



**INITIATION PLAN  
FOR A GEF PROJECT PREPARATION GRANT (PPG) OR  
PROGRAMME COORDINATION BUDGET (PCB)**

**Project Title:** Reducing UPOPs and Mercury releases from healthcare waste management, e-waste treatment, scrap processing and biomass burning.

**Country:** Colombia

**Initiation Plan Start Date:** January 2015

**Initiation Plan End Date:** December 2015

Programme Period: 2014-2018  
Programme Component: Chemicals and Waste  
PPG Title: Reducing UPOPs and Mercury releases from healthcare waste management, e-waste treatment, scrap processing and biomass burning.  
ATLAS Award ID: 00083909  
ATLAS Project ID: 00092153  
PIMS Project ID: 5481  
Duration: 12 months  
Management Arrangement: DIM ..

|                      |              |
|----------------------|--------------|
| Total budget:        | USD\$150,000 |
| Allocated resources: |              |
| GEF PPG Grant        | USD\$150,000 |

**AGREED BY UNDP RESIDENT REPRESENTATIVE / UNDP DIRECTOR:**

*Representante Residente*

*Signature*

*Date:*

*24/12/14*

## **Brief Description of Initiation Plan**

### **PROJECT OVERVIEW**

In 2005, as part of the preparation of its National Implementation Plan (NIP), Colombia estimated a total generation of dioxins and furans of 790.17 g-TEQ/year. Of these releases, the largest releases were to air (60.67%), and waste (30.32%). Of these total UPOPs releases, the most significant releases contributions were from: Uncontrolled combustion processes (436 g-TEQ/year); Waste incineration (124 g-TEQ/year); Power and heat generation (70 g-TEQ/year); Iron metal and non-iron metal production (59 g-TEQ/year); Production and use of chemical substances and consumption goods (37 g-TEQ/year); Miscellaneous (41 g-TEQ / year).

The sources that result in the most significant releases of dioxins and furans are uncontrolled combustion processes (55%); Waste incineration (16%); Heat and Power Generation (9%) and the production of ferrous and nonferrous metals (7%).

Following the results of the 2004 UPOPs inventory, Colombia agreed on a number of national priorities actions to meet its obligation under the Stockholm Convention on POPs, which were taken up in its NIP (2010). Priorities related to UPOPs release reduction were (among else): Establish an inventory of dioxins and furans; Establish an action plan for the reduction of dioxin and furan emissions and issue the necessary regulations and laws that would compel some sectors to comply with emission standards for dioxins and furans (for instance, sectors such as metal, iron and steel industries, coke coal production, roasting ovens for grains or vegetal, incineration facilities, and cement furnaces which co-incinerate (hazardous) waste).

In order to address national challenges related to the releases of unintentionally produced POPs and to reduce the negative impact of UPOPs on human health and the environment, close to releases sources but also on a regional and global level, the proposed project anticipates to implement a number of interventions with the objective to reduce UPOPs releases from the sectors with the most significant UPOPs releases in the country and to help the country meet its obligations under the Stockholm Convention.

**Project Component 1:** Update the release inventory of dioxins and furans and develop the inventory for unintentional UPOPs.

**Project Component 2:** Prevent and reduce emissions of UPOPs and Mercury generated in the treatment of HCW.

**Project Component 3:** Prevent and reduce the generation of UPOPs as well as other hazardous and toxic releases such as Mercury from the processing of Waste Electrical and Electronic Equipment (WEEE).

**Project component 4:** Prevent and minimize the generation of unintentional POPs in the metallurgical industry

**Project Component 5:** Prevent and minimize the generation of UPOPs in biomass burning.

**Project Component 6:** Strengthening the institutional, administrative, legal, technical and regulatory framework for reducing UPOPs.

#### THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT:

The amount of PCDD/PCDF/PBDE/PCB, mercury, lead as well as other hazardous substances which will be avoided from being released will be estimated a part of the project's PPG phase, during consecutive implementation, while a final cost-effectiveness will be reported on upon completion of the project.

At the PIF's development stage, it is expected that the project would be able to reduce UPOPs releases by ~ 100 g-TEQ/year. Reduction in Mercury releases will be determined during the PPG phase. This is a significant reduction.

However, the most important aspect of the project is that with GEF financing, a multitude of UPOPs priority sectors is being addressed, each of them applying an individualized approach for the introduction of BAT and BEP in priority sectors. Without GEF intervention, this would not be possible and would result in the fact that communicates at local, regional and global level remain exposed to the releases of UPOPs.

The fact that the country, with the support of this project, will not only be able to introduce BAT/BEP in a multitude of sectors, but will also be able to improve its regulatory and policy framework, build institutional capacity and further improve the analytical capacity of the country related to UPOPs, will also ensure long-term sustainability of project results and remove existing barriers towards the further replication of project results.

Finally, GEF contributions to the proposed project will enable the country to make great strides towards meeting its obligations under the Stockholm Convention.

## GEF PPG/PCB approved grant document and TBWP



**Naoko Ishii**  
CEO and Chairperson

September 03, 2014

Ms. Adriana Dinu  
GEF Executive Coordinator  
United Nations Development Programme  
One United Nations Plaza  
304 East 45th St.  
FF Bldg., 10th floor  
New York, NY 10017

Dear Ms. Dinu:

I am pleased to inform you that I have cleared the project concept detailed below for inclusion in the upcoming work program. I have also approved your request for project preparation grant.

|                               |   |
|-------------------------------|---|
| Decision Sought:              | Project Identification Form (PIF) Clearance for Work Program Inclusion and Project Preparation Grant (PPG) Approval           |
| GEFSEC ID:                    | 6928  |
| Agency(ies):                  | UNDP  |
| Agency ID:                    | 5481 (UNDP)   |
| Focal Area:                   | Chemicals and Waste   |
| Project Type:                 | Full Size Project   |
| Country(ies):                 | Columbia  |
| Name of Project:              | Reducing UPOPs and Mercury Releases from Healthcare Waste Management, e-Waste Treatment, Scrap Processing and Biomass Burning |
| Indicative GEF Project Grant: | \$3,660,000   |
| Indicative Agency Fee:        | \$532,000   |
| PPG Grant:                    | \$150,000   |
| PPG Agency Fee:               | \$14,250  |
| Funding Source:               | GEF Trust Fund  |

| Agency | Trust Fund | 40% Fees to be committed at Council Approval | Fees to be committed at CEO Endorsement | Total (US\$) |
|--------|------------|--|---|--------------|
| UNDP   | GET        | \$212,000                                    | \$319,200                               | \$532,000    |

This PIF clearance and PPG approval is subject to the comments made by the GEF Secretariat in the attached project review document. It is also based on the understanding that the project is in conformity with

Ms. Adriana Dimi

- 2 -

September 03, 2014

GEF focal areas strategies and in line with GEF policies and procedures. Please submit your final project documents for my endorsement no later than 18 months after Council approval of the work program.

Sincerely,



Karim Ishii  
Chief Executive Officer and Chairperson

Attachment: GEFSEC Project Review Document  
Copy to: Country Operational Focal Point, GEF Agencies, STAP, Trustee

**Annex B: Total Budget and Work Plan**

|  |  |                   |                                     |                                 |                             |                    |        |
|--|--|-------------------|-------------------------------------|---------------------------------|-----------------------------|--------------------|--------|
| <b>Award &amp; Project ID:</b>   | 00083909 / 00092153  |                   |                                     |                                 |                             |                    |        |
| <b>Award Title:</b>  | Reducing UPOPs releases from healthcare waste management   |                   |                                     |                                 |                             |                    |        |
| <b>Business Unit:</b>  | COL10  |                   |                                     |                                 |                             |                    |        |
| <b>Project Title:</b>  | Reducing UPOPs and Mercury releases from healthcare waste management, e-waste treatment, scrap processing and biomass burning. |                   |                                     |                                 |                             |                    |        |
| <b>PIMS no.</b>  | 5481   |                   |                                     |                                 |                             |                    |        |
| <b>Implementing Partner (Executing Agency)</b>   | Ministry of Environment and Sustainable Development (Minambiente)  |                   |                                     |                                 |                             |                    |        |
| <b>GEF Outcome/Atlas Activity</b>  | <b>Responsible Party/Implementing Agent</b>  |                   |                                     |                                 |                             |                    |        |
| Project Preparation Grant for Reducing UPOPs and Mercury releases from healthcare waste management, e-waste treatment, scrap processing and biomass burning. | <b>Fund ID</b>   | <b>Donor Name</b> | <b>Atlas Budgetary Account Code</b> | <b>ATLAS Budget Description</b> | <b>Amount 2015 (USD)</b>    | <b>Total (USD)</b> |        |
|  | 62000  | GEF               | 71200                               | International Consultant        | 40,000                      | 40,000             |        |
|  |  |                   | 71300                               | Local consultants               | 55,000                      | 55,000             |        |
|  | UNDP   | 62000             | GEF                                 | 74100                           | Workshops and consultations | 35,000             | 35,000 |
|  |  |                   |                                     | 71600                           | Travel                      | 10,000             | 10,000 |
|  |  |                   | 72500                               | Supplies                        | 10,000                      | 10,000             |        |
| <b>Total GEF Budget</b>  |  |                   |                                     |                                 | <b>150,000</b>              | <b>150,000</b>     |        |



