling techniques necessary. It is understood that the national laboratories may not be necessarily capable to analyse the 11 “new” POPs. Therefore new partnerships and collaboration with specialized laboratories may be necessary.

The (so far) only POP laboratory in the Pacific Islands region is located at University of the South Pacific at the Institute of Applied Sciences (USP/IAS). It is covered under the Asia region. This laboratory is capable to analyse simple or basic POPs but does not have the capacity to analyse complex, dioxin-like POPs. However, the laboratory has presently adequate instrumentation for the analysis of the non-lipophilic new POPs such as PFOS. For the Pacific Islands region and with the assistance of the GEF, expanding and improving capacity for the initial POPs and developing capacity for the analysis of PFOS and its precursors at USP/IAS is a realistic chance to keep a whole region committed and actively participating in the implementation of the Global Monitoring Plan of the Stockholm Convention – and serving a whole region.

Due to the boundaries of the final objective (*i.e.*, implementing the Global Monitoring Plan at regional level) some limitations are given in the project, such as:

- i. The sampling locations cannot be changed during the project’s implementation (and afterwards);
- ii. Sampling for all three core matrices (*i.e.*, air, water, human milk) has to follow agreed plans and methods, and therefore, no deviations are permitted;
- iii. Interpretation of the results need to be carefully done by respecting/protecting the individual donor (in case of the human milk) and not over-interpreting the results;
- iv. It should be noted that high concentrations of POPs in a country may negatively influence important economic activities, such as tourism.

Since the Global Monitoring Plan does explicitly not address hot-spots, it is not envisaged (and actually would be against the objectives of the Global Monitoring Plan) that highly contaminated sites will be assessed or analysed in this project.

The situation analysis behind the project design can be found in the form of problem and objective trees in Annex B. The expected outcomes, outputs and related activities of the project are listed below. Related indicators and assumptions can be found in the logical framework in Annex A.

### **Project component 1: Securing conditions for successful project implementation.**

#### Expected outcome:

Relevant stakeholders for project implementation in the Pacific Islands region are committed to carry out the agreed responsibilities.

Expected output:

Technical and administrative support provided for the implementation of the project and organization of process established in the Pacific Islands Region.

Planned activities:

- Key stakeholders sign legal documents to carry POPs monitoring activities for all 23 POPs in the region;
- Organise a regional inception workshop to launch the project and detail the activities and responsibilities with a workplan and budget;
- Update POPs laboratory databank with information on new laboratories, new POPs and new matrices.

**Project component 2: Capacity building and data generation on analysis of core abiotic matrices (air and water).**

Expected outcome:

Regional network and national capacity to carry out air and water sampling is enhanced in the Pacific Islands region, and high quality data is generated on the presence of initial and new POPs in the region.

Expected output:

Training reports and sectoral reports on POPs analysis undertaken on two abiotic core matrices (i.e., air and water) in the Pacific Islands Region.

Planned activities:

- Identify the sampling sites for air monitoring in the region, and provide them sampling equipment and materials to make them operational;
- Identify strategic sampling sites for water monitoring in the region, and provide them sampling equipment and materials to make them operational;
- Provide equipment, training and guidelines to make operational the national laboratories undertaking analysis of abiotic matrices in the region;
- Analyse national samples for air and water and report high quality data for the region;
- Summarize results of analysis from the region in two distinctive sectoral reports, i.e. one for air and one for water.

**Project component 3: Capacity building and data generation on analysis of core biotic matrices (human milk).**

Expected outcome:

Regional network and national capacity to carry out human milk sampling is enhanced in the Pacific Islands region, and high quality data is generated on the presence of initial and new POPs in the region.

Expected output:

Training reports and sectoral report on POPs analysis undertaken on one biotic core matrix (6<sup>th</sup> round of human milk survey) in the Pacific Islands Region.

Planned activities:

- Provide materials and guidelines to countries in the region to undertake sampling of human milk for the 6<sup>th</sup> round of UNEP/WHO survey;
- Provide materials, training and guidelines to national laboratories in the region to undertake analysis of human milk samples;
- Successfully implement the 6<sup>th</sup> round of human milk survey in the Pacific Islands region, with high quality data reported by the UNEP/WHO reference laboratory;
- Compare results of the 6<sup>th</sup> round of human milk survey with data from earlier rounds and report them to the Global Monitoring Plan.

**Project component 4: Assessment of existing analytical capacities and reinforcement of national POPs monitoring.**

Expected outcome:

Accuracy of POPs assessment in the Pacific Islands region is consolidated by performance evaluation of national laboratories, as well as by analysis of additional matrices of major national interest.

Expected output:

Assessment report of existing analytical capacities prepared and report on POPs analysis undertaken in samples of national priority (other than core matrices) in the Pacific Islands Region.

Planned activities:

- Organise two rounds of the “Bi-ennial Global Interlaboratory Assessment for POPs Laboratories” implementing the 3<sup>rd</sup> and 4<sup>th</sup> round and prepare a report summarizing the test results;
- At national level, each country identifies, collect and analyse samples of major interest for national chemicals management (such as fish or other foodstuffs but also sediments and soils), with high quality data being reported.

**Project component 5: Securing conditions for sustainable POPs monitoring.**

Expected outcome:

Contribution to regional report for the GMP is performed, and a roadmap for sustainable POPs monitoring for the Pacific Islands region in global context is developed.

Expected output:

Assessment reports contributing to regional report for the GMP undertaken, and a roadmap for sustainable POPs monitoring developed for the Pacific Islands region.

Planned activities:

- Develop conclusions, lessons learned and recommendations from GMP phase 2 for future monitoring plan;
- Prepare a state-of-the-art report to picture the present situation of POPs in the Pacific Islands region’s environment and humans;
- Develop a roadmap for sustainable POPs monitoring in the Pacific Islands region.

#### **4. Incremental cost reasoning and expected contributions from the baseline, the GEFTF, LDCF/SCCF and co-financing**

In line with the GMP implementation plan, the project builds on existing POPs monitoring programmes and networks, and operates in close collaboration with the coordination groups established under the Stockholm Convention. The GEF funding will cover the incremental costs of the regional activities being performed regarding POPs analysis.

The GMP project (2009-2012) has initiated the analysis and monitoring of the 12 initial POPs. The main contributions from the baseline to this project are the following:

- Analytical capacity was built for the first time in the Pacific Islands Region to analyse basic POPs. This was possible through training, improved clean-up procedures and the use of dedicated gas chromatograph for POPs analysis.
- The personnel at the IAS laboratory in Fiji has a greater awareness of international standards for POPs analyses and is able to submit high quality data to the GMP.

Countries are ready to contribute to continue this analysis but have limited funding to continue the intercalibration studies. This component and a wider scope of the monitoring activities (more sampling/analysis) and POPs analysis will be covered by this project.

This project will also reinforce the capacity of the laboratory in the Pacific Islands region located at University of the South Pacific at the Institute of Applied Sciences (USP/IAS) with appropriate training and programmes to include the analysis of new POPs. Without the GEF resources, the programmes would not be able to perform collection and analysis of POPs containing sample with sufficient quality and comparability for the 12 initial POPs and there will be no data available for 11 newly listed POPs (10). As a result, data from the region would be missing from the monitoring report, while the Pacific region is critical for assessing global transport and levels of POPs.

#### **5. Global environmental benefits (GEFTF, NPIF) and adaptation benefits (LDCF/SCCF)**

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.

In addition, the project will contribute to the current efforts towards improving the understanding of human exposure to and environmental concentration of POPs at the national, regional and global levels including spatial and time trends. As such, the project will facilitate the adoption of effective risk reduction measures at the national and international levels, and therefore the minimization of the global risks to humans and the environment.

#### **6. Innovativeness, sustainability and potential for scaling up**

##### **Innovativeness**

This project will continue to assist countries to build capacity on POPs monitoring in the region and will use as a baseline the results and lessons learned obtained from the UNEP GEF project to support the Pacific programme to build capacity on GMP (2009-2012). In addition, this project will include the new POPs adopted during COP-4, COP-5 and COP-6, as well as a new core matrix (water) and other matrices of interest identified by participating countries. For the first time Parties will obtain POPs monitoring da-

ta on new POPs.

### **Sustainability**

The capacity building for POPs monitoring programs for most countries in the region remains a priority and the continuation of the GMP activities has been highlighted by countries in the region at different international events, including the fifth and the sixth meeting of the Conference of the Parties (COP-5 and COP-6). One of the main conclusions of the Phase I of the GMP project for POPs (2009-2012) indicated that more qualified data on POPs concentration are needed in order to improve and complement the baseline of POPs levels in the region. In particular, resources are required to improve analytical facilities and methods for the determination of all POPs. This entails more trained personnel and the acquisition of appropriate analytical facilities and the funds to maintain and operate the instruments.