## Annual Work Plan

Colombia - Bogota

Project: 00083909 Report Date: 22/12/2014  
 Project Title: Reducing UPOP's releases from healthcare waste management  
 Year: 2015

| Output                                   | Key Activities        | Timeframe |     | Responsible Party | Planned Budget |             |              |                           |            |
|--|-----------------------|-----------|-----|-------------------|----------------|-------------|--------------|---------------------------|------------|
|  |                       | Start     | End |                   | Fund           | Donor       | Budget Descr | Amount US\$               |            |
| 00092153 Reducing UPOP's releases from h | 1.FORMULACION FASE PP |           |     | UNDP              | 62000          | GEF Trustee | 71200        | International Consultants | 40,000.00  |
|  |                       |           |     | UNDP              | 62000          | GEF Trustee | 71300        | Local Consultants         | 55,000.00  |
|  |                       |           |     | UNDP              | 62000          | GEF Trustee | 72500        | Supplies                  | 10,000.00  |
|  |                       |           |     | UNDP              | 62000          | GEF Trustee | 71800        | Travel                    | 10,000.00  |
|  |                       |           |     | UNDP              | 62000          | GEF Trustee | 74100        | Professional Services     | 35,000.00  |
| <b>TOTAL</b>                             |                       |           |     |                   |                |             |              |                           | 150,000.00 |
| <b>GRAND TOTAL</b>                       |                       |           |     |                   |                |             |              |                           | 150,000.00 |

**LISTA DE CHEQUEO PARA FIRMA DE PRODOCS /REVISIONES**

**PROGRAMA**

**DATOS GENERALES**

FECHA 22 de diciembre de 2014

NUMERO DEL PROYECTO :00083909

NUMERO DEL OUTPUT ID :00092153

NOMBRE DEL PROYECTO *Fase PPG UPOPs and Mercury releases from healthcare waste management, e-waste treatment scrap processing and biomass burning*

REVISIÓN ANTERIOR:  REVISIÓN ACTUAL: INICIAL

PRODOC NUEVO: SI FECHA PREPAC NA\_ FECHA PAC 9-dic-2014

**FIRMAS**

|  | NOMBRE   | FIRMA  | FECHA             |
|--|--|--|-------------------|
| ANALISTA   | PP <u>Xavier Hernandez</u>   |   | <u>22/12/2014</u> |
| FINANZAS   | <u>OSCAR OVALLE</u>  |  | <u>22/12/14</u>   |
| ADQUISICIONES  | <u>N/A</u>  | <u>N/A</u>   | <u>N/A</u>        |
| <small>(solo si el proyecto tiene un componente alto de adquisiciones)</small> |  |  |                   |
| PLANEACION ESTRATEGICA   | <u>Daniel Vargas</u>   |  | <u>23.12.2014</u> |

**OBSERVACIONES:** *Este Proyecto está en fase de inicio, y es una Fase PPG, en su arranque se construirá el Plan de Adquisiciones.*

ENVIO A LA SEDE : \_\_\_\_\_

(solo si se trata de nuevo PRODOC o Rev. Sustantiva)





COMITÉ DE EVALUACIÓN DE PROYECTOS  
PAC

**Fecha de la Reunión: 9 de diciembre de 2014**

**ATLAS Project ID:** 00083909

**ATLAS Output ID:** 00092153

**Título:** Fase PPG: Reducing UPOPs and Mercury releases from healthcare waste management, e-waste treatment, scrap processing and biomass burning

**Nombre de la Agencia de Ejecución:** PNUD

**Duración del Proyecto:** 12 meses

**Modalidad de Ejecución:** DIM

**Indicador(es)/Resultado(s) UNDAF:** Capacidades nacionales, regionales y locales fortalecidas para la gestión integral del territorio que garantice el desarrollo sostenible

**Resultado(s)/Indicador(es) Esperado(s) - (Resultado CPAP):** *Fortalecimiento de capacidades, por parte de las instituciones públicas y de la sociedad civil, para enfrentar y reducir el impacto negativo del cambio climático, la reducción de la capa de ozono, el manejo de los residuos sólidos, el manejo integral de los recursos hídricos y de los contaminantes orgánicos persistentes, en concordancia con los acuerdos internacionales.*

**Producto(s) Esperados/Metas Anuales (Productos CPAP vinculados con el resultado CPAP mencionado arriba):** *Instituciones públicas y de la sociedad civil consolidan capacidades para enfrentar y reducir el impacto negativo del cambio climático, la reducción de la capa de ozono, el manejo de los residuos sólidos, el manejo integral del recurso agua, y de los contaminantes orgánicos persistentes, en concordancia con los acuerdos internacionales/Al menos 4 iniciativas nuevas en 2012*

**Presupuesto del Proyecto:**

*GEF: USD 150.000,00*

**Funcionario que solicita el análisis del PAC:** Jimena Puyana

**Antecedentes:**

En 2005, como parte de la preparación de su Plan Nacional de Implementación de Contaminantes Orgánicos Persistentes (COPs), Colombia estimó la generación total de dioxinas y furanos a 790,17g de equivalentes tóxicos por año. De estas emisiones, las más grandes fueron emisiones al aire (60,67%) y residuos (30,32%). De estas emisiones de COPs producidas de manera no intencional (UPOPs por sus siglas en inglés), las contribuciones de emisiones más importantes fueron los siguientes: procesos de combustión no controlados (436g de equivalentes tóxicos/año), incineración de residuos (124g de equivalentes tóxicos/año), generación de energía y calor (70g de equivalentes tóxicos/año), producción de metales féreos y no féreos (59g de equivalentes tóxicos/año), la producción y uso de sustancias químicas y bienes de consumo (37g de equivalentes tóxicos/año) y misceláneos (41g de equivalentes tóxicos/año).

Las fuentes que resultan en las emisiones más significativas de dioxinas y furanos son procesos de combustión no controlados (55%), incineración de residuos (16%), generación de energía y calor (9%) y la producción de metales féreos y no féreos (7%).

Dando seguimiento a los resultados del inventario de UPOPs, Colombia ha acordado de llevar a cabo un número de acciones de prioridad nacional para cumplir sus obligaciones en el marco de la Convención de Estocolmo sobre Contaminantes Orgánicos Persistentes. Las prioridades relacionadas a reducir las emisiones de UPOPs fueron, entre otras: Establecer un inventario para dioxinas y furanos; Establecer un plan de acción para la reducción de emisiones de dioxinas y furanos y emitir las regulaciones y leyes necesarios que obligarían algunos sectores de cumplir con estándares de emisiones de dioxinas y furanos (por ejemplo, sectores como los de producción de metales, hierro y acero, producción de carbón de coque, hornos de asar de granos y vegetales, facilidades de incineración y hornos rotatorios que co-incineran residuos o residuos peligrosos).

Con el fin de abordar los retos que el país se enfrenta en relación a las emisiones de UPOPs y para reducir el impacto negativo de los UPOPs a la salud humana y el medio ambiente cercanos a las fuentes de emisión pero también en un nivel regional y global, el proyecto propuesto espera implementar un número de intervenciones con el objetivo de reducir las emisiones de UPOPs en los sectores que son fuentes de las emisiones más significativas del país, y ayudar al país a cumplir con las obligaciones bajo la Convención de Estocolmo.

El objetivo de este proyecto de fase de preparación (fase PPG) es desarrollar el Documento de Proyecto para ser sometido a aprobación del GEF para recibir los fondos completos para la implementación del proyecto propuesto.

**Componentes del proyecto:**

El producto final de este proyecto es un documento de proyecto para ser enviado a aprobación del GEF, que incluye los siguientes componentes:

**Componente 1:** Actualizar el inventario de emisiones de dioxinas y furanos, y desarrollar el inventario para Contaminantes Orgánicos Persistentes producidos de manera no intencional (UPOPs por su sigla en inglés).

**Componente 2:** Prevenir y reducir emisiones de UPOPs y mercurio generado en el tratamiento de residuos sanitarios.

**Componente 3:** Prevenir y reducir la generación de UPOPs y otras emisiones peligrosas y tóxicas como el mercurio de procesamiento de Residuos de Aparatos Eléctricos y Electrónicos (RAEE).

**Componente 4:** Prevenir y minimizar la generación de UPOPs en la industria metalúrgica.

**Componente 5:** Prevenir y minimizar la generación en quema de biomasa

**Componente 6:** Fortalecer el marco institucional, administrativo, legal, técnico y regulatorio para reducir los UPOPs.

**Enfoques Transversales del PNUD:**

Este proyecto apunta al enfoque transversal del PNUD de desarrollo de capacidades nacionales. Fortalecerá las capacidades del gobierno la gestión ambientalmente adecuada de químicos contaminantes, tanto para cumplir con compromisos de acuerdos internacionales firmados por el Gobierno colombiano, y para mejorar el bienestar de los colombianos. Así mismo, apunta al desarrollo humano ya que los químicos contaminantes que ayudará manejar el proyecto de manera sostenible tienen un impacto negativo en la salud humana.

**Principales productos:**

El producto principal es tener la versión final del Documento de Proyecto del proyecto para ser sometido al GEF para aprobación.

**Objetivo de la Presentación:** Poner a consideración del Comité la aprobación este proyecto.

**Análisis de Riesgos:**

**Riesgo:** El tiempo corto para la formulación del proyecto (12 meses), por lo cual demoras en la conformación de equipo de proyecto pueden poner a riesgo el cumplimiento del objetivo de este proyecto de preparación.

**Acciones de mitigación:** Borradores de los TORs del equipo de trabajo ya están elaborados. Terminar con los procesos de contratación lo antes posible.

**Riesgo:** No se cuenta con información de calidad para la elaboración de la línea base.

**Acciones de mitigación:** Involucrar desde el principio los actores clave a nivel público y privado, demostrando que el proyecto a ser implementado tiene beneficios para las diferentes entidades y también para el bienestar de la población colombiana.

**Comentarios y Recomendaciones del PAC:**

- Información en ATLAS incompleta.ok ingresado

**Miembros del PAC:**

Daniel Vargas, Carolina Naranjo, Amalia Alarcón, Marcela Rodríguez, Jimena Puyana, David Quijano

Daniel Vargas  
Presidente del PAC

Fecha:

22 Dic. 2014

20



# PROSPERIDAD PARA TODOS

Dioxinas  
PPE

8 1 5 0 - 3 - 2 6 5 9 6 -  
0 5 AGO 2014

Bogotá, D. C.

**FABRIZIO HOCHSCHILD**  
Resident Coordinator  
United Nation Development Program UNDP  
Avenida 82 No.10-62 Pisos 3 y 4  
Bogotá, Colombia.

MINISTERIO DE AMBIENTE Y DESARROLLO SOSTENIBLE  
8/8/2014 15:15:34 FOLIOS: 1 ANEXOS: 0  
AL CONTESTAR CITE: 8150-E2-26596  
TIPO DOCUMENTAL: OFICIO  
REMITE: OFICINA DE ASUNTOS INTERNACIONALES DE AMBIENTE  
DESTINATARIO: MINISTERIO DE RELACIONES EXTERIORES

Subject: Endorsement for the project "Reducing UPOPS releases from health - care waste management, e-waste treatment, scrap processing and biomass burning".

In my capacity as GEF Operational Focal Point for Colombia, I confirm that the above mentioned project proposal (a) is in accordance with my government's national priorities and our commitment to the relevant global environmental conventions; and (b) was discussed with relevant stakeholders, including the global environmental convention focal points.

I am pleased to endorse the preparation of the above project proposal with the support of the GEF Agency listed below. If approved, the proposal will be prepared and implemented by Ministry of Environment and Sustainable Development. I request the GEF Agency to provide a copy of the project document before it is submitted to the GEF Secretariat for CEO endorsement.

The total of financing (from GEFTF) being requested for this project is US\$6.296.250, inclusive of project preparation grant (PPG), if any, and Agency fees for project cycle management services associated with the total GEF grant. The financing requested for the POP'S project is detailed in the table below.

| Source of Funds            | GEF Agency | Focal Area | Amount (in US\$)    |           |         |           |
|----------------------------|------------|------------|---------------------|-----------|---------|-----------|
|                            |            |            | Project Preparation | Project   | Fee     | Total     |
| GEFTF                      | UNDP       | POP'S      | 150.000             | 5.600.000 | 546.250 | 6.296.250 |
| <b>Total GEF Resources</b> |            |            | 150.000             | 5.600.000 | 546.250 | 6.296.250 |

Sincerely,

*LAURA C. BERMUDEZ WILCHES*

**LAURA BERMUDEZ WILCHES**  
GEF Operational Focal Point for Colombia  
Office of International Affairs

Copy to: Claudia Cuevas, GEF Political Focal Point for Colombia  
Rodrigo Suarez, Acting Chief of the Office of International Affairs  
Francisco Gomez, Director of Environmental Manager, Sectorial and Urban Affairs

Calle 37 No. 8 – 40 Bogotá, Colombia  
Conmutador (571) 3323400  
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PNUD ASUNTO: PRY 01  
Radicado: 201403414 2014/08/11 4:19 PM  
Proc: ENT00316-MINISTERIO DEL MEDIO AMBIENTE  
Dest: JMP-PUYANA JIMENA  
Asun: ENDORSEMENT FOR THE PROJECT REDUCING UPOP





# PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project

TYPE OF TRUST FUND: GEF Trust Fund

For more information about GEF, visit [TheGEF.org](http://TheGEF.org)

## PART I: PROJECT INFORMATION

|                             |   |   |    |
|-----------------------------|---|---|----|
| Project Title:              | Reducing UPOPS releases from healthcare waste management, e-waste treatment, scrap processing and biomass burning.      |   |    |
| Country(ies):               | Colombia  | GEF Project ID: <sup>1</sup>                    |    |
| GEF Agency(ies):            | UNDP (select) (select)  | GEF Agency Project ID:                          |    |
| Other Executing Partner(s): |   | Submission Date:                                |    |
| GEF Focal Area(s):          | Chemicals and Wastes  | Project Duration (Months)                       | 60 |
| 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:     | [if applicable]   |   |    |

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

| Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs) | Trust Fund | (in \$)               |              |
|--|------------|-----------------------|--------------|
|  |            | GEF Project Financing | Co-financing |
| (select) CW-2 Program 3 (select)   | GEFTF      | 5,600,000             | 22,050,000   |
| (select) (select) (select)   | (select)   |                       |              |
| (select) (select) (select)   | (select)   |                       |              |
| (select) (select) (select)   | (select)   |                       |              |
| (select) (select) (select)   | (select)   |                       |              |
| (select) (select) (select)   | (select)   |                       |              |
| (select) (select) (select)   | (select)   |                       |              |
| (select) (select) (select)   | (select)   |                       |              |
| (select) (select) (select)   | (select)   |                       |              |
| Total Project Cost   |            | 5,600,000             | 22,050,000   |