This project will also contribute to strengthening the regional network and coordination in the region. Sustainability of the monitoring of POPs in the region will be ensured by the maintenance of these networks and the continuous operation of the only regional laboratory assigned to perform POPs analysis, the laboratory in the Pacific Islands region which is located at the University of the South Pacific at the Institute of Applied Sciences (USP/IAS) in Suva, Fiji.

The University of South Pacific and the Institute of Applied Sciences are supported by 12 Pacific Island Countries – Cook Islands, Fiji, Kiribati, Marshall Islands, Nauru, Niue, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu and Vanuatu. This support ensures continuity of the services provided by the regional laboratory.

Recently, UNEP through its regional office ROAP started initiation of the second phase of the project entitled “Capacity building related to Multilateral Environmental Agreements (MEA) in Africa, Caribbean and Pacific countries”, which will be funded by the European Union. This project focuses on the MEAs related to biodiversity, chemicals and wastes. Hence, the future EU project and this GEF project should seek co-benefits and avoid duplication. The POPs monitoring component of this GEF project can be integrated into the National Environment Management Strategies (NEMS) of Pacific Islands countries to be further developed through EU project.

### **Potential for scaling up**

The Global Monitoring Plan (GMP) is established by the Conference of the Parties to the Stockholm Convention and is being implemented on a regional basis accordingly. The Pacific Islands region is part of the UN Region Asia-Pacific and represented in the regional and global coordination groups for the GMP. A summary on available data from the Pacific Islands region has been reported in the first Global Report (2009) and a technical/political baseline has been established by the first UNEP/GEF project (named “GMP-1”) from 2009 to 2012. This project as the Global Monitoring Plan scales up at various points such under the direction of the Conference of the Parties, such as (i) inclusion of new POPs that are listed through decision of the COP, (ii) inclusion of more core matrices as reflected in decisions of the COP, (iii) follow-up changes of POPs concentrations over time. The extension of the timeline by using same approaches and sampling locations is the prerequisite for fulfilling the obligations under the Convention and contribution to future reports on the Global Monitoring Plans. This project fortifies the baseline in the Pacific Islands region and strengthens the capacity and sustainability for future projects and reports.

## **A.2 STAKEHOLDERS**

*Will project design include the participation of relevant stakeholders from civil society and indigenous people? (yes  /no  ) If yes, identify key stakeholders and briefly describe how they will be engaged in project design/preparation:*

Key stakeholders and beneficiaries are Governments through their Ministries and Agencies including the national focal points for the Stockholm Convention, research institutions, and to a lesser extent private institutions. The main beneficiary is the Conference of the Parties to the Stockholm Convention and especially the Parties in the Pacific Islands region. The participating 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 GEF-5 PIF participating countries. Jointly, they will collect/organize the collection of human milk samples for the GMP through the mothers donating the human milk. Ministries of Environment, Ministry of Health and 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 for 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.

Key stakeholders in the project will be ISO (International Standards Organisation) and ILAC (International Laboratory Accreditation Cooperation) as well as IUPAC (International Union of Pure and Applied Chemistry) to guarantee that (other) internationally agreed standards are followed. In reverse, results and criteria from the UNEP/GEF projects will feed into their decision documents and projects. In order to provide the highest technical standards, it is envisaged that the Executing Agency will subcontract the expert laboratories from Free University Amsterdam, IVM VU, the Netherlands, and Örebro University, MTM Centre, Sweden, for training and mirror analysis of samples, and organization of inter-calibration studies. The WHO Reference laboratory for human milk at Chemisches Untersuchungsamt Freiburg (CVUA Freiburg), Germany, will assist in matters related to this core matrix. Further coordination will be done with other air monitoring activities such as Environment Canada and RECETOX-Czech Republic.

**Table 2: Stakeholders participation in the project**

<b>Key stakeholders</b>	<b>Role in the proposed project</b>
<b>(ISO) International Standards Organisation and ILAC International Laboratory Accreditation Cooperation (ILAC) as well as (International Union of Pure and Applied Chemistry) (IUPAC)</b>	<ul style="list-style-type: none"> <li>– Guarantee that (other) internationally agreed standards are followed.</li> </ul>
<b>Expert laboratories from Free University Amsterdam, IVM VU, the Netherlands, and Örebro University, MTM Centre, Sweden</b>	<ul style="list-style-type: none"> <li>– Organize training and mirror analysis of samples, and organization of inter-calibration studies;</li> <li>– MTM Centre Örebro also serves as reference laboratory for PFOS in human milk</li> </ul>
<b>WHO/UNEP Reference laboratory for human milk at Chemisches Untersuchungsamt Freiburg (CVUA Freiburg), Germany</b>	<ul style="list-style-type: none"> <li>– Undertakes the analysis of lipophilic POPs in human milk and assists in matters related to this core matrix</li> </ul>



<b>RECETOX-Czech Republic</b>	<ul style="list-style-type: none"> <li>- Assist in matters related to air monitoring</li> </ul>
<b>Participating countries from the Pacific Islands region; mainly through their ministries of environment (for component 2) and ministries of health (for component 3)</b>	<ul style="list-style-type: none"> <li>- 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;</li> <li>- Establishment and maintenance of the air and water networks</li> <li>- Collect/organize the collection of human milk and blood samples for the GMP through the mothers donating the breast milk and blood;</li> <li>- Provide human milk donors with results of the analysis and the interpretation of it.</li> </ul>
<b>Staff operating the networks together with the laboratories in the region</b>	<ul style="list-style-type: none"> <li>- Maintain the sampling network for ambient air</li> <li>- Receive training and consumables/spares</li> <li>- Generate national data in a systematic and comparable way that will characterize their exposure to POPs.</li> </ul>

### A.3. GENDER CONSIDERATION

Are gender considerations taken into account? (yes  /no  ). If yes, briefly describe how gender considerations will be mainstreamed into project preparation, taken into account the differences, needs, roles and priorities of men and women.

The proposed project is of a scientific nature that does not directly impact people's productive activities. Therefore the gender equity issue takes a different dimension than for pure emissions reductions activities. The particular vulnerability to POPs exposure of women in childbearing age is taken into account in the design of the monitoring activities, notably by the incorporation of mother's milk as one of the core matrices of the POPs GMP. The collection of human milk samples will be conducted on the basis of the ethical clearance as required by WHO, and after signature of the statement of interest by both, health and environment sector.

### A.4 BENEFITS.

Describe the socioeconomic benefits to be delivered by the project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (gef trust fund) or adaptation benefits (Idcf/scf)

The general public is the indirect beneficiary of the project since for most of the countries national data will be generated for the first time 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 proposed project is of a scientific nature that does not directly impact people’s productive activities. Therefore the gender equity issue takes a different dimension than for pure emissions reductions activities. The particular vulnerability to POPs exposure of women in childbearing age is taken into account in the design of the monitoring activities, notably by the incorporation of mother’s milk as one of the core matrices of the POPs GMP. The collection of human milk samples will be conducted on the basis of the ethical clearance as required by WHO, and after signature of the statement of interest by both, health and environment sector. In addition, the POPs laboratory will apply the standards as established in “Good Laboratory Practices” (GLP) which includes in particular the laboratory management of human resources. More generally, data generated through the project will allow a more accurate knowledge of human exposure and environmental concentration of POPs at the national, sub-regional and global levels, therefore enabling an assessment of the effectiveness of the measures adopted and the development of more efficient measures where relevant. In Fiji, for example, data showing higher dioxin levels in rural women have suggested a need to improve how rural women cook with firewood.

#### A.5 RISKS.

*Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks*

A program involving nine countries has obvious logistical risks. The University of the South Pacific has campuses in each country, which will assist with liaison work. WHO has been a long-term partner in POPs work in the region and has representatives in Fiji, Samoa and Kiribati. All countries have WHO focal points. With this the project builds on an already existing network with proven capacity to carry out the project activities. Based on the positive experience made during the global UNEP/GEF Laboratory Project, the USP Laboratory was selected as regional hub for the POPs analysis training activities in the Pacific region. The work accomplished by this laboratory during the first POPs monitoring project confirmed its capacity in this regard. Some issues, in particular at the logistical level, were raised at the final workshop of the first POPs monitoring project (Suva, Fiji, 9-10 June, 2011). These issues were further discussed during a brainstorming meeting on POPs monitoring (Geneva, Switzerland, 14-15 July, 2011) gathering the partners of the first POPs monitoring projects, and possible solutions were proposed. These will be further discussed during the sub-regional workshop to be held in component 1 of the project, and the issues will be addressed in the revised work plan and project arrangements. The other major risk is the ability to do the laboratory work. As indicated above, the USP laboratory has been shown to be able to deliver analytical results for the basic POPs chemicals; only dioxin-like compounds analyses were done in an experienced international partner laboratory. It is therefore expected that the USP laboratory can be enabled to deliver analytical results for the newly included POPs. For Quality Assurance purpose, a number of samples will be analyzed in an experienced partner laboratory.