### B. INDICATIVE PROJECT DESCRIPTION SUMMARY

| <b>Project Objective:</b> To introduce BEP and BAT to reduce the release of unintentionally generated POPs from the treatment of healthcare waste (HCW), the processing of Waste Electrical and Electronic Equipment (WEEE), secondary metal processing and biomass burning. |                             |   |            |                       |              |
|--|-----------------------------|---|------------|-----------------------|--------------|
| Project Component  | Financing Type <sup>3</sup> | Project Outcomes  | Trust Fund | (in \$)               |              |
|  |                             |   |            | GEF Project Financing | Co-financing |
| 1. Update the release inventory of dioxins and furans and develop the inventory for unintentional UPOPs.   | TA                          | 1.1 UPOPs inventory updated and results incorporated into NIP.  | GEFTF      | 270,000               | 1,350,000    |
| 2. Prevent and reduce emissions of UPOPs generated in the treatment of HCW.  | TA                          | 2.1 Demonstrated a reduction in UPOPs releases as a result of the BAT/BEP application for HCW treatment.<br><br>2.2 Lessons learned from the demonstration projects documented and disseminated for replication purposes. | GEFTF      | 1,200,000             | 3,600,000    |

<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.

|  |          |   |          |           |            |
|--|----------|---|----------|-----------|------------|
| 3. Prevent and reduce the generation of UPOPs from the processing of Waste Electrical and Electronic Equipment (WEEE).     | TA       | 3.1 National WEEE management assessment finalized (incl. technology recommendations for different types of facilities).<br><br>3.2 Demonstrated a reduction in the generation of UPOPs as a result of the application of BAT and BEP for the management of WEEE.<br><br>3.3 Lessons learned from the demonstration projects documents and disseminated for replication purposes.            | GEFTF    | 1,300,000 | 4,500,000  |
| 4. Prevent and minimize the generation of UPOPs in the metallurgical industry.   | TA       | 4.1 Assessment of primary and secondary metallurgic production processes and technologies finalized.<br><br>4.2 Demonstrated a reduction in UPOPs releases as a result of the introduction of BAT/BEP.  | GEFTF    | 1,300,000 | 5,000,000  |
| 5. Prevent and minimize the generation of UPOPs in the biomass burning.  | TA       | 5.1 Demonstrated a reduction in UPOPs releases as a result of BAT/BEP application related to biomass burning.   | GEFTF    | 900,000   | 3,100,000  |
| 6. Strengthening the Institutional, administrative, legal, technical and regulatory framework for reducing UPOPs Baseline. | TA       | 6.1 Reviewed and adjusted regulatory framework for controlling the generation of UPOPs.<br><br>6.2 Education and training program for environmental authorities on the negative impacts of UPOPs and measures to prevent their generation established.<br><br>6.3 Increased capacity of the country for the development of monitoring programs and control generation UPOPs and other POPs. | GEFTF    | 350,000   | 4,500,000  |
|  | (select) |   | (select) |           |            |
|  | (select) |   | (select) |           |            |
|  | (select) |   | (select) |           |            |
|  | (select) |   | (select) |           |            |
| Subtotal   |          |   |          | 5,320,000 |            |
| Project Management Cost (PMC) <sup>4</sup>   |          |   | GEFTF    | 280,000   |            |
| Total Project Cost   |          |   |          | 5,600,000 | 22,050,000 |

If Multi-Trust Fund project :PMC in this table should be the total and enter trust fund PMC breakdown here ( )

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

**C. INDICATIVE SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE, IF AVAILABLE**

| Sources of Co-financing   | Name of Co-financier                              | Type of Co-financing | Amount (\$)       |
|---------------------------|---|----------------------|-------------------|
| Government                | Ministries and Regional Environmental Authorities | In-kind              | 2,450,000         |
| Others                    | National Center for Cleaner production            | In-kind              | 250,000           |
| Private Sector            | Waste Management Companies                        | Grants               | 9,000,000         |
| Private Sector            | Companies in the electronics industry             | Grants               | 1,200,000         |
| Private Sector            | Companies in the metallurgical industry           | Grants               | 5,500,000         |
| Private Sector            | Agricultural Industries Sugarcane                 | Grants               | 3,650,000         |
| <b>Total Co-financing</b> |   |                      | <b>22,050,000</b> |

**D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS**

| GEF Agency                 | Trust Fund | Country/<br>Regional/<br>Global <sup>a)</sup> | Focal Area           | Programming of Funds   | (in \$)                   |                              |                  |
|----------------------------|------------|---|----------------------|------------------------|---------------------------|------------------------------|------------------|
|                            |            |   |                      |                        | GEF Project Financing (a) | Agency Fee (b) <sup>b)</sup> | Total (c)=a+b    |
| UNDP                       | GEFTF      | Colombia <input type="checkbox"/>             | Chemicals and Wastes | POPS                   | 5,600,000                 | 532,000                      | 6,132,000        |
| (select)                   | (select)   | <input type="checkbox"/>                      | (select)             | (select as applicable) |                           |                              |                  |
| (select)                   | (select)   | <input type="checkbox"/>                      | (select)             | (select as applicable) |                           |                              |                  |
| (select)                   | (select)   | <input type="checkbox"/>                      | (select)             | (select as applicable) |                           |                              |                  |
| (select)                   | (select)   | <input type="checkbox"/>                      | (select)             | (select as applicable) |                           |                              |                  |
| <b>Total GEF Resources</b> |            |   |                      |                        | <b>5,600,000</b>          | <b>532,000</b>               | <b>6,132,000</b> |

a) Country name plus tick box if charged against regional or global set-aside.

b) Refer to the Fee Policy for GEF Partner Agencies.

**E. PROJECT PREPARATION GRANT (PPG)<sup>5</sup>**

Is Project Preparation Grant requested? Yes  No  If no, skip item E.

**PPG AMOUNT REQUESTED BY AGENCY(IES), TRUST FUND, COUNTRY(IES) AND THE PROGRAMMING OF FUNDS**

| GEF Agency              | Trust Fund | Country/<br>Regional/Global <sup>a/</sup> | Programming of Funds   | (in \$)        |                             |                 |
|-------------------------|------------|---|------------------------|----------------|-----------------------------|-----------------|
|                         |            |   |                        | PPG (a)        | Agency Fee <sup>6</sup> (b) | Total c = a + b |
| UNDP                    | GEF TF     | Colombia <input type="checkbox"/>         | POPS                   | 150,000        | 14,250                      | 164,250         |
| (select)                | (select)   | <input type="checkbox"/>                  | (select as applicable) |                |                             |                 |
| (select)                | (select)   | <input type="checkbox"/>                  | (select as applicable) |                |                             |                 |
| <b>Total PPG Amount</b> |            |   |                        | <b>150,000</b> | <b>14,250</b>               | <b>164,250</b>  |

a/ Country name plus tick box if charged against regional or global set-aside.

<sup>5</sup> PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF upto \$1 mil; \$100k for PF up to \$3 mil; \$150k for PF up to \$6 mil; \$200k for PF up to \$10 mil; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

<sup>6</sup> PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

## F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS<sup>7</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  | (Enter number of hectares)          |
| 2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)   | 120 million hectares under sustainable land management   | (Enter number of hectares)          |
| 3. Promotion of collective management of transboundary 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; | (Enter number of freshwater basins) |
|   | 20% of globally over-exploited fisheries (by volume) moved to more sustainable levels                                  | (Enter number of fisheries)         |
| 4. Support to transformational shifts towards a low-emission and resilient development path   | 750 million tons of CO <sub>2e</sub> mitigated   | (Enter number of tons)              |
| 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)   | 100 g-TEQ                           |
|   | Reduction of 1000 tons of Mercury  | (Enter number of tons)              |
|   | Phase-out of 303.44 tons of ODP (HCFC)   | (Enter number of tons)              |
| 6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks  | Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries | (Enter number of countries)         |
|   | Functional environmental information systems are established to support decision-making in at least 10 countries       | (Enter number of countries)         |

## PART II: PROJECT JUSTIFICATION<sup>8</sup>

### 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/ADDITIONAL COST REASONING AND EXPECTED CONTRIBUTIONS FROM THE BASELINE, THE GEFTF, LDCF, SCCF, AND CO-FINANCING; 5) GLOBAL ENVIRONMENTAL BENEFITS (GEFTF) AND/OR ADAPTATION BENEFITS (LDCF/SCCF); AND 6) INNOVATIVENESS, SUSTAINABILITY AND POTENTIAL FOR SCALING UP.

Section 5 of the Stockholm Convention on Persistent Organic Pollutants points out that each party shall adopt the measures as deemed necessary to reduce the total releases derived from anthropogenic sources belonging to each and all of the chemical products included in Annex C to protect the health of the population and environment globally.

In 2005, as part of the preparation of its National Implementation Plan (NIP), Colombia estimated a total generation of dioxins and furans of 790.17 g-TEQ/year. Of these releases, the largest releases were to air

<sup>7</sup> 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.

<sup>8</sup> Part II should not be longer than 5 pages.



(60.67%), and waste (30.32%). Of these total UPOPs releases, the most significant releases contributions were from: Uncontrolled combustion processes (436 g-TEQ/year); Waste incineration (124 g-TEQ/year); Power and heat generation (70 g-TEQ/year); Iron metal and non-iron metal production (59 g-TEQ/year); Production and use of chemical substances and consumption goods (37 g-TEQ/year); Miscellaneous (41 g-TEQ / year).

The sources that result in the most significant releases of dioxins and furans are Uncontrolled combustion processes (55%); Waste incineration (16%); Heat and Power Generation (9%) and the production of ferrous and nonferrous metals (7%).

Following the results of the 2004 UPOPs inventory, Colombia agreed on a number of national priorities actions to meet its obligation under the Stockholm Convention on POPs, which were taken up in its NIP (2010). Priorities related to UPOPs release reduction were (among else): Establish an inventory of dioxins and furans; Establish an action plan for the reduction of dioxin and furan emissions and issue the necessary regulations and laws that would compel some sectors to comply with emission standards for dioxins and furans (for instance, sectors such as metal, iron and steel industries, coke coal production, roasting ovens for grains or vegetal materials, incineration facilities, and cement furnaces which co-incinerate (hazardous) waste).

In order to address national challenges related to the releases of unintentionally produced POPs and to reduce the negative impact of UPOPs on human health and the environment, close to releases sources but also on a regional and global level, the proposed project anticipates to implement a number of interventions with the objective to reduce UPOPs releases from the sectors with the most significant UPOPs releases in the country and to help the country meet its obligations under the Stockholm Convention.

Below are presented the project's baseline scenario, associated baseline projects as well as a proposed alternative scenario, including a brief description of expected outcomes and project components.

### **Project Component 1: Update the release inventory of dioxins and furans and develop the inventory for unintentional UPOPs.**

#### *Baseline:*

Colombia conducted a UPOPs inventory in 2004 in preparation for its NIP using the Standardized Instruments for Identification and Quantification of Dioxin and Furan Releases (UNEP). It is essential to update the UPOPs inventory due to the fact that during the past 10 years, sectors, such as waste treatment, metal production, the oil & chemical industry and mining activities which are considered important UPOPs release sources in Colombia have grown. Likewise, the informal waste management sector, has also grown, which is known to apply practices which generate UPOPs releases, such as the burning of plastic or rubber coatings of electric and electronic wires in order to extract metals inside.

In addition to Polychlorinated Dibenzoparadioxins and Polychlorinated Dibenzofurans (PCDDs/ PCDFs), other POPs such as Hexachlorobenzene (HCB) and Pentachlorobenzene (PECB), are also formed and released unintentionally through thermal processes. Therefore, it would be important to also establish release factors for those UPOPs.

#### *Associated Baseline Projects:*

The Government of Colombia, anticipates to submit a request to the GEF (during the GEF-6 replenishment cycle) to revise and update its National Implementation Plan for the Stockholm Convention on Persistent Organic Pollutants (POPs). Results from the proposed project, in particular the updated UPOPs release inventory but also priority interventions as identified throughout the implementation of the proposed project, would provide necessary data, priorities and action plans for incorporation into the revised NIP, in specific sections related to UPOPs release reduction.

*Expected outputs:*

- Release inventory of UPOPs revised/prepared.

*GEF-supported Activities:*

- An inventory review shall be carried out to compare the 2004 calculation methodology with the 2013 calculation methodology, to determine to what extent emission factors have been adjusted in the new toolkit version.
- Apply the 2013 Toolkit for Identification and Quantification of Releases of Dioxins, Furans and Other Unintentional POPs to update and establish release inventories of unintentional POPs, and in order to identify priorities.
- Review available UPOPs data on measurements of dioxins and furans that have been conducted in sectors such as waste treatment, metal processing industry and other sectors to verify whether theoretical calculations are in line with actual data and to decide whether adjustments have to be made to the inventory's calculations.
- Conduct a limited number of UPOPs measurements in Colombia's priority sectors, such as uncontrolled biomass burning, waste incineration, metal processing, power generation and waste treatment, to verify whether Colombian emissions factors are in line with the release factors as calculated by the toolkit.

**Project Component 2: Prevent and reduce emissions of UPOPs generated in the treatment of HCW.**

*Baseline:*

A hazardous waste stream which poses particular challenges in Colombia, is infectious healthcare waste (HCW) generated by the health sector. In 2012, an estimated 25,000 tonnes per year were generated, representing 10% of produced hazardous waste volumes in the country. Although, such wastes are produced throughout the entire national territory, in Bogota alone, HCW represents a fourth of the total volume of generated hazardous waste. The 2004 UPOPs inventory, concluded that the incineration of HCW resulted in UPOPs releases equivalent to 89 g-TEQ/year.

Treatment of HCW is performed mainly through incineration, one of the main sources of UPOPs. Many incineration facilities in Colombia use obsolete technologies with deficient emission controls, especially in poor areas located far away from urban centers. In some remote areas of the country, due to geographic and/or armed conflict reasons, Health Care Facilities (HCFs) have no means to treat HCW, as such such wastes are disposed of along with domestic waste or they are burned in the open.

In some cities such as Bogota, Medellin or Cali, some private hospitals make use of steam based non-incineration treatment systems, however public hospitals have currently no access to such systems. Even though some HCW is disinfected using steam-treatment in private hospitals, no disinfected waste is being recovered as a raw materials for other industrial processes. Instead, such waste is often disposed of in sanitary landfills.

*Associated Baseline Projects:*

- Since 2000, Colombia has a regulation that deals with healthcare waste management (HCWM), it was amended recently, and obligations were established for generators, collectors, sanitary- and environmental authorities. The objective of this regulation is to guarantee an adequate management of those residues. Regulations have also been established for emission control, while regulations are currently being discussed and drafted in order to address the management and treatment of other types of waste.

- The Colombian Ministry of Health and Social Protection and the Ministry of Environment and Sustainable Development shall develop standards, directions and technical guidelines for the management and disposal of waste generated in health services. This is done within the National Policy of Hazardous Waste Management. For this purpose, private hospitals and companies in the business of waste management are currently implementing waste treatment systems that have been offered as a counterpart supplied by the country to the UPOPS Project.

Building upon the newly developed and adopted HCWM regulations and emission standards, the proposed project anticipates to support a number of HCFs in the demonstration of BAT and BEP approaches for HCWM and as such achieve UPOPs release reductions..

*Expected outputs:*

- National HCWM assessment finalized and published.
- Technical and economic assessment of HCWM technologies for the Colombian setting prepared.
- National HCWM Plan and/or Strategy developed (including recommendations for HCW treatment technologies and national guidelines for BAT/BEP applicaion in the treatment of HCW).
- Four (4) demonstration projects implemented to improve waste segregation, treatment and recovery..
- Decrease in UPOPs releases as a result of the project quantified.
- Document published with the lessons learned from the demonstration projects.

*GEF-supported Activities:*

- Assessment of the HCWM situation in Colombia, especially in socially vulnerable areas and/or areas with a high environmental interest (e.g. regions of the Amazon, Orinoquia and Chocó).
- Conduct a technical and economic assessment of available technologies (national/international level) for the treatment of HCW.
- Development of a national HCWM Strategy and Plan, based upon the outcomes of the national HCWM assessment and the outcomes of the CBA which assessed the application of BAT for HCW treatment in Colombia.
- Implementation of four (4) demonstration projects in the following regions of the country: Caribbean Coast of Colombia, Chocó, Amazon and Antioquia. The four demonstration projects will introduce BAT and BEP to improve waste segregation, storage, transport, treatment and recovery, etc.
- A calculation on the release reduction of UPOPs will be made to indicate the impact of the introduction of BAT and BEP.
- Information shall be collected about the operational conditions of the technologies introduced at the demonstration sites as well as the BEP measures introduced to improve the HCWM situation, These results will be published and released to encourage replication of project results.