Table 3: Summing up of risks and mitigation measures identified:

Risk identified	Mitigation measure
Logistical risks inherent to a programme involving nine countries	<ul style="list-style-type: none"> <li>- The liaison work will be facilitated by the University of the South Pacific campuses in each country;</li> <li>- WHO has been a long-term partner in POPs work in the region and has representatives in Fiji, Samoa and Kiribati. Moreover, all countries have WHO focal points;</li> </ul>

	<ul style="list-style-type: none"> <li>- Lessons learned from the 1<sup>st</sup> POPs Monitoring project concerning logistical issues will be taken into account in this project;</li> </ul>
Inability to conduct laboratory work	<ul style="list-style-type: none"> <li>- USP laboratory has been shown to be able to deliver analytical results for the basic POPs chemicals. It is therefore expected that the USP laboratory can be enabled to deliver analytical results for the newly included POPs. For quality assurance purpose, a number of samples will be analyzed in an experienced partner laboratory.</li> </ul>

## A.6 COST EFFECTIVENESS

*Explain how cost-effectiveness is reflected in the project design*

The project builds on a GEF project implemented by UNEP from 2009 to 2012 (*i.e.*, GMP Phase 1 project) and its conclusions and recommendations, which have been incorporated here to enhance efficient and cost-effective implementation. It is worth noting that the external terminal evaluation of the Phase 1 project rated the projects' implementation as cost-effective. Hence, the factors of success identified in the evaluation have been replicated in Phase 2, namely: (i) partnerships with strategic players (*i.e.*, key organisations, agencies, and academic and research institutions); (ii) building on relevant existing programmes in the region (*e.g.*, WHO milk survey); (iii) the adoption of existing procedures (WHO guidelines for human milk sampling); (iv) engaging local stakeholders (*e.g.* for identification of sites and mother's milk donors).

The international coordination by UNEP/DTIE Chemicals Branch as the executing agency have been chosen in order to increase efficiency. However, the project follows the approach of identifying and building on what is already existing in the region whenever possible/relevant. The executing agency will thus be supported by one regional university laboratory (*i.e.*, USP/IAS laboratory) that will assist participating countries within the same time zone. The USP/IAS laboratory has already received training in POPs analysis and has experience in coordination with neighboring countries. The laboratory also has existing collaborations with the RECETOX Laboratory in Czech Republic sampling for passive air, the MTM Center of Örebro University in Sweden, and the WHO reference laboratory for human milk at the Chemisches und Veterinäruntersuchungsamt Freiburg (CVUA). Hence, the selection of USP/IAS allows, on the one hand, to significantly reduce the costs associated with laboratory's identification and capacity building (*e.g.*, infrastructure, technology transfer, training, experience, etc.), and, on the other hand, the sustainability of the regional network and of the project's deliverables.

In addition, the project uses the basic SOPs and training manuals that are already existing within the region from the GMP Phase 1 project.

Cost-effectiveness has also been considered in the choice of samplers for core matrices. Instead of using expensive active samplers, passive air samplers (PAS) have been selected as the main tool for the monitoring of POPs in the air, as they are really cheap and easy to use while being reliable. The use of PAS increases the sustainability of the project, as they are consequently more appropriate for the local context in terms of post-project monitoring activities in the region. Hence, these cheaper, more easy to use monitoring tools make capacity building measures (*e.g.*, trainings) much more relevant and efficient as well.

## A.7 COORDINATION

*Outline the coordination with other relevant GEF financed initiatives [not mentioned in A.1]*

**UNEP/GEF regional projects on POPs monitoring, including the UNEP/GEF project "Supporting the**

### **Implementation of the Global Monitoring Plan of 12 initial and 11 new POPs in East and South East Asia”:**

The PIF for this project has been approved and presently, UNEP is developing the fully-fledged document for CEO endorsement. UNEP/DTIE Chemicals Branch will be the Executing Agency for both projects and will establish close linkages between them within the Asia Pacific region but also with two GMP-2 projects in Africa and the Latin America and the Caribbean regions<sup>7</sup>.

### **UNEP/GEF global project on “Establishing the Tools and Methods to Include the Nine New POPs into Global Monitoring Plan”:**

This project is at its final stage and has created the necessary basis to address the analysis of nine new POPs according to international standards. It provides training on how to analyse new POPs, and lays down the scientific and practical modalities at regional level to provide global monitoring data for environmental concentrations and human exposure. The results are updated and amended guidance documents and input into regional reports and regional POPs monitoring systems. This project (the GMP Pacific) will use the guidelines developed under the global monitoring project. In reverse, this project will contribute to the UNEP/GEF Global new POPs analytical project through experiences gained on the ground.

### **6th Round of the UNEP/WHO human milk survey:**

This project has been launched jointly by the World Health Organisation (WHO), and UNEP, represented by the Secretariat of the Basel, Rotterdam and Stockholm Conventions (BRS Secretariat) and UNEP/DTIE Chemicals Branch at the extraordinary meeting of the Conferences of the Parties in April/May 2013 (COP-6 for Stockholm, COP-11 for Basel and COP-6 for Rotterdam conventions). The project uses the same guidelines and the same Reference Laboratory and will generate one joint report for the Global Monitoring Plan and submission to the next meeting of the Conference of the Parties to the Stockholm Convention (COP-7, 2015). This large global project will share responsibilities and funds whereby the BRS Secretariat through WHO will assist eligible developing countries that have participated in previous rounds of the survey and the UNEP/GEF projects will assist countries/parties participating in UNEP’s regional GEF projects. This survey will provide data on POPs concentrations in human milk in the Pacific Islands region as part of the global 6<sup>th</sup> round of the human milk survey that has been launched by WHO and UNEP

Within UNEP, this project forms part of two projects under the Programme of Work (PoW) in the biennium 2012-2013 and beyond into the next Medium Term Strategy (MTS). The development of global guidelines and standards together with the interlaboratory comparison study is embedded in project 52-P5 “Schemes for reporting of progress in sound management of harmful substances and hazardous waste and tools for monitoring and assessment” under the priority area “Harmful Substances and Hazardous Waste”. Output C “Capacity built and inventory of chemical analytical laboratories and their performances established for use in the chemicals and waste MEAs/international agreements” addresses the quality assurance/quality control aspect of chemical analytical laboratories. These activities are complemented by interventions in developing countries financed by the GEF through the Global Monitoring projects.

## **A.8 INSTITUTIONAL ARRANGEMENT**

*Describe the institutional arrangement for project implementation*

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<sup>7</sup> GEF Project ID 4886 “Continuing Regional Support for the POPs Global Monitoring Plan under the Stockholm Convention in the Africa Region” and GEF Project ID 4881 “Continuing Regional Support for the POPs Global Monitoring Plan under the Stockholm Convention in the Latin American and Caribbean Region”.

This project contributes to UNEP Programme of Work output 522 (also named 5B2): “Thematic Assessments of environmental transport and fate of chemicals, and monitoring of trends in chemicals production, handling, movement, use, release and disposal, catalyze coordinated action on chemicals management in the UN system”. It contributes to the first indicator under expected accomplishment (b): “Increase in the number of Governments addressing priority chemical issues, including their obligations under the chemicals MEAs, through the use of risk assessment and management tools provided by UNEP”.

The roles of the IA, EA and Project Steering Committee will be the following:

**Implementing Agency (IA):** This project will be implemented by UNEP and internally executed by the Chemicals Branch of UNEP DTIE. As Implementing Agency, UNEP will be responsible for the overall project supervision, overseeing the project progress through the monitoring and evaluation of project activities and progress reports, including on technical issues. It will report the project implementing progress to GEF and will take part in the project Steering Committee. UNEP will closely collaborate with the EA and provide it with administrative support in the implementation of the project.

**Executing Agency (EA):** The participating countries as well as USP/IAS Institute (in Fiji) were consulted to determine the executing agency (EA). All of them expressed their desire to replicate the successful model from GMP1 project and have UNEP DTIE Chemicals as the EA. This is based on several considerations, such as UNEP’s known expertise and proven track record (e.g. in GMP1 project). As EA, UNEP DTIE Chemicals will execute, manage and be responsible for the project and its activities on a day-to-day basis. It will provide technical support to participating countries and regional laboratory and establish the necessary managerial and technical teams, as needed, to execute the project. It will search for and hire expert organizations and consultants necessary for technical activities and supervise their work. UNEP/DTIE Chemicals Branch will closely liaise with the Stockholm Convention Secretariat, other co-funding partner, including the World Health Organization which is implementing a global human milk survey. Financial transactions, audits and reports will be carried out in accordance with UNEP procedures. .

**Project Steering Committee (PSC)** will be established, and will meet at the beginning, mid-point and prior to the end of the project. The PSC will assess the progress of the project and give advice and guidelines. The PSC is composed of UNEP IA, the Secretariat of the Basel, Rotterdam and Stockholm Convention (BRS Secretariat), the World Health Organisation (WHO) and donor institutions such as expert laboratories, Recetox (hosting the GMP databank), and USP/IAS (as a member of the global coordination group and the main partner of UNEP EA in the region).