**Project Component 3: Prevent and reduce the generation of UPOPs from the processing of Waste Electrical and Electronic Equipment (WEEE).**

*Baseline:*

Waste from Electric and Electronic Devices (WEEE) are considered a global concern, as their rapid generation growth and management of such wastes result in global, regional and local health and environmental implications.

According to the Ministry of Environment and Sustainable Development, in Colombia approximately 120,000 tons of WEEE are generated per year (2013), representing a yearly per capita generation of 2.5 kg of WEEE, of which the most relevant fractions are domestic appliances with 44% (e.g. TV sets, refrigerators, washing machines), and information and telecommunication technology equipment with 16% (e.g. computers, mobile



phones, etc.). It has been estimated that 20% of WEEE consists of plastic material, which contain flame retardants such as hexabromobiphenyl, polybromated ethers, Perfluorooctane sulfonate – PFOS -, perfluorooctane sulfonide fluoride – PFOSF, hexachloro cyclodecane, and Hexabromo cyclodecane – HBCD. When such plastics are burned or incinerated that can result in the release of UPOPs.

WEEE management in Colombia has been traditionally assumed by cooperatives, whether formal or informal, which seek for the recovery of raw materials, mainly those that have or contain iron, plastics and precious metals.

#### *Associated Baseline Projects:*

To address the pressing challenges posed by increasing waste volumes and treatment of WEEE, the Government of Colombia has recently taken several initiatives to improve the management of WEEE.

- Formal recycling activities of WEEE have been regulated since 2010 with the issuance of an Environmental License. The license is expected to support companies in obtaining a good payment for recovered materials from WEEE, while such companies are expected to prevent and reduce environmental impacts associated with hazardous substances present in those waste.
- Considering the need to establish channels for adequate collection, Law 1672 was issued in 2013. The law establishes the public policy guidelines for environmentally adequate management of WEEE, based on the application of the Extended Producer Responsibility (EPR) Principle. Producers being considered by Law as the principal players in the collection of WEEE and its further environmental management.
- The Colombian Ministry of Environment and Sustainable Development, the Federal Swiss Institute of Material and Technology Testing and Research (EMPA), and the National Center for a Cleaner Production and Environmental Technologies (CNPMTA), are developing a project for strengthening WEEE management in Colombia, with funding provided by the Cooperation Department of the Swiss Government. The project will aim to implement EPR practices and approaches for WEEE manufacturers and importers.

Building upon the baseline activities support by the Colombia and Swiss Government, the proposed project will aim to reduce releases of UPOPs from the inadequate treatment of WEEE by introducing BAT and BEP approaches and practices in this sector.

#### *Expected outputs:*

- National WEEE assessment finalized and published.
- Technical and economic assessment of WEEE technologies for the treatment and recycling of WEEE prepared.
- Two (2) demonstration projects implemented to improve waste collection, segregation, material separation, and recovery.
- Decrease in UPOPs releases as a result of the project quantified.
- Document published with the lessons learned from the demonstration projects.
- Recommendations/criteria for WEEE treatment technologies/approaches and national guidelines for BAT/BEP application in the treatment of WEEE developed.

#### *GEF-supported Activities:*

- Conduct an WEEE management assessment, including an inventory of recycling companies, sectors and groups.
- Test methods/guidelines for the identification of WEEE and WEEE components containing POPs flame retardants will be prepared in line with Stockholm Convention guidance.
- Conduct a technical and economic assessment of available technologies (national/international level) conform Stockholm Convention guidelines for the treatment of WEEE, and define the best available environmental practices for the country.

- Implementation of two (2) demonstration projects to improve the collection, segregation, storage, waste separation, recycling and treatment of WEEE.
- A calculation on the release reduction of UPOPs will be made to indicate the impact of the introduction of BAT and BEP.
- Information about the operational conditions of the technologies introduced at the demonstration sites as well as the BEP measures introduced to improve the recycling and management of WEEE will be collected. These results will be published and released to encourage replication of project results.

#### **Project component 4: Prevent and minimize the generation of unintentional POPs in the metallurgical industry**

##### *Baseline:*

There is one (1) company in Colombia that melts iron minerals for steel manufacturing (primary production), while there are four (4) iron and steel companies that make steel out of metal junk. Moreover, Colombia has a large number of small and informal enterprises engaged in the smelting of metals such as zinc, aluminum, lead and copper, who use artisanal technologies. The 2004 inventory indicated that UPOPs releases associated with this source produces 47,3 g TEQ/year.

The main source of metal junk in Colombia comes from building demolitions, used appliances (refrigerators, stoves, washing machines, etc.), obsolete transportation vehicles, metal materials and equipment from several types of industries, and metal waste from homes, industries and trade shops.

Chlorine components are present in metal junk, therefore resulting in the release of dioxins and furans, when such metals are processed, the level of release depending on the type of technologies used.

##### *Associated Baseline Projects:*

Iron and steel companies in the country have established large programs for scrap metal suppliers aiming to get from them metals as clean as possible, in order to protect their electric furnaces, and those companies established criteria for purchasing and reception of these materials. In this respect, some of the scrap suppliers perform a scrap selection process. Nevertheless, it is not the same for little or artisanal smelters that use scrap of any quality; moreover, they usually buy the scrap that is rejected or not buy by the big companies. Therefore the project aims to involve people who collect scrap, companies that buy it and smelting companies and disseminate the application of BET/BAP in the sector.

Another baseline project involved is the vehicles scrapping project; different cities (Bogotá, Medellín, Cali and Barranquilla) have established programs to remove old cars that are still in circulation, disarm them and melt the scrap metal; the project will work with these initiatives as these vehicles have plastic flame retardants controlled by the Stockholm Convention and, when handle improperly, many of these can be sources of dioxins and furans.

##### *Expected outputs:*

- Assessment of primary and secondary metallurgic processes (lead, steel and other base metals) finalized (incl. BEP/BAT recommendations for different type of facilities).
- Two (2) demonstration projects implemented to demonstrate BEP/BAT in the collection and conditioning of raw materials in metal casting.
- Two (2) demonstration projects implemented to demonstrate BEP/BAT in the production of metals (one in the primary and one in secondary production).
- Decrease in UPOPs releases as a result of the project quantified.
- Document published with the lessons learned from the demonstration projects.

- Recommendations/criteria for BAT/BEP to be applied in metallurgic processes in Colombia developed.

*Activities supported by the GEF:*

- Assess the types of technologies used in Colombia for metal processing, incl. the size of facilities, metals produced, and type and sources of raw materials.
- Recommendation of best techniques, technologies and practices available that could be implemented in the Colombian metal processing industries based on identified needs.
- Establish best available practices to obtain the best possible junk metal-involving separation at source, adequate handling, cleaning and classification methods.
- Implementation of four (4) demonstration projects to introduce BAT and BEP in metal junk collection and melting industries.
- Information shall be collected about the operational conditions of the practices/technologies introduced at the demonstration sites as well as the BEP measures introduced to improve metal processing. These results will be published and released to encourage replication of project results.

**Project Component 5. Prevent and minimize the generation of UPOPs in the biomass burning.**

*Baseline:*

In Colombia, Sugar cane crops are an important contributor to GDP (1%) and make up a significant portion of agricultural cash crops (source: Asocaña, The Association of Sugarcane Growers of Colombia). In the Cauca river valley region alone, more than 200,000 hectares are dedicated to sugar cane crops, which produce on average 20 million tonnes of cane per year.

However, an important environmental implication of this agricultural industry, is the burning of sugar cane fields before harvesting (pre-harvest burning facilitates the harvesting process requiring less manual labor). According to Asocaña sugar cane field burning started in Colombia in the mid-70s. As it became a common and widespread practice, field burning was regulated nationally by the Ministry of Environment and Sustainable Development (MADS) by Decree 4296 (2004) and Resolution 532 (2005), which set the conditions and restrictions for this practice. The regulation also stipulates that field burning should be monitored by regional environmental authorities, the most important of which is the Regional Autonomous Corporation of the Valle del Cauca (CVC by its initials in Spanish), having within its jurisdiction the highest amount of sugar cane crops.