As is shown in the graphical sketch below, the EA makes agreement with all partners in the project (*i.e.*, beneficiary countries in the Pacific Islands Region, expert laboratories, consultants, and procurements if necessary). By implementing the agreements, the partners report back to the EA and interact among themselves according to project activities.

A graphical sketch is shown in the Figure below:

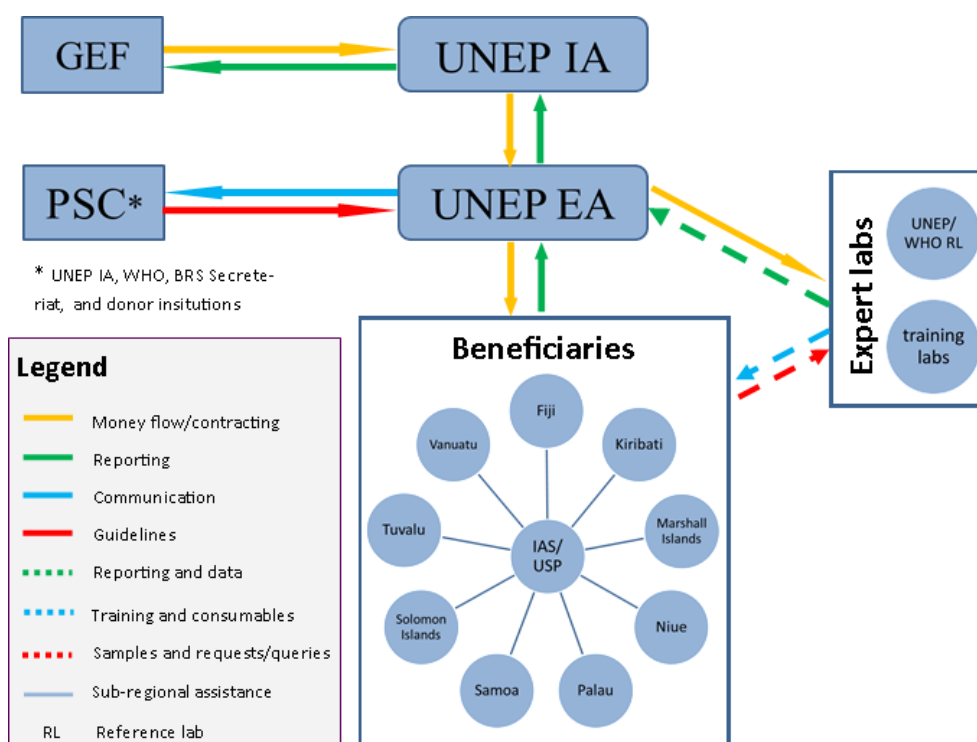


Table 4: Implementation arrangements – Steering Committee

Actor		Role in the project
Steering Committee	UNEP/DTIE Chemicals Branch (IA)	– Implementing agency, overall supervision of the project, monitoring progress
	World Health Organization	– IGO responsible for human health, cooperation partner that is implementing the global human milk survey jointly with UNEP/DTIE Chemicals Branch and the BRS Secretariat.
	BRS Secretariat	– Leadership on issues related to the Stockholm Convention in general and Global Monitoring Plan specifically. Co-funding partner
	Donor institutions	– Expert laboratories that provide training and backstopping to developing countries and to UNEP
UNEP/DTIE Chemicals Branch (EA)		– Executing Agency, responsible for legal arrangements with participating countries and support institutions; technical and scientific backstopping and closely liaise with the Secretariat of the Basel, Rotterdam and Stockholm conventions
Institute of Applied Sciences of the University of South Pacific (USP/IAS)		– Partner for regional delivery in the Pacific Islands region

## B. DESCRIPTION OF THE CONSISTENCY OF THE PROJECT WITH

### B.1 IS THE PROJECT CONSISTENT WITH THE NATIONAL STRATEGIES AND PLANS OR REPORTS AND ASSESSEMENTS UNDER RELEVANT CONVENTIONS? (YES /NO ). IF YES, WHICH ONES AND HOW: NAPAS, NAPS, NBSAPS, ASGM NAPS, MIAS, NCS, TNAS, NCSA, NIPS, PRSPS, NPFE, BURS, ETC.

Countries participating in this project are all Parties to the Stockholm Convention and therefore committed to implement Article 16. These countries have also developed National Implementation Plans (NIPs), and have indicated the development of monitoring capacity as a component of their NIP. Fiji, Marshall Islands, Samoa and Tuvalu have submitted their NIPs to the Stockholm Convention Secretariat. Kiribati, Palau, and Vanuatu have developed final drafts of the NIP and are in the process of endorsing their NIPs for subsequent submission to the Stockholm Convention Secretariat. The Solomon Islands will undertake the initial NIP and the NIP updating in one attempt; It is expected that at the time of project submission, all participating countries would have submitted their NIPs to the Stockholm Convention Secretariat.

### B.2 GEF FOCAL AREA<sup>8</sup> AND/OR FUND(S) STRATEGIES, ELIGIBILITY CRITERIA AND PRIORITIES

The GEF is the principal (interim) financial mechanism of the Stockholm Convention and, as such, supports activities to meet its objectives. As reflected in Article 16 of the Convention, an important element for effective implementation of the convention is the availability of reliable information on POPs levels in humans and in the environment. Following the completion of the 1st Global Monitoring Report (UNEP/POPS/COP.4/33), the Conference of Parties requested in its decision SC-4/31 “*the financial mechanism of the Convention (...) to provide sufficient financial support to further step-by-step capacity enhancement (...) to sustain the new monitoring initiatives with provided data for the first monitoring report.*” The project is therefore in line with the GEF chemicals strategy’s objective 1: phase out POPs and reduce POPs releases.

### B.3 THE GEF AGENCY’S PROGRAM (REFLECTED IN DOCUMENTS SUCH AS UNDAF, CAS, ETC.) AND AGENCIES COMPARATIVE ADVANTAGE FOR IMPLEMENTING THIS PROJECT

#### UNEP:

The fifth thematic priority (Harmful Substances and Hazardous Waste) of the UNEP Mid Term Strategy has as its objective: *to minimize the impact of harmful substances and hazardous waste on the environment and human beings.* This MTS sets out the main areas of work of UNEP and is in line with UNEP’s comparative advantage in the GEF. The UNEP strategy for GEF V is based on the three pillars of MTS 2010-2013, which are described as follows:

- a) That States and other stakeholders have increased capacities and financing to assess, manage and reduce risks to human health and the environment posed by chemicals and hazardous wastes;
- b) That coherent international policy and technical advice is provided to States and other stakeholders for managing harmful chemicals and hazardous waste in an environmentally sound manner, including through better technology and best practices;
- c) That appropriate policy and control systems for harmful substances of global concern are developed and in place in line with States’ international obligations.

#### UNEP DTIE:

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<sup>8</sup> For biodiversity projects, please describe which Aichi Target(s) the project will directly contribute to and what indicators will be used to track progress towards achieving these specific Aichi target(s).

All GEF proposed interventions in GEF V, whether POPs, mercury, chemicals or ozone, are complementary to UNEP's Subprogram 5 (Harmful Substances and Hazardous Waste), executed by UNEP/DTIE OzonAction or Chemicals Branch, for the years 2010–2013. The Mid-Term Strategy for the years 2014-2017 has been approved and individual projects are presently under development. This GEF project will be placed under the Expected Accomplishment B of the (renamed) Subprogramme "chemicals and waste", which reads "Countries, including Major Groups and stakeholders, increasingly use the scientific and technical knowledge and tools needed to implement sound chemicals management and the related MEAs". Thus, continuous support for the project is ensured.

#### **UNEP - Regional Office for Asia Pacific (ROAP):**

Based in Bangkok, Thailand, ROAP has chemicals and POPs related staff capacity. ROAP will assist UNEP DTIE to identify further opportunities of cooperation with ongoing and planned activities in the region. UNEP DTIE and UNEP ROAP have started to identify potential common activities on chemicals wastes and capacity building. Last but not least, experts from the UNEP DTIE and ROAP offices will provide substantial input throughout the duration of this project.

Following are some avenues for ROAP's potential involvement in the project:

- Implement awareness activities as part of UNEPs' regular activities such as Sub-Regional Policy Dialogue;
- Coordination with other regional projects such as the EU funded capacity building MEA project for the Pacific;
- Liaison with regional institutions such as Secretariat of the Pacific Regional Environment Programme (SPREP).

#### **UNDAF for the Pacific Sub-Region:**

The UN Development Assistance Framework (UNDAF) for the Pacific Sub-Region is a five-year strategic programme framework that outlines the collective response of the UN system to development challenges and national priorities in 14 Pacific Island Countries and Territories (PICTs), including all countries participating in these projects for the period 2013-2017. Its overarching ambition is to promote sustainable development and inclusive economic growth to address the social, economic and environmental vulnerabilities affecting society at all levels and to ensure human security in the Pacific, with a focus on the most vulnerable groups. It focus its programming and advocacy efforts on five inter-related outcomes areas: i) environmental management, climate and disaster risk management, in support of an integrated approach to environmental sustainability and efforts by PICT governments and communities to adapt to climate change and reduce and manage disaster risk; ii) gender equality, with the aim of fostering gender equality, women's political and economic empowerment and participation, and enhance safety for women and children across the Pacific; iii) poverty reduction and inclusive economic growth, where the UN system will promote the capacity to stimulate equitable growth, create economic opportunities and decent work especially for the youth, and promote sustainable livelihoods and social protection systems; iv) basic services (Health & Education), the UN system aims to building capacity throughout society to improve the quality of and access to basic services in health, education, and protection; and strengthening the accountability of duty bearers and v) governance and human rights, where the aim is to improve the quality of governance, including the inclusion of vulnerable groups in decision-making processes in the political and economic spheres and advance compliance with international human rights norms and standards. Through the planned activities this project will contribute indirectly to achieve goal (i) of the UNDAF.



### C. DESCRIBE THE BUDGETED M & E 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. The project M&E plan is consistent with the GEF Monitoring and Evaluation policy.

Day-to-day management and monitoring of the project activities will be the responsibility of the executing agency, UNEP/DTIE Chemicals Branch. The Institute of Applied Sciences of the University of South Pacific, USP/IAS will assist the executing agency within the region and maintain frequent contact with the participating countries. UNEP/DTIE Chemicals Branch will submit half-yearly progress reports to the implementing agency at UNEP. She will also be responsible for the issuing of legal documents such as small-scale funding agreements (SSFAs) with participating governments and other institutions, especially expert laboratories assisting in the capacity building activities of the project according to the work plan and expected outcomes.

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 identify obstacles occurred during implementation period.

Each participating country will nominate a national coordinator, responsible for the coordination and oversight of national activities. In consultation with UNEP the national coordinator will identify suitable national institutions to carry out the activities on the ground such as the sampling of air, water, and human milk. They will also identify samples of national interest for POPs analysis. Such request had been formulated at the ex-COPs by Kiribati local consultants to assist in the air sampling and mother's milk collection.

The Project Steering Committee (PSC) will comprise UNEP IA, the World Health Organisation (WHO), the Secretariat of the Basel Rotterdam and Stockholm conventions (BRS Secretariat) and donors such as expert laboratories, Recetox (in function of the Stockholm Convention Regional Centre and host of the GMP databank). The PSC will monitor the progress of the project and give advice as to implementation issues. The PSC meetings will be held back to back with major meetings (*e.g.*, the inception workshop and the final lessons learned workshop), in association with COP-BRS Secretariat meeting. At month 12, the PSC will meet through teleconference. Hence, no additional fund is needed for travel and DSA.

Table 5: Monitoring and Evaluation Budget

M&E activity	Purpose	Responsible Party	Budget GEF (US\$)	Time-frame
Half-yearly progress reports		UNEP EA	0	
PIRs		UNEP EA with UNEP TM	0	Months 26, 38, 50
Final report	Reviews effectiveness against implementation plan, highlights technical outputs, identifies lessons learned and likely design approaches for future projects, assesses likelihood of achieving design outcomes	UNEP	0	At end of project implementation
Project review and steering by	Assesses progress, effectiveness of operations and technical outputs;	PSC	0	Months 2, 24, and 48

PSC	Recommends adaptation where necessary and confirms implementation plan.			
Mid-term evaluation	Reviews project performance at mid-term, to analyze whether the project is on track, what problems and challenges the project is encountering, and which corrective actions are required	UNEP (Task Manager or Evaluation Office)	35,000	Month 24
End-term financial audit at national level	Reviews use of project funds against budget and assesses probity of expenditure and transactions at national level.	UNEP	0	Month 44
Independent Terminal evaluation	Reviews effectiveness, efficiency and timeliness of project implementation, coordination mechanisms and outputs Identifies lessons learned and likely remedial actions for future projects Highlights technical achievements and assesses against prevailing benchmarks	UNEP TM in coordination with UNEP Evaluation Office (EO)	35,000	At end of project implementation
Independent Financial Audit	Reviews use of project funds against budget and assesses probity of expenditure and transactions	N/A for internally executed projects	0	
<b>Total indicative M&amp;E cost</b>			<b>70,000</b>	

### **PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**


#### **A. RECORD OF ENDORSEMENT<sup>9</sup> OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S)**

(Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [SGP OFP endorsement letter](#)).

<b>NAME</b>	<b>POSITION</b>	<b>MINISTRY</b>	<b>DATE</b> (mm/dd/yyyy)
Mr. Jope Rinabobo DAVETANIVALU Acting Director of Environment Ministry of Local Government, Urban Development, Housing and Environment Fiji	GEF Operational Focal Point	Environment Ministry of Local Government	03.26.2012
Mrs. Nenenteiti Teariki RUATU Deputy Director (Officer in Charge), Environment & Conservation Division Ministry of Environment, Lands and Agricultural Development (MELAD) Kiribati	GEF Operational Focal Point	Ministry of Environment	04.23.2012
Ms. Yumiko CRISOSTOMO Director Office of Environmental Planning and Policy Coordination (OEPPC) Marshall Islands	GEF Operational Focal Point	Office of Environmental Planning and Policy Coordination	03.29.2012
Mr. Sauni TONGATULE Director Department of Environment (DOE) Niue	GEF Operational Focal Point	Department of Environment	03.27.2012
Mr. Sebastian R. MARINO National Environment Planner Office of Environmental Response and Coordination (OERC)	GEF Operational Focal Point	Office of the Environmental Response and Coordination	03.29.2012
Mr. Taulealeausumai MALUA Chief Executive Officer Ministry of Natural Resources and Environment Samoa	GEF Operational Focal Point	Ministry of Natural Resources and Environment	08.29.2012
Mr. Rence SORE Permanent Secretary Ministry of Environment, Climate Change, Disaster Management and Meteorology Solomon Islands	GEF Political / Operational Focal Point	Ministry of Environment, Climate Change, Disaster Management and Meteorology	03.26.2012
Mr. Mataio TEKINENE Director of Environment Ministry of Natural Resources & Environment Government of Tuvalu	GEF Operational Focal Point	Ministry of Natural Resources & Environment Government	03.27.2012
Mr. Albert Abel WILLIAMS Director Department of Environmental Protection and Conservation Vanuatu	GEF Operational Focal Point	Department of Environmental Protection and Conservation	30.03.2012

<sup>9</sup> For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

## B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies <sup>10</sup> and procedures and meets the GEF criteria for MSP approval under GEF-6					
Agency Coordinator, Agency name	Signature	DATE (mm/dd/y yyy)	Project Contact Person	Telephone	Email Address
Brennan VanDyke, Director, GEF Coordination Office, UNEP		June 16, 2014	Jorge OCAÑA CORREA, Task Manager	+41 22 917 81 95	<a href="mailto:jorge.ocana@unep.org">jorge.ocana@unep.org</a>

## C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION *(Applicable Only to newly accredited GEF Project Agencies)*

For newly accredited GEF Project Agencies, please download and fill up the required **GEF Project Agency Certification of Ceiling Information Template** to be attached as an annex to the PIF.

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<sup>10</sup> GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

**ANNEX A: PROJECT RESULTS FRAMEWORK** (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

**OVERALL GOAL: Protect human health and environment from toxic exposure to POPs**

UNEP Programme of Work			
<p><b>Expected Accomplishment 5(b):</b> Countries, including Major Groups and stakeholders, increasingly use the scientific and technical knowledge and tools needed to implement sound chemicals management and the related MEAs</p> <p><b>Output. 522:</b> Thematic Assessments of environmental transport and fate of chemicals, and monitoring of trends in chemicals production, handling, movement, use, release and disposal, catalyze coordinated action on chemicals management in the UN system</p> <p><b>Indicator (i):</b> Increase in the number of Governments addressing priority chemical issues, including their obligations under the chemicals MEAs, through the use of risk assessment and management tools provided by UNEP</p>			
Project outcome	Indicators	Means of verification	Assumptions and risks
National capacities for implementing the updated POPs Global Monitoring Plan (GMP) are strengthened, high quality data on the presence and transport of POPs are generated, and conditions for sustainable monitoring of POPs are in place in the Pacific Islands Region	<ul style="list-style-type: none"> <li># of countries capable to undertake sampling in the core and other matrices for POPs analysis <u>Baseline:</u> 0 <u>Target:</u> 9 (100% in this project)</li> <li># of countries with reported data on 23 POPs; <u>Baseline:</u> 0 <u>Target:</u> 8</li> <li># of regional roadmap for sustainable POPs monitoring published. <u>Baseline:</u> 0 <u>Target:</u> 1</li> </ul>	<ul style="list-style-type: none"> <li>Shipment documentation on samples sent for analysis;</li> <li>Reports of training in POPs analysis at UNEP website;</li> <li>Data are visualized and accessible, e.g. via GMP data-bank;</li> <li>Regional roadmap document.</li> </ul>	<ul style="list-style-type: none"> <li>(Co-)funding parties provide the funds they have committed;</li> <li>Political commitment among the participating countries stays active throughout the project;</li> <li>No natural or man-made disasters occur that may affect the implementation of the project;</li> <li>No vandalism affects the national network infrastructures (esp., for air and water);</li> <li>Financial and human resources are sufficient;</li> <li>Trained staff remains in place.</li> </ul>
Project outputs	Indicators	Means of verification	Assumptions and risks

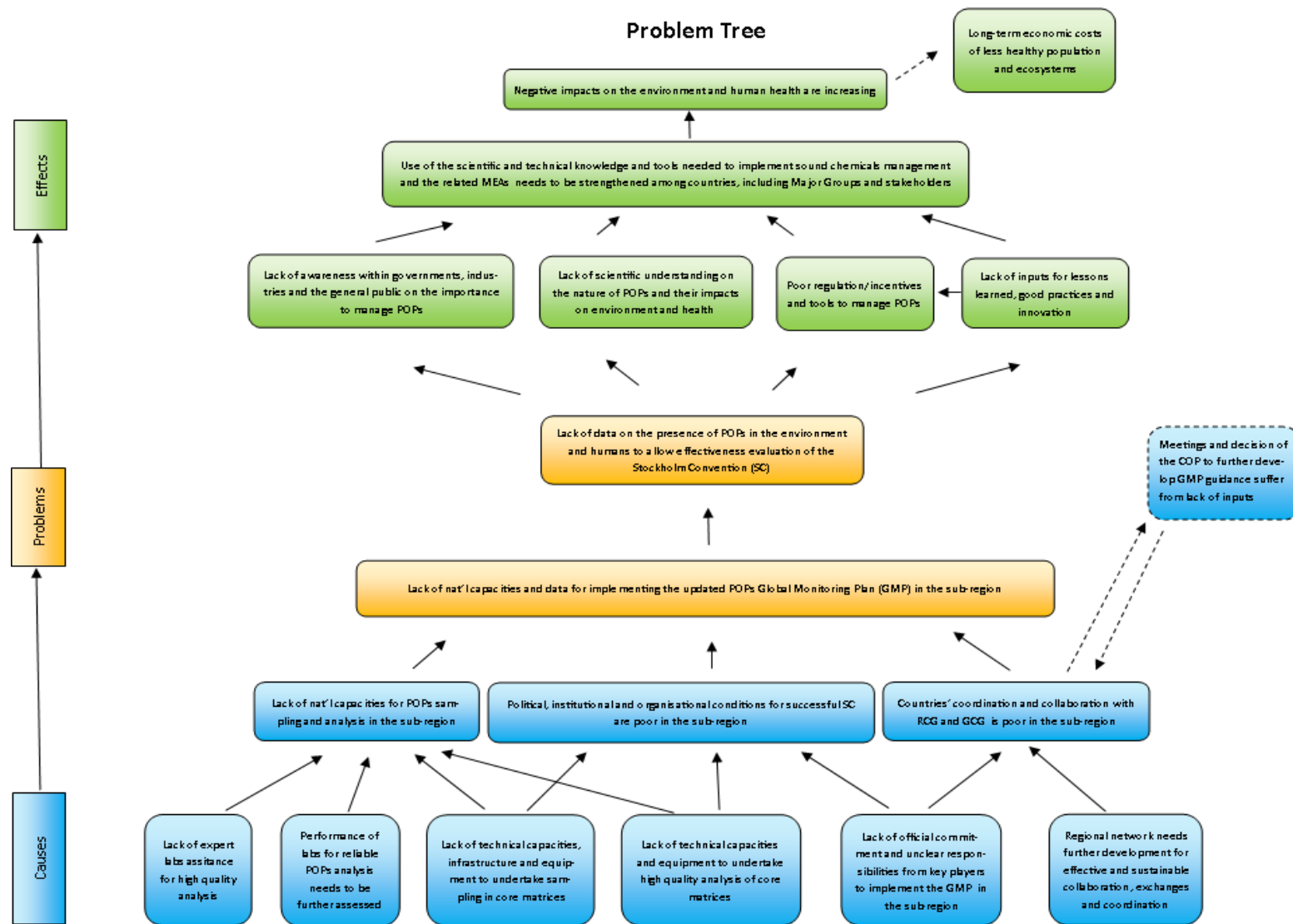
<p>1. Technical and administrative support provided for the implementation of the project and organization of process established in the Pacific Islands Region</p>	<ul style="list-style-type: none"> <li>• # of national project implementation agreements signed <u>Baseline:</u> 0 <u>Target:</u> 9</li> <li>• # of laboratories submitted information to UNEP for updating information in the databank <u>Baseline:</u> 0 <u>Target:</u> 5</li> </ul>	<ul style="list-style-type: none"> <li>• Agreements with national entities for project execution available at the EA upon request</li> <li>• UNEP laboratory databank website includes information provided by project countries</li> </ul>	<ul style="list-style-type: none"> <li>• Legal agreements are in place during the project period</li> <li>• UNEP laboratory databank is accessible</li> </ul>
<b>Project output Milestones</b>			<b>Expected Milestone delivery date</b>
M1.1: Relevant stakeholders, POPs laboratories and POPs monitoring activities identified			31 December 2014
M1.2: Regional inception workshop held and workplan agreed			30 June 2015
<p>2. Training reports and sectoral reports on POPs analysis undertaken on two abiotic core matrices (i.e., air and water) in the Pacific Islands Region</p>	<ul style="list-style-type: none"> <li>• # of countries that carried out sampling in abiotic matrices <u>Baseline:</u> 0 <u>Target:</u> At least 8</li> <li>• # of training report for analysis of abiotic matrices <u>Baseline:</u> 0 <u>Target:</u> 1</li> <li>• # of sectoral reports developed in abiotic matrices <u>Baseline:</u> 0 <u>Target:</u> 2 (one on air; one on water)</li> </ul>	<ul style="list-style-type: none"> <li>• Photos of PAS and water samplers at specified sites available at the EA upon request</li> <li>• Training report available on UNEP website</li> <li>• Sectoral reports (2) one on air and one of water available at UNEP's website</li> </ul>	<ul style="list-style-type: none"> <li>• No natural or man-made disaster damages the sampling sites (its adequacy for sampling) or the air sampling materials</li> <li>• Personnel ready to dedicate time and expertise over the period of two years</li> <li>• Training of national laboratories is adequate and effective</li> </ul>
M2.1 Hands-on training to national laboratories on abiotic samples concluded			31 December 2015
M2.1 All national samples are taken and in the laboratory for analysis			30 June 2017
<p>3. Training reports and sectoral report on POPs analysis undertaken on one biotic core matrix (6<sup>th</sup> round of human milk survey) in the Pacific Islands Region</p>	<ul style="list-style-type: none"> <li>• # of countries that carried out sampling in biotic matrices <u>Baseline:</u> 0 <u>Target:</u> At least 8</li> <li>• # of training report for analysis of biotic matrices <u>Baseline:</u> 0</li> </ul>	<ul style="list-style-type: none"> <li>• Shipment documents from Pacific Islands countries to the reference lab available at the EA</li> <li>• Training report available on UNEP website</li> <li>• Sectoral report for 6<sup>th</sup> human</li> </ul>	<ul style="list-style-type: none"> <li>• Infrastructure and practical arrangements can be realized as planned</li> <li>• No substantial changes in personnel</li> </ul>

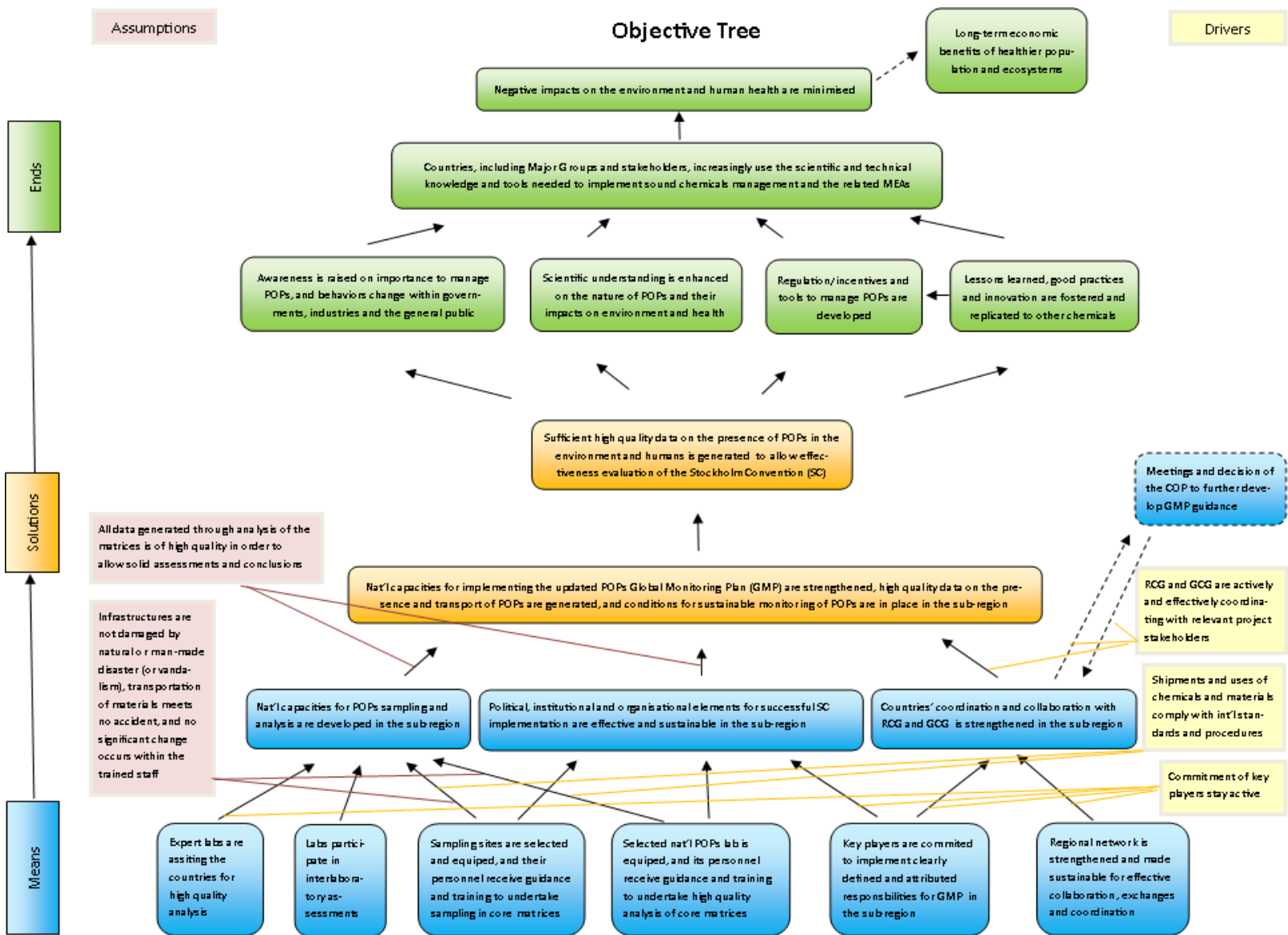
	<p><u>Target: 1</u></p> <ul style="list-style-type: none"> <li># of sectoral reports developed in biotic matrices</li> </ul> <p><u>Baseline: 0</u></p> <p><u>Target: 1</u></p>	milk survey available at UNEP's website	
M3.1 Hands-on training to national laboratories on biotic samples concluded			31 December 2015
M3.2: 6 <sup>th</sup> round of human milk survey concluded and report available			31 December 2016
4. Assessment report of existing analytical capacities prepared and report on POPs analysis undertaken in samples of national priority (other than core matrices) in the Pacific Islands Region	<ul style="list-style-type: none"> <li># of rounds for interlaboratory assessments held</li> </ul> <p><u>Baseline: 0</u></p> <p><u>Target: 2</u></p> <ul style="list-style-type: none"> <li># of countries having high quality data reported for samples of major national interest.</li> </ul> <p><u>Baseline: 0</u></p> <p><u>Target: At least 7</u></p>	<ul style="list-style-type: none"> <li>Bi-ennial Global Interlaboratory Assessment reports available through UNEP's website</li> <li>Reports containing quantitative results of POPs analysis.</li> </ul>	<ul style="list-style-type: none"> <li>Financial and human resources are sufficient;</li> <li>Other regions, including developed country regions, are interested and participate in both rounds of interlaboratory assessment (OECD countries finance their participation).</li> </ul>
M4.1: First round of Interlaboratory assessment concluded and report available			30 June 2016
M4.2: Second round of Interlaboratory assessment concluded and report available			30 June 2018
5. Assessment reports contributing to regional report for the GMP undertaken, and a roadmap for sustainable POPs monitoring developed for the Pacific Islands region	<ul style="list-style-type: none"> <li># of assessments on POPs presence in the region and its capacity to analyse them</li> </ul> <p><u>Baseline: 0</u></p> <p><u>Target: Two assessments, i.e. (i) presence of POPs through quantitative data; (ii) analytical capacity and performance of the national laboratories in the region</u></p> <ul style="list-style-type: none"> <li># of regional roadmap for sustainable POPs monitoring in the region, with strategy for implementation, milestones and timetable in a regional roadmap.</li> </ul> <p><u>Baseline: 0</u></p> <p><u>Target: 1</u></p> <ul style="list-style-type: none"> <li># of countries providing inputs to develop conclusions and lessons learned on GMP phase 2, as well as recommendations and future plans</li> </ul>	<ul style="list-style-type: none"> <li>Assessment reports available through UNEP's website</li> <li>Regional roadmap document</li> <li>Report from final workshop available in UNEP's website</li> </ul>	<ul style="list-style-type: none"> <li>The quality of the data gathered through analysis of the matrices is of sufficient quality to undertake assessments and draw conclusions and lessons learned in order to design a roadmap</li> <li>Project has proceeded at pace and coverage as anticipated</li> <li>Financial and human resources are sufficient</li> </ul>

	<u>Baseline:</u> 0 <u>Target:</u> at least 8 national sets of recommendations		
M5.1: Draft report on the present situation of POPs in the region's environment and humans and draft regional summary report available			31 December 2017
M5.2: Final workshop concluded, with a report including conclusions, lessons learned, recommendations and roadmap for future monitoring plan in the Pacific Islands region			30 June 2018



## ANNEX B: SITUATION ANALYSIS





## ANNEX C: CALENDAR OF EXPECTED REFLOWS (If Non-Grant Instrument Is Used)

Provide a calendar of expected reflows to the GEF/LDCF/SCCF Trust Funds or to your Agency (and/or revolving fund that will be set up)

N/A

## ANNEX D: TECHNICAL INFORMATION ON PAS SAMPLING (SELECTION FOR THE PACIFIC ISLANDS)

### 1. Ambient air sampling using passive air samplers (PAS)

#### Generic principle of passive air samplers (PAS)

Ambient air monitoring for POPs is a challenging task. Next to the habitual difficulties inherent to the accurate detection and quantifications of POPs in environmental samples, the low concentrations of POPs in air require sampling techniques accumulating volumes of air that are large enough to overcome analytical detection limits. To sample large and well-known volumes of air within an acceptable period of time (typically a few hours to a few days), active air samplers proved to be the method of choice. However, active air samplers have some relevant disadvantages. Instrumental acquisition costs, demand of maintenance, as well as requirement of reliable power supply, are crucial limitations to the use of active air samplers, in particular in countries with limited financial resources.

Passive air samplers (PAS) have been developed as simple and cost-effective alternatives to active air samplers and they have been recommended for use in the global monitoring projects under the Stockholm Convention. Polyurethane foam (PUF) disks proved to be adequate adsorbents in PAS. PAS used in the UNEP/GEF projects are identical to the devices used in several previous networks; they consist of a PUF disk protected from dry and wet deposition by a stainless steel casing. The general layout and principle of the circulating air is shown in Figure 1.

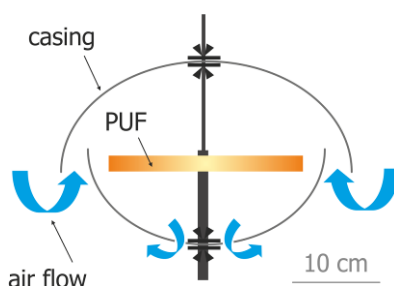


Figure 1: Cross section through a passive air sampler (PAS) equipped with a polyurethane foam (PUF) disk as adsorbent for airborne persistent organic pollutants (POPs)

#### Deployment of PAS and collection of PUF

In the UNEP/GEF monitoring projects, three types of passive air samplers have been and will be used. Such differentiation is necessary due to practical issues such as not to brake existing networks, *i.e.*, MONET in Africa, accessibility of samplers. Although slightly different in shape, all types follow the principle as shown above and the results have proven to be comparable. In the previous project, the respective providers of the samplers also provided cleaned PUFs, wrapped in aluminum foil; each PAS was delivered with five PUFs for a 1-year sampling: four PUFs for the four seasons and one

in reserve or as a laboratory blank. Table 1 shows the distribution of the PAS according to UNEP/GEF project and the providers.

PAS will be installed vertically at about 1.5 m to 2.0 m above ground or above the roof of a building. PAS will be exposed for two consecutive years in each country and PUFs will be changed every three months.

Table 1: Type and distribution of PAS and PUFs

Regional project	Provider/shipment from	Reference
Africa	Recetox	MONET
Asia	TBD	South-east Asia network
Pacific Islands	Tisch Co. (USA) through USP/IAS	GAPS
Latin America and the Caribbean	CSIC	Spanish network



Figure 2: PAS used in the GRULAC region



Figure 3: PAS used in the African region



Figure 4: PAS used in the pacific islands region

For the positioning and installation of samplers, a document with a standard operating procedure was prepared and provided to the participants of these projects. Whenever possible, the instructions provided in the standard operating procedure were followed by the operators on site. The regional representation of the sampling site was one of the most important criteria that had to be considered. Sampling locations should not be heavily influenced by POP emissions from very close local sources, but rather sample air representative of a wide region around the site.

A description of all selected sites was provided. PAS were located in urban and industrial regions, as well as in rural and remote sites (Table 2).

#### Location of PAS samplers

Table 2: Pacific Islands - location of sampling sites from GMP 1 project; site assignment for GMP 2 project (country, iso-3 alpha code, site, type, latitude, longitude, altitude)

Country	ISO 3-alpha code	Site	Type	Latitude	Longitude	Altitude (m a.s.l.)
Fiji	FJI	Suva Nausori or Nadi	urban-industrial or rural	18° 08' S, 18° 02' S, 17° 45' S	178° 27' E, 178° 33' E, 177° 27' E	6, 30, 22
Kiribati	KIR	Tarawa or Beru	Urban or background	01° 21' N, 01° 21' S	172° 59' E, 175° 59' E	2
Marshall Islands	MHL	TBD at inception meeting				
Niue	NIU	Alofi	urban	19° 04' S	169° 55' E	59
Palau	PLW	Koror <sup>1</sup>	urban	7° 20' N	134° 28' E	20
Samoa	WSM	Apia <sup>1</sup>	urban	13° 50' S	171° 45'	141
Solomon Islands	SLB	Honiara, Munda or Lata	Urban or rural	09° 25' S, 08° 20' S, 10° 43' S	159° 58' E, 157° 15' E, 145° 48' E	55, 4, 24
Tuvalu	TUV	Funafuti	urban	08° 32' S	179° 12' E	3
Vanuatu	VUT	TBD at inception meeting				



### Scheme for the set-up of the PAS and the analysis of POPs

Table 3: Assignment of samplers, PUFs, and analytes according to laboratory

No of sampler	Number of PUFs	Group of analytes / POPs in the group	Number of analyses <i>per year</i>
Sampler 1	PUFs 1-4	For basic POPs pesticides in expert back-up laboratory drins, chlordanes, DDTs, HCHs, heptachlors, mirex, HCB, pentachlorobenzene, endosulfans, toxaphenes, chlordecone	4 toxaphene, annual sample only
Sampler 2	PUFs 1-4	For basic POPs in national POPs laboratory drins, chlordanes, DDTs, HCHs, heptachlors, mirex, HCB, pentachlorobenzene, endosulfans, toxaphenes, chlordecone	4 toxaphene, annual sample only
Sampler 3	PUFs 1-4	For indicator PCB in expert back-up laboratory 6 indicator PCB	4
Sampler 4	PUFs 1-4	For indicator PCB in national POPs laboratory 6 indicator PCB	4
Sampler 5	PUFs 1-4	For dioxin-like POPs in expert back-up laboratory (combined into one extract as annual average) 17 PCDD/PCDF, 12 dl-PCB	1
Sampler 6	PUFs 1-4	For dioxin-like POPs in national dioxin laboratory (combined into one extract as annual average) 17 PCDD/PCDF, 12 dl-PCB	1
Sampler 7	PUFs 1-4	For dioxin-like POPs in expert back-up laboratory (each exposure to generate one seasonal data point; total of 4 per year and country) 17 PCDD/PCDF, 12 dl-PCB	4
Sampler 8	PUFs 1-4	For dioxin-like POPs in national laboratory (each exposure to generate one seasonal data point; total of 4 per year and country) 17 PCDD/PCDF, 12 dl-PCB	4
Sampler 9	PUFs 1-4	For BFR in expert laboratory 8 PBDE, HBCD, PBB	4
Sampler 10	PUFs 1-4	For BFR in national laboratory 8 PBDE, HBCD, PBB	4
Sampler 11	PUFs 1-4	For PFOS in expert laboratory 6 PFAS	4
Sampler 12	PUFs 1-4	For PFOS in national laboratory 6 PFAS	4





## 2. Countries that participated in the 5<sup>th</sup> round of milk survey

All efforts will be undertaken to support countries that participated in the 5<sup>th</sup> round of the WHO/UNEP milk survey participating in the component 3 of this project, *i.e.*, 6<sup>th</sup> round of the human milk survey. The following table summarizes the institutions that have been supported in the 5<sup>th</sup> round

Table 4: Pacific Islands - countries and coordinators where human milk samples were collected and analysed during the implementation of the regional project during GMP phase 1

Country	Institution	Human milk coordinator
Niue	Department of Environment	Haden Talagi Project Coordinator Email: <a href="mailto:haden.talagi@mail.gov.nu">haden.talagi@mail.gov.nu</a> / <a href="mailto:h_talagi@mail.nu">h_talagi@mail.nu</a>
Samoa	Division of Environment and Conservation Ministry of Natural Resources and Environment	Fuatino Matatumua-Leota Principal Chemicals & Hazardous Waste Management Officer Email: <a href="mailto:fuatino.leota@mnre.gov.ws">fuatino.leota@mnre.gov.ws</a> , <a href="mailto:fuatinol@gmail.com">fuatinol@gmail.com</a>
Solomon Islands	Environment and Conservation Division (ECD) Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM)	Rosemary Apa Chief Environment Officer Email: <a href="mailto:rosemaryapa@gmail.com">rosemaryapa@gmail.com</a>

## 3. Laboratories identified in developing countries to analyse POPs

The following laboratories have participated in the first phase of the UNEP/GEF GMP. It is attempted to engage them in this GMP2 project and further enhance their capacities and capabilities. For countries, participating for the first time in the GMP project, the national coordinator together assisted by UNEP will identify a national laboratory and nominate for the project. It is expected that not all countries will have operational POPs laboratories.

Table 5: Laboratories from the Pacific Islands region that participated in the regional project during GMP phase 1

Country	Name of laboratory	Name of laboratory
Fiji	Institute of Applied Sciences, University of the South Pacific Suva, E-mail: <a href="mailto:aalbersberg@usp.ac.fj">aalbersberg@usp.ac.fj</a>	
Kiribati	Did not have an operational laboratory for POPs analysis during GMP 1	
Marshall Islands	Did not have an operational laboratory for POPs analysis during GMP 1	
Niue	Did not have an operational laboratory for POPs analysis during GMP 1	
Palau	Did not have an operational laboratory for POPs analysis during GMP 1	
Samoa	Did not have an operational laboratory for POPs analysis during GMP 1	
Solomon Islands	Did not have an operational laboratory for POPs analysis during GMP 1	
Tuvalu	Did not have an operational laboratory for POPs analysis during GMP 1	
Vanuatu	TBD by national coordinator at inception	

#### 4. Laboratories that participated in the 1<sup>st</sup> and 2<sup>nd</sup> rounds of the interlaboratory assessments

Two rounds of interlaboratory assessments have been undertaken in 2009-2011 and 2012-2013. The participation of developing country laboratories has been supported through UNEP/GEF, UNEP/SAICM projects and bilateral donors such as the government of Norway (1<sup>st</sup> round) and the European Union (2<sup>nd</sup> round).

Table 6: Laboratories from the Pacific Islands that participated in the global interlaboratory assessments

Country	Name of laboratory	City	1 <sup>st</sup>	2 <sup>nd</sup>
Fiji	Institute of Applied Sciences, University of the South Pacific	Suva	X	X

## **APPENDICES**

1. Acronyms and abbreviations
2. Overall Project Budget
3. GEF Budget by project component and UNEP budget lines
4. Co-financing by source and UNEP Budget lines
5. Public awareness, communications and mainstreaming
6. Environmental and social safeguards
7. Workplan and timetable
8. Key deliverables and benchmarks
9. Summary of reporting requirements and responsibilities
10. Standard terminal evaluation
11. Decision making flowchart and Organigram
12. Terms of reference
13. Co-financing commitment letters from project partners
14. Endorsement letters of GEF National Focal Points
15. Draft Procurement plan
16. Tracking tools (not available)
17. Supervision Plan