As for the controlled burning of sugar cane field, the 2004 National UPOPs Inventory indicated that sugar cane makes up 33% of the total biomass burned (2002), resulting in releases of 69,5 g-TEQ /year.

To reduce UPOPs emissions from biomass burning in the sugar cane sector, it would be important to assess current practices, identify BEP and BAT solution for application in the sugar cane sector in Colombia and demonstrate such improved practices, with the ultimate aim to replicate BEP/BAT across the region and nationally.

*Baseline projects:*

In November 1996, the Colombian Sugar Industry signed the “Convention for Clean Production Agreement” with MADS, the Regional Autonomous Corporations of Cauca, Valle del Cauca and Risaralda and civil society represented by the community of Palmira. The Convention aims to reduce environment impact by promoting the use of best environmental practices and eco-efficiency. As indicated by the Environmental Guidelines for the sugar cane subsector, the domestication of the Convention has brought about one of the most important environmental achievements for the sugar cane sector.



It is also important to note that the Automated Meteorological Network for the Sugar Sector – RMA (operational since 1993) has 28 stations throughout the region, providing climatological and meteorological information for the proper programming of sugar cane field burning, to avoid ashes falling in population dense areas (source: Cenicaña).

*Expected outputs:*

- Assessment results on biomass combustion in the sugar cane production sector.
- BEP and BAT for application in the sugar cane sector identified and assessed for pre and post-harvest biomass processing.
- One (1) project implemented to demonstrate BEP/BAT in the sugar cane sector to reduce uncontrolled biomass burning.
- Achieve UPOPs reduction through the application of BEP/BAT in the sugar cane sector.

*Activities supported by the GEF:*

- Undertake an assessment of biomass burning practices and techniques in the sugar cane production sector and measure UPOPs releases during sugar cane field and bagasse burning.
- Conduct a technical and economic assessment of available technologies and practices (national/international level) to reduce burning of biomass in the open or in low technology furnaces, and recommend BEP/BAT that can be implemented by the sugar cane industry in Colombia based on economic, social and environmental considerations.
- Implementation of one (1) demonstration project to introduce BEP/BAT in the processing sugar cane sector with the aim to reduce uncontrolled burnings of biomass.
- Information shall be collected about the operational conditions of the technologies introduced at the demonstration site as well as the BEP measures introduced to improve the management of sugar cane biomass. These results will be published and released to encourage replication of project results.

**Project Component 6: Strengthening the institutional, administrative, legal, technical and regulatory framework for reducing UPOPs Baseline.**

*Baseline:*

Colombia has established regulations to control emissions of dioxins and furans in some sectors; has established an action plan to reduce UPOPs emissions and has adopted an air quality policy and accompanying measures to reduce emissions of dioxins and furans.

Nevertheless, the country still faces numerous challenges in enforcing set standards and implementing of some of the objectives of the Stockholm Convention, such as the application of BAT and BEP to reduce UPOPs releases. Current needs and gaps which have been identified, include the following:

- The staff of the environmental authorities does not have sufficient knowledge on the generation, control and measures to reduce the generation of dioxins and furans.
- Policy and guidelines for incorporating BAT and BEP in the productive sectors that generate the largest amounts of UPOPs have not been established yet.
- Feasibility of applying BAT and BEP within different national production sectors has not yet been addressed or assessed.
- Health authorities do not have programmes to assess the impacts of dioxins and furans on the health of population groups.
- Absence of a methodology to assess the risk of certain facilities or activities, which generate UPOPs, such as waste incineration plants, in order to evaluate the potential impacts on human health and the environment.

- Measurements of air quality in areas where industrial activity is concentrated, and where the major point sources of UPOPs are located, have not been performed, therefore management actions to reduce releases are difficult to prioritize and implement.
- The analytical capacity of the country for monitoring and analyzing dioxins and furans is limited.

In order to support the above mentioned needs and gaps and to ensure that sustainable capacity will be built in Colombia to ensure the continuous reduction of UPOPs releases to the environment beyond project duration, it is of imperative importance to further develop the country's regulatory and policy framework and strengthen institutional as well as analytical capacity in the country.

First and foremost, the proposed project anticipates to assess, review and improve the current national policy and regulatory framework governing the management of UPOPs. Secondly the project aims to build institutional capacity of environmental and sanitary authorities. Thirdly the project aims to build analytical capacity of laboratories to enable them to develop validated protocols for monitoring PCDDs/PCDFs in several matrixes; start the accreditation process in the aforementioned techniques; monitor the level of UPOPs in a number of media in high risk areas.

Related to UPOPs monitoring capacity, Colombia is most concerned about UPOPs releases from waste incineration plants and the impact such emissions might have on close-by communities. Therefore as a priority, UPOPs risk monitoring will focus on areas located next to or in the near vicinity of waste incineration.

#### *Associated baseline projects:*

This proposed project component will build on capacity building activities as supported under the GEF/UNEP regional project "Continuing Regional Support for the POPs Global Monitoring Plan under the Stockholm Convention in the Latin American and Caribbean Region." Data generated under the proposed project, is expected to be useful for the Global Monitoring Programme and vice-versa.

#### *Expected outputs:*

- Standards, policies and technical regulations to enable a reduction in UPOPs releases drafted.
- Environmental and sanitary authorities trained in the implementation of BAT and BEP in priority sectors.
- Strengthened analytical capability for UPOPs monitoring.

#### *GEF-supported Activities:*

- Review of existing standards and regulations pertaining to the management and release of UPOPs, including recommendations for amendments, modifications or the development of new regulations and standards.
- Assessment of policies and strategies governing sustainable production and sustainable consumption and ensuring that aspects related to UPOPs management and reduction are included (mainstreamed) and BAT and BEP practices are promoted and prioritized.
- Establishment of a training programme for environmental and sanitary authorities to create awareness on UPOPs issues and create capacity to support industries and priority sectors in the implementation of BAT and BEP.
- Support a laboratory to develop validated protocols for monitoring PCDDs/PCDFs in several matrixes; start the accreditation process in the aforementioned techniques; analyze the level of UPOPs in a number of media in high risk priority areas (to be selected during the project's PPG phase).



## THE EXPECTED COST-EFFECTIVENESS OF THE PROJECT:

The amount of PCDD/PCDF/PBDE/PCB, mercury, lead as well as other hazardous substances which will be avoided from being released will be estimated a part of the project's PPG phase, during consecutive implementation, while a final cost-effectiveness will be reported on upon completion of the project.

At the PIF's development stage, it is expect that the project would be able to reduce UPOPs releases by ~ 100 g-TEQ/year. This is a significant reduction.

However, the most important aspect of the project is that with GEF financing, a multitude of UPOPs priority sectors is being addressed, each of them applying an individualized approached for the introduction of BAT and BEP in priority sectors. Without GEF intervention, this would not be possible and would result in the fact that communities at local, regional and global level remain exposed to the releases of UPOPs.

The fact that the country, with the support of this project, will not only be able to introduce BAT/BEP in a multitude of sectors, but will also be able to improve its regulatory and policy framework, build institutional capacity and further improve the analytical capacity of the country related to UPOPs, will also ensure long-term sustainability of project results and remove existing barriers towards the further replication of project results.

Finally, GEF contributions to the proposed project will enable the country to make great strides towards meeting its obligations under the Stockholm Convention.

*A.2. Stakeholders.* Identify key stakeholders (including civil society organizations and indigenous people, and others as relevant) and describe how they will be engaged in project preparation:

Stakeholders and ways to participate in this project:

**Regional environmental authorities** which support the implementation of environmental standards at local level. They will receive the necessary training in BAT and BET application, and support the review and improvement of the policy and regulatory framework governing UPOPs.

**The Colombian Ministry of Health and Social Protection and the Ministry of Trade, Industry and Tourism** shall participate in developing several activities belonging to the project herein. This shall take into consideration the fact that standards and regulations issued in regard to the topics this project is about, they shall be coordinated in joint manner with those entities.

**The Ministry of Housing and Territorial Development:** Proviton of financial support (co-financing) in the area of waste management to reduce the open burning of waste.

**Civil Society Organizations:** COLNODO, an institution that aims to facilitate communication, information and experience exchange through networks will promote this project through online social networks. Patrimonio Común (Common Heritage) is an organization that works for the preservation of the natural heritage of Colombia. This institute shall facilitate the involvement of rural habitants and rural communities in priority project counties.

**The National Center of Cleaner Production** is an entity that supports the development of a WEEE management project in Colombia. This project will be financially supported by the Swiss Agency for Development and Cooperation - COSUDE - and the Secretary of State for Economic Affairs - SECO - from the Swiss Government.

**Indigenous communities:** This project shall involve indigenous communities from the Guajira, Chocó and Amazon provinces in Colombia, who are expected to benefit from HCW demonstration projects.

**Private Sector Involvement:** e.g. Sugar Cane Factories; Refrigeration and electronic industries through the provision of co-financing to the WEEE project component; companies involved in HCWM which are expected to provide co-financing to the project HCWM component.

Furthermore, private sector related associations are also expected to contribute to the proposed project such as the Colombian National Entrepreneur Association - ANDI -, The Colombian Association of Sugar Cane Growers - Asocaña -, and The Colombian Association of Hospitals and Clinics - ACHC -.

*A.3. Gender Considerations.* Describe how gender considerations are taken into account based on differences, needs, roles and priorities of men and women.

Gender conditions within this project shall be considered as follows:

Efforts to ensure the Sound Management of Chemicals, including UPOPs, have important gender dimensions. In daily life, men, women, and children are exposed to different kinds of chemicals in varying concentrations. Biological factors — notably size and physiological differences between women and men and between adults and children — influence susceptibility to health damage from exposure to toxic chemicals. Social factors, primarily gender-determined occupational roles, also have an impact on the level and frequency of exposure to toxic chemicals, the kinds of chemicals encountered, and the resulting impacts on human health.

During the project’s PPG phase, a detailed analysis of UPOPs exposure and impacts as related to gender will be undertaken, based upon which project activities will be tailored in such a manner, that the groups at most risk, whether these turn out to be children, women or men, will be targeted in such a way to reduce their exposure to UPOPs.

Furthermore, the project will do its utmost to ensure a gender balance, where feasible, in activities that encompass awareness raising, capacity building, training, etc.

*A.4 Risk.* 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 to be further developed during the project design (table format acceptable):

| Risk   | Mitigation Measure   |
|--|--|
| Difficulties in attaining information and updating mechanisms for inventories        | Active participation of control target sectors shall be incorporated together with competent authorities with the purpose of involving them in this type of activities that shall evolve into a their own benefit and the one of the general population. |
| Existence of alternatives for the implementation of BAT and BEP                      | Once identified those control sources, mechanisms shall be established to the implementation of BAT / BEP available and that are able to be implemented in Colombia  |
| Technical, technological and financial capacities for institutional strengthening    | Finance and co-finance resources are intended to be used to access technical and technological support that allows strengthen analytical capacities and those of environmental authorities in compliance with the National Application Plan (NAP).       |
| Lack of laboratories to measure UPOPs in Colombia                                    | International laboratories shall be used when having capacities to perform the analysis as required. For such a purpose, commercial labs shall be contracted or agreements shall be signed with Universities having the capacities to do such analyses.  |
| Qualified personnel to perform some of the activities required by the project herein | International consultants shall be contracted provided that they have the deep knowledge required in topics whenever there are no Colombian consultants with the same or better skills.  |

A.5. *Coordination.* Outline the coordination with other relevant GEF-financed and other initiatives:

- GEF/UNDP project “*Development of Capacity for Management and Environmentally Adequate Elimination of PCB*”. An administrative unit has been established for this project, which will also assume the administrative support for the proposed project. In addition, a group has been consolidated within the Ministry of Environment and Sustainable Development, which will support and implement Stockholm Convention related projects.
- Project “*Strengthening of the Management of Electric and Electronic Device Waste in Colombia*” - Colombian Ministry of Environment and Sustainable Development, the Federal Swiss Institute of Material and Technology Testing and Research (EMPA), and the National Center for a Cleaner Production and Environmental Technologies (CNPMTA), Cooperation Department of the Swiss Government.
- GEF/UNEP “*Continuing Regional Support for the POPs Global Monitoring Plan under the Stockholm Convention in the Latin American and Caribbean Region*”.

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

B.1 NATIONAL STRATEGIES AND PLANS OR REPORTS AND ASSESSMENTS UNDER RELEVANT CONVENTIONS, IF APPLICABLE, I.E. NAPAS, ASGM NAPs, MIAS, NBSAPs, NCS, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURS, ETC.:

This project herein has been structured to support the activities as stated by Colombia within the National Implementation Plan - NIP - specifically for actions stated within the project related to Dioxins Furans and other UPOPS.

B.2 GEF FOCAL AREA<sup>9</sup> AND/OR FUND(S) STRATEGIES, ELIGIBILITY CRITERIA AND PRIORITIES:

This project herein is framed within the Chemicals and Waste focal Area Strategy del GEF- 6 ; Strategic Objective CW 2: - Reduce the prevalence of harmful chemicals and waste and support the implementation of clean alternative technologies/substances within Program 3 Reduction and elimination of POPs. Areas considered are those under decision SC – 6 / 20 of the Stockholm Convention. One of those areas is the promotion of the use of Best Available Techniques and Technologies for new sources in the categories listed in part II of Annex C of the Convention as soon as practicable, but no later than four years after the entry into force of the Convention for a party. Especially, avoid unintentional emission of Persistent Organic Pollutants.

B.3 THE GEF AGENCY’S COMPARATIVE ADVANTAGE FOR IMPLEMENTING THIS PROJECT:

As confirmed in Annex L of the GEF document “Comparative advantages of the GEF agencies”, UNDP has a comparative advantage in the area of Persistent Organic Pollutants, in specific with respect to Capacity Building and provision of Technical Assistance. The proposed project will benefit from UNDP’s experience in integrated policy development, human resources development, institutional strengthening, and non-governmental and community participation.

Moreover, UNDP has a comparative advantage in all work related to the Millennium Development Goals (MDGs) and in poverty reduction. This proposed project will help improve health-delivery systems through the fostering of good healthcare waste management thereby supporting several targets under the MDGs.

In its capacity as GEF implementing agency for the UNDP/WHO/HCWH project “Demonstrating and Promoting Best Techniques and Practices for Reducing Health-Care Waste to Avoid Environmental Releases of Dioxins and Mercury,” UNDP is particularly well placed to demonstrate BAT/BEP which have been applied, tested and improved under this GEF-IV global project in seven countries (Argentina, India, Latvia, Lebanon,

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<sup>9</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).



Philippines, Senegal, and Viet Nam). During GEF-V UNDP developed additional healthcare waste management related programmes in Egypt, Honduras, Kazakhstan, Turkey, Uruguay and a regional Africa HCWM programme in Ghana, Madagascar, Tanzania, and Zambia.

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

**A. RECORD OF ENDORSEMENT<sup>10</sup> OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the with this template. For SGP, use this [SGP OFP endorsement letter](#)).

| NAME                         | POSITION                       | MINISTRY  | DATE (MM/dd/yyyy) |
|------------------------------|--------------------------------|---|-------------------|
| LAURA C. BERMUDEZ<br>WILCHES | GEF OPERATIONAL<br>FOCAL POINT | MINISTRY OF<br>ENVIRONMENT<br>AND<br>SUSTAINABLE<br>DEVELOPMENT | 08/06/2014        |
|                              |                                |   |                   |
|                              |                                |   |                   |
|                              |                                |   |                   |
|                              |                                |   |                   |

**B. GEF AGENCY(IES) CERTIFICATION**

| This request has been prepared in accordance with GEF policies <sup>11</sup> and procedures and meets the GEF criteria for project identification and preparation under GEF-6. |           |                      |                           |           |       |
|--|-----------|----------------------|---------------------------|-----------|-------|
| Agency Coordinator,<br>Agency name   | Signature | Date<br>(MM/dd/yyyy) | Project Contact<br>Person | Telephone | Email |
|  |           |                      |                           |           |       |
|  |           |                      |                           |           |       |
|  |           |                      |                           |           |       |

**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.

<sup>10</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.

<sup>11</sup> GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF