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**United Nations Development Programme
Global Environment Facility
Country: Republic of Belize**

PROJECT DOCUMENT

Project Title: Belize Chemicals and Waste Management Project

UNDAF Outcome(s): Environmental Sustainability: Outcome 6: By 2017, Public policies and development processes are mainstreamed with cross –cutting environmental, disaster risk reduction and climate change dimensions

Expected CPAP Outcome(s): UNDP Country Programme 2013- 2017 Outcome 6:
Public policies and institutional capacities are strengthened and capacitated to manage Belize’s natural resource base in a sustainable manner, and for a more effective and multi-sectoral preparedness and response to natural disasters and climate-induced events.

Expected CPAP Output(s):

- National compliance with multi-lateral environmental agreements strengthened.
- Strengthened policy framework and institutional arrangements for integrated water and land resource management

Implementing Partner: Department of Environment, Belize

Responsible Partners: United Nations Development Programme, Ministry of Forestry, Fisheries & Sustainable Development

Brief Description

Programme Period:

Atlas Award ID:

Project ID:

PIMS #

Start date:

End Date

Management Arrangements National (NIM)

LPAC Meeting Date

Total resources required		\$
Total allocated resources:		\$
• Regular (UNDP)		\$25,000
• GEF	\$990,000	
• Other:		
○ Government	\$	
○ UNDP (in-kind)	\$	
○ Other	\$	

Agreed by the Ministry of Forestry, Fisheries & Sustainable Development of Belize:

Date/Month/Year	Signature
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Agreed by ,
UNDP Resident Representative in Belize:

Date/Month/Year	Signature
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List of Acronyms

BEP/BAT — Best Environmental Practice / Best Available Techniques

FAO — Food and Agricultural Organization of the United Nations

GEF — Global Environment Facility

HZW — hazardous waste

MSW — municipal solid waste

NIP — National Implementation Plan for the Stockholm Convention

NGO — Non Governmental Organization

PCDD/Fs — dioxins and furans

POPs — Persistent Organic Pollutants

RCU — Regional Coordinating Unit

TOR — Terms of Reference

UNDP — United Nations Development Programme

UNEP — United Nations Environment Programme

UPOPs — Unintentionally Produced Persistent Organic Pollutants

I. Situation analysis

Strategic environmental policy

The economy of Belize is based on the country's natural resource endowments. At Independence, export agriculture became the mainstay of the country's economy. Changes in the demands of traditional markets have also given rise to prominence of other natural resource based/ dependent industries such as tourism, the growth of marine products (fish and lobster in particular), and the development of shrimp farming for export. Based on a national realization that the country's development is intrinsically tied to the prudent management of the environment and the country's natural resource based, decision makers formally articulated the country's commitment to pursuing a sustainable development pathway in its long term vision for the country. Horizon 2030 recognizes the people and the environment as being at the core of the long term development framework of the country.

As part of the general development direction spelled out in Horizon 2030, environmental policy is in continuous development in Belize. Plans with longer and shorter time spans are agreed to ameliorate the living and natural environment in the country. The Government of Belize in consultation with its stakeholders have prioritized the following environmental issues and have included these in their national environmental strategies and plans primarily the National Environmental Action Plan and the Belize Medium Term Development Strategy 2010 – 2013:

a. Need to ensure the sustainable management of environmental resources so that the needs of future generations are not compromised by the current levels of resource use, including the strengthening of standards, quality of management and enforcement.

b. Need to address unsustainable practices such as milpa farming, cultivation of steep slopes, pesticide use and unsustainable extraction of timber and other plant species as a means of mitigating against deforestation and erosion.

c. Need for review and strengthening of existing institutional management systems with emphasis placed on Belize's national chemical management framework and legislation to allow for greater coordination and collaboration among agencies and a need to ensure the enforcement of the occupation safety and health (OSH) Act.

d. Need to increase capacity building and information sharing to promote sound management of natural resources, and the establishment of national policies with thematic foci that would assist in the negotiation of country and regional positions.

e. Need to ensure that Belize's planning process recognizes the economic value of the natural resources and environmental goods and services and provide for greater incentives for the adoption of green technologies.

f. Need to guard against adverse effects of petroleum production in this still relatively new industry.

g. Need to address Belize's vulnerability to climate change in particular the impacts of tropical cyclones and sea level rise by focusing on the need for increased readiness and mitigation, and emphasis on an ex-ante, risk management approach to disasters rather than an ex-post, reactionary approach and Belize's ability to adapt to climate change.

h. Need to integrate environmental education within the school system to allow Belizeans to develop an appreciation for Belize's Natural resources and its environment so that they could become involved in sustainable development practices.

i. *Need to invest in technology and irrigation and provide technical support to farmers while promoting the use of greener pesticides. Provide —Go Green‖ Incentives to businesses, schools and society e.g.: for recycling products.*

The above priorities are supported/constraint by following drivers:

- Lack of enforcement of environmental laws and regulations;
- Poor environmental governance structure;
- Inadequate coordinating mechanisms to ensure full participation of all stakeholders in the planning and implementation process;
- Limited capacity – financial, human and training
- Limited economic option and job opportunities
- Over exploitation of and degradation of resources in particular the fishing and marine resources, timber and other forest products;
- Policies are totally lacking, outdates or inadequate;
- Environmental management and natural resources planning remain sectoral although the results of this type of planning framework remains extremely limited;
- Lack of incentives for the adoption of —green‖ policies and practices;
- Lack of awareness and education;
- Lack of recognition of the significant economic value of the natural resources and environmental goods and services;
- Belize's vulnerability to climate change and its adverse impacts.

National legislative framework on hazardous chemicals and wastes

Presently there is very limited amount of resources available for the integrated management of chemicals in Belize. The legislation related to the integrated management of chemicals is fragmented among various institutions with limited coordination occurring among them. This is because there is presently no comprehensive policy and legislation that allows for harmonization and uniformity among the various existing legal instruments and the dispersed efforts of the various responsible institutions.

Among the various pieces of existing legislation, the Environmental Protection Act Chapter 328 and its amendments of 2009 and the Pesticide Control Act Chapter 216, Revised Edition 2000 are perhaps the two single most import statutes related to the importation, production, use and

disposal of chemicals. Both pieces of legislation have promulgated several important regulations to facilitate their implementation.

Because of the Environmental Protection Act's overarching responsibility for environmental protection and pollution control its mandate covers all classes of chemicals although there are other legislation that are specific to various groups of chemicals. Pesticides are specifically regulated by the Pesticide Control Act, explosives and petroleum products are regulated under the Dangerous Goods Act, and under the Belize Agricultural Health Authority (BAHA) Act (Chapter 211, Revised Edition 2003) the use and production of agro-chemicals other than pesticides, animal products, animal feeds and fertilizers is regulated.

There are several other pieces of legislation that do not specifically target the importation, production, transport, use and disposal of chemicals but which have provisions that are incidental and important to their integrated management.

The need of restructuring policy and re-organizing the chemicals policy and regulations as well as optimize and strengthen the existing limited resources for management of chemicals with special emphasis on the importation, production, use and disposal of hazardous chemicals has been well recognized by the key government institutions.

A systematic and phased approach to strengthen the policy and regulative framework when it comes to chemicals management is actively being undertaken supported by projects co-funded by SAICM Quick Start Program. The projects, in cooperation with UNDP and UNEP, are supporting the mainstreaming of chemicals management in to national and sector development plans as well as chemicals management policy and regulative infrastructures.

The projects have already ameliorated the coordination among key stakeholders. In addition proposal for new nation chemicals policy including National Integrated Chemicals Management Act as well administrative structures in form of National Integrated Chemicals Management Authority has been proposed.

The new regulative system is proposed to divide the chemicals on the market into three categories of chemicals i) Agricultural chemicals (pesticides, veterinary drugs, fertilizers), ii) Consumer chemicals (pharmaceutical drugs, poisons and cosmetics) and iii) Industrial chemicals. All these groups of chemicals are important from a POPs management perspective. Therefore the detailed regulative and administrative structures as well as implementation of Consumer and Industrial Chemicals will be supported by the current project, while the Agricultural chemicals work will be supported by a separate regional project in the realm of FAO.

POPs management in Belize

The Stockholm Convention on Persistent Organic Pollutants (POPs) was adopted in May 2001 with the objective of protecting human health and the environment from toxic and hazardous POPs listed chemicals and wastes. It entered into force in May 2004.

The convention initially covered twelve (12) POPs chemicals – so called “dirty dozen”. At its fourth meeting of the Conference of Parties (COP) in May 2009, the Stockholm Convention was amended to include the following nine (9) new POPs in Annex A1 and Annex B2. The amendments entered into force for most of the Stockholm Convention Parties on 26 August 2010. Further, one additional amendment (endosulfan chemical listed in Annex A) was introduced in May 2011 at the fifth (5th) COP.

According to Article 7 of the Convention, Parties are required to develop National Implementation Plans (NIP) to demonstrate how they intend to implement obligations assumed under the Stockholm Convention. According to existing rules, each Party should develop and submit the NIP within two (2) years from ratification. In compliance to the above, Belize ratified the Stockholm Convention on November 9, 2007.

The first NIP, prepared with GEF assistance, addressing the inventories and strategic action plan for the initial twelve (12) POPs, was developed by the Department of Environment. After formulation works were completed in 2009, the NIP was officially transmitted to the Stockholm Convention’s Secretariat on December 8, 2009, which allowed for additional preparation of follow-up capacity building and investment programmes for safe POPs management in Belize.

The Initial National Implementation Plan (POPS NIP) submitted in March 2011 was based on the results of inventories of chemicals with POPs characteristics, which were carried out during 2005-2009 period, and those covered storages of obsolete and unwanted pesticides, PCB-containing equipment, releases of dioxins and furans (calculated on the basis of production figures and the UNEP toolkit methodology) as well as POPs-polluted sites.

The NIP investigation revealed that despite of regulatory and capacity constraints in managing chemicals POPs were not extensively used in Belize. Only a 15 metric ton stockpile of DDT was inventoried, and no PCBs were reported.

Waste incineration and uncontrolled burning as part of agricultural practices stood for the 95% of the estimated total of 84 g I-TEQ PCDD/Fs releases in Belize.

As a direct result of NIP formulation, the following priorities were identified for POPs in Belize:

1. Amendment of the Existing Legal Instruments and Strengthening Pesticides Law Enforcement
2. Strengthening the Capacity to Handle POPs Pesticides and Contaminated Sites
3. Raising Awareness of POPs Pesticides with Particular Reference to Waste and Contaminated Sites
4. Undertaking Ecologically Sound Measures to Eliminate Obsolete

¹ Listed chemicals in Annex A: Alpha hexachlorocyclohexane, Beta hexachlorocyclohexane, Chloredecone, Hexabromobiphenyl, Hexabromodiphenyl ether and Heptabromodiphenyl ether, Lindane, Pentachlorobenzene (also listed in Annex C), Tetrabromodiphenyl ether and Pentabromodiphenyl ether.

² Perfluorooctane sulfonic acid (PFOS), its salts and Perfluorooctane sulfonyl fluoride.

POP Pesticides

With respect to other wastes and unintentionally produced POPs (UPOPs; primarily dioxins and furans), the NIP noted the need for:

1. Policy and Legal Framework for the Management of Unintentionally Produced POPs (UPOPs)
2. Capacity Building and Technical Support
3. Municipal and Hazardous Waste Management
4. Public Awareness and Technical Networking
5. Landfills and Hazardous Waste Co-incineration
5. Inventory of Unintentionally Produced POPs
6. Medical Wastes Management

It should be noted that consequent work on POPs have identified that the DDT stockpile is totalling in 21 metric tons and have been transferred to drums stored for export disposal. In addition, one industrial company has in its possession a stockpile of 6-7 tons of low contaminated (assumedly around 100 ppm) PCB oil in drums. The oil is flush oil from a former PCB transformer, which was disposed long time ago.

Waste management

In addition to the specific POPs and chemicals waste issues, a significant part municipal waste management is challenging and give raise to POPs emissions particularly from uncontrolled burning of waste dumps.

Solid waste management in Belize has been recognized for over two decades as an area of national attention. Yet, inadequate waste collection systems, and improper discharge of wastes in open or partially controlled dumps lacking technical and environmental controls still persist.

The inadequacy of the waste disposal practices on the offshore islands has been become particularly worrisome, due to their proximity to biodiversity rich coral reefs and their importance to the eco-tourism market.

The technical challenges faced by Belize for managing its wastes stem from growing volumes of waste, insufficient waste collection services, inexistent waste separation and recycling programs, and insufficient capacity and inadequate management practices at the disposal sites.

For tackling the problem the Government established the Solid Waste Management Authority (SWMA), the preparation of the Solid Waste Management Plan (SWMP), and institutional and financial sustainability assessments that would pave the ground for new investments. The on the ground action initially tackles the geographic central part of the country, the Western Corridor, including the main islands or Keys in the barrier reef.

The total population served along the Western Corridor (Belize City, San Ignacio/Santa Elena and the islands of San Pedro and Caye Caulker) is 119,000 people, which accounts for 40% of the total population of Belize .

The total volume of waste generated in this area is estimated to 119 tons/day (around 70% of the total waste generation in Belize). Belize City generates 80 tons/day (based on 7 days/week count), accounting for 67% of total waste generated.² The islands (San Pedro and Caye Caulker) generate almost 19 tons/day (16% of total waste). San Ignacio/Santa Elena generates 20 tons/day, or 17% of total waste in the corridor. Waste generation projections indicate that the volume of domestic solid waste that will be generated is expected to increase to 203 tons/day in 2023.

Waste collection in Belize City is carried out by one private operator who collects more than 90% of the solid waste generated. The operator also collects between 10% and 15% of the commercial garbage, as well as special wastes (e.g. healthcare waste, animal carcasses, etc).

At least five illegal operators collect garbage from commercial users for a lower fee and, to avoid a fee at the gate of Mile 3, dump the collected garbage in random locations that are often burning.

To remediate the municipal waste management situation in the Western Corridor the MNR&A and the Solid Waste Management Authority is implementing a Solid Waste Management Project with a budget of US\$14,789,000. The project consist of:

1. Belize City Closure of open dumpsite at Mile 3/3.5 and construction of a transfer station.
2. Construction of a Regional Sanitary Landfill at Mile 24 on the Western Highway. Including municipal solid waste cell, hazardous waste cell, Leachate ponds and lagoons, sedimentation ponds, weight bridge/wheelwash facility, administrative building, internal access road and ancillary facilities.
3. Closure of the open dumpsites serving San Ignacio/Santa Elena, Caye Caulker and San Pedro Ambergris Caye and construction of transfer stations.
4. Institutional Strengthening. With staff development as well as consultancies on Design Build Engineer, Social Communication Strategy, Tariff Specialist, Auditing

While the overall MSW management initiative along the Western Corridor has been successful sofar there are some important gaps in the system particularly at semi-official waste sites/dumpsites at Belmopan and Boom that allows for dumping of waste (partly circumventing the official waste collection in Belize City) and continued releases of UPOPs. Proper waste disposal and discontinuation of uncontrolled waste burning with resulting UPOPs emissions at these sites will be supported by the project and the GEF co-financing.

Uncontrolled burning in Sugar Cane production

Together with uncontrolled burning of waste, agricultural practices linked with sugar cane cultivation belong to major UPOPs sources in Belize.

Sugarcane is cultivated in the northern districts of Belize around the cities of Corozal and Orange Walk. Altogether 66,000 acres are under cultivation resulting in a harvest of around 1.2 million tons of sugar cane. The cane to a large extent harvested by hand. Almost all, more than 90%, of cane fields are burnt as a part of pre-harvesting field preparation practices. The reasons for pre-harvest burning can be summarized as labour productivity and efficiency gains as well as labour safety particularly in form of snake bite prevention. The post-harvest burning is done in order to clear land from debris as well as for pest management particularly management of the froghoppers, an insect that have caused up to 70% loss of harvest in some fields.

Since adoption of the NIP the UPOPs emission factors for sugar cane cultivation has been revised. With today's best knowledge the burning of 1,1 million tons of cane in post-harvest results in around 4.5 g I-TEQ/a UPOPs emission which together with the biomass burnt for landclearing Totals in 5 g I-TEQ/a emissions.

The sugarcane cultivation is facing major serious economic and profitability challenges. The reasons for these are many fold including changes in European Union's sugar regime and increased input costs. For meeting these challenge , the Belize Country Adaptation Strategy for the Sugar Industry 2006-2015 outlined various interventions geared towards increasing industry productivity and competitiveness; diversification within the sugar industry (including the BELCOGEN project) as well as diversification of the agricultural base; socio-economic interventions; and projects for sustainable industry development.

For example, in order to increase efficiency in cane production, the strategy proposes to start a crop rehabilitation programme to include irrigation and drainage, encourage mechanical harvesting and upgrading of agricultural equipment, activate the Belize Sugar Industry Research and Development Institute (SIRDI) and establish a revolving loan credit facility.

Mechanical harvesting without cane burning is already undertaken Belize Sugar Industries (BSI) fields consisting of around 3,300 acres. There are several reasons that pressure for small farmers and their harvest groups to adapt such greenharvesting strategies. Apart from UPOPs control, the increased labour costs as well as the Fairtrade standards that are considering of expelling sugar made through burn harvesting from its scope are encouraging farmers to find new techniques for harvesting and other agricultural practices.

II. Barriers

The main barriers which presently prevent sound POPs including Unintentional POPs releases, are considered the following:

- Limited regulatory framework: Despite of recent and ongoing activities to strengthen the legal framework for chemicals including POPs, the regulations are not at level that which

would underpin a sustainable POPs management. The main deficiencies and consequent barriers lie in practically non-existent industrial chemicals regulations ;

- Insufficient systemic and institutional capacity: lack of coordinated, cross-cutting and comprehensive system for sound waste and chemicals management, limited collaboration between government authorities, private service providers, and stakeholders such as waste generators;
- Professional and Technical limitations: Sound chemicals management approaches and schemes are novelties in the Belize system. Therefore there is a lack of expertise and experience in dealing with chemicals and POPs management from a regulatory development and administrative angles. These limitations exist also in practical issues such as contracting of POPs disposal and associated procedures
- Financial limitations: With IABD financed solid waste initiative, some of the most urgent municipal solid waste issues have started to be addressed. Unfortunately there are some gaps in the scheme that are not financially covered and give rise to high UPOPs reductions. Further, no finances are available for safe POPs disposal. Also the green harvesting among small scale sugar cane farmers require some initial investments which are beyond current possibilities.
- Information and awareness barriers: scarce knowledge on UPOPs impacts, no register and monitoring of UPOPs, releases to understand the scope of the problem, poor understanding of the linkages between problematic chemical management areas and human health/environmental quality, inadequate knowledge of socio-economic benefits associated with sound waste and chemicals management.

III. Stakeholder analysis

During the NIP development and the preparation of the current project a stakeholder analysis was performed. The table below shows the analysis of jurisdiction mandates and of line ministries and other governmental bodies that deal with and are responsible for various aspects of POPs management as per current legislation.

Responsibilities of the ministries and departments strongly depend on the Government determined mandates. Their functions and scope of competences are directed to certain areas of expertise such as, for instance, resource management, environment protection, agriculture, industrial safety and occupational health.

From the analysis made it became evident that from the list of government authorities the Department of Environment covers the largest number of POPs handling related functions, including external country reporting on the obligations under chemical related MEAs. This is, in addition to sector responsibilities in chemicals the also the reasoning to select DOE as prime coordinating institution for the project implementation stage. For implementation of technical components of the programme, coordination with the other line ministries such as Ministry of Economic Development and Industry, Ministry of Health and Ministry of Agriculture is imperative. Another essential aspect is the relevant importance of NGO community in the project implementation, active in the area of work, whose involvement will be ensured.

Table 1. Responsibilities of governmental institutions for inventory and control over the use of chemical substances.

Institution	Pesticide POPs	PCBs	UP-POPs	POPs of industrial relevance
Department of Environment	+	+	+	+
Ministry of Health	+			
Ministry of Economic Development, Industry and Consumer Protection	+	+	+	+
Ministry of Agriculture	+		+	
Ministry of Labour and Social Protection				+
Customs & Excise Department under Ministry of Finance		+		
Ministry of Foreign Affairs				
Industries, industrial association	+	+	+	+
NGOs	+	+	+	+
Farmer and agricultural associations	+			

IV. Linkages with ongoing projects and country drivenness

The commitment of the Government of Belize to the principles of sound chemicals and hazardous waste management has been confirmed with the country's ratification of the Stockholm (2007), Basel (2003) and Rotterdam (2007) Conventions. Belize also participates in the SAICM initiative and has a designated focal point for coordination of such activities.

Embedded in such forward looking country positioning, the proposed initiative (current project) is also in line with current national environmental policies which focus on reducing pollution and eliminating related anthropogenic pressures and impacts to the natural and human environment.

The project is closely aligned with national environmental strategies and plans primarily the National Environmental Action Plan and the Belize Medium Term Development Strategy 2010 – 2013, particularly with

c. Need for review and strengthening of existing institutional management systems with emphasis placed on Belize's national chemical management framework and legislation to allow for greater coordination and collaboration among agencies and a need to ensure the enforcement of the occupation safety and health (OSH) Act.

i. Need to invest in technology and irrigation and provide technical support to farmers while promoting the use of greener pesticides. Provide —Go Green‡ Incentives to businesses, schools and society e.g.: for recycling products.

More specifically, the project's approach is consistent and builds upon:

SAICM's Quick Start Programme (QSP) supported UNDP/UNEP Partnership Initiative for the Integration of Sound Management of Chemicals in Development Planning and Processes. It aims at improving cross-sectoral governance for achieving more effective management of chemicals priorities in the country.

Belize/UNEP partnership on development of a coherent legal and institutional framework in Belize for the sound management of chemicals aiming at development of a plan for introducing coherent legal and institutional infrastructures in Belize including sustainable funding of public chemicals management activities through economic instruments, where appropriate.

GEF/ UNIDO Regional Project on Development and Implementation of a Sustainable Management Mechanism for POPs in the Caribbean, which will provide training and capacity building through the Basel Convention Regional Centre for Training and Technology Transfer for the Caribbean Region (BCRC-Caribbean).

For POPs pesticides the coordination will be ensured with a recently proposed GEF/FAO regional project on Disposal of Obsolete Pesticides including POPs, Promotion of Alternatives and Strengthening Pesticides Management in the Caribbean. While the actual disposal of known POPs waste in Belize that contain DDT used in vector control and PCBs will be disposed through this project the remaining work on agricultural POPs pesticides such regulatory

strengthening, capacity building, pesticide container management etc will be in the realm of the regional project.

V. Strategy

This project aims to assist the country in implementing its relevant obligations under the Stockholm Convention, in particular to reduce the releases of UPOPs, as well as to build country's capacity, in line with the GEF objectives. This will be accomplished through 2 principal project's components. The project will include information dissemination and awareness raising on key aspects of the project's work.

Component 1: Regulatory Strengthening and Environmentally sound management of chemicals and waste, including POPs

(GEF \$ 249,000 finance; cofinance - \$)

Outcome 1.1: Institutional capacities strengthened through enhanced policies and regulatory framework supporting sound management of chemical life cycle

The following activities will be carried out to deliver Outcome 1.1:

Activity 1.1.1: Development of a coherent Legal and Institutional framework for the sound management of chemicals in Belize

Activity 1.1.2: Industrial chemicals regulation developed in order to develop and incorporate PCB's enabling regulations and standard operating procedures in the legal framework.

Activity 1.1.3: National regulatory instruments on consumer chemicals, including pharmaceuticals, cosmetics and pre-cursor chemicals revised and updated to address POPs waste, UPOPs, mercury and other hazardous chemicals

Activity 1.1.4. Regulations for rural solid waste stream management developed.

Activity 1.1.5. Chemicals regulation and solid waste management compliance promotion and enforcement rules legislated and capacities for enforcement enhanced

Outcome 1.2: Management and disposal of existing POPs waste

This outcome will work towards safe management and disposal of the identified intentionally produced POPs stockpiles in Belize. The stockpiles consist of both PCB and DDT that are in the ownership of private sector and Ministry of Health. The DDT stockpile has been previously packed by a regional project for export disposal. The PCB containing oil needs however to be repacked before shipment.

The activities to be undertaken under this project component consists of:

Activity 1.2.1. Training in buyer's competence for disposal services for hazardous waste, including POPs as well as safe practices for handling, packing and transportation.

Activity 1.2.2. Repacking and disposal of obsolete PCB and DDT stockpiles as well as associated waste through export to a dedicated facility.

The GEF co-finance will be mainly used for development of POPs specific regulations and guidelines as well as base regulation for these aligned with the Stockholm Convention requirements in order to guarantee that POPs issues become integrated in regulations and policies. The funding will be further used for technical assistance to raise capacities for chemicals management regulations and their enforcement as well as ensuring safe transport and disposal of the identified POPs chemicals in Belize

National finance will be used for development of framework chemicals management policies and Acts and Bills as well as institutional infrastructure for sound chemical management for providing a sound regulatory and administrative structure for POPs management. This will include, in addition to monetary funding, considerable professional input both from public and private sectors particularly when it comes to operationalizing the POPs regulations and repackaging and disposing of POPs chemicals.

Component 2: UPOPs release reduction in waste management operations and agriculture

(GEF - \$ 610,000 finance; cofinance - \$)

As envisioned in the project concept stage, this project component will work towards ensuring that the municipal waste management in the Western Corridor area will be upgraded to modern standards without uncontrolled burning and resulting Unintentional POPs emissions. The backbone of this will consist of the overarching Solid Waste Management Project complemented with key activities that will ensure that no gaps and possibilities for systematic uncontrolled burning can take place in the Western Corridor area and that potentially high POPs release resulting waste is clearly separated.

In the agricultural sector, green harvesting with underlying field improvements as well as expert, technical and technological assistance will enable smaller scale cooperative sugar cane farmers to stop burning of the cane fields pre-and post-harvest with increased yields and decreased inputs.

Outcome 2.1: Measureable reduction in dioxin release from formal and informal waste dumps

The main cluster of activities to contribute this outcome is the Western Corridor Solid Waste Management Project by the MNR&A and the Solid Waste Management Authority completed with additional activities in closure of the waste dumps in Belmopan and Boom. This, with corresponding measures at the waste sites to separate hazardous and high POPs releasing waste fractions such as electric and computing equipment casings at waste transfer centers will result in considerable POPs release reduction.

Activity 2.1.1 Closure of waste dumpsites and their upgrade for avoiding waste burning and associated UPOPs releases

2.1.2. Waste separation for high POPs releasing waste streams.

Will consist of i) closure Belize City Closure of open dumpsite at Mile 3/3.5 and construction of a transfer station. ii) Construction of a Regional Sanitary Landfill at Mile 24 on the Western Highway. Including municipal solid waste cell, hazardous waste cell, Leachate ponds and lagoons, sedimentation ponds, weight bridge/wheelwash facility, administrative building, internal access road and ancillary facilities. ii) Closure of the open dumpsites serving San Ignacio/Santa Elena, Caye Caulker, San Pedro Ambergris Caye, Belmopan and Boom as well as construction of transfer stations and associated infrastructure. iv) Institutional Strengthening. With staff development as well as consultancies on Design Build Engineer, Social Communication Strategy, Tariff Specialist, Auditing

Activity 2.1.2. Waste separation for high POPs releasing waste streams.

Waste separation procedures for planned new solid waste management facilities introduced. The transfer station and regional landfill, include consideration of POPs and other hazardous chemical wastes within the solid waste stream.

Outcome 2.2: Reduction of UPOPs releases from uncontrolled, open burning of agricultural and other wastes

This outcome will work towards a gradual shift among small scale cane growers towards agricultural practices that ends the need for burning of the cane fields before and after harvest. The approach will be initially tested in one sugar cane harvest group and is expected to be extended to cover one harvest branch, paving way for further replication by the end of the project.

The replication efforts supported by Activity 1.2.2. including agricultural and demand policy changes will result in permanent and sustainable switch from burning of sugar cane to Green harvesting.

Activity 2.2.1. Piloted alternatives to agricultural burning in sugar cane farming.

This will entail technical assistance towards preparing fields suitable for such harvesting, the actual field preparation, introduction of small scale mechanical harvesting approaches and

technologies, preferably by technologies recently developed in the LAC region as well as technical assistance and implementation of appropriate pest management approaches as well as post harvest action.

Activity 2.2.2. Promotion of farmer voluntary programmes and guidelines regulating agricultural burning, will consist of action to replicate the approaches introduced in Activity.2.2.1. widely in the sugarcane farming community. The work will on develop guidelines of introducing Green Harvesting as well as discuss the inclusion of these in Fairtrade and other preferential trading schemes that are considering environmental benefits.

Component 3: Monitoring, learning, adaptive feedback, outreach, and evaluation

(GEF - \$ 41,000 finance; cofinance - \$)

The component aims at monitoring and evaluation of results achieved to improve the implementation of the project and disseminate lessons learnt domestically and internationally. The outputs of the component are:

- M&E and adaptive management are applied to provide feedback to the project coordination process to capitalize on the project needs; and
- Lessons learned and best practices are accumulated, summarized and replicated at the country level.

Further details are provided in chapter IX. Monitoring Framework and Evaluation.

VI. Incremental reasoning and benefits

The project is designed in a manner that supports both national development objectives as well as contributes towards global environmental benefits. The project is expected to lead to the following important results that are incremental for the global environment:

- Through capacity building, the authorities responsible for international agreement compliance are better positioned to manage POPs and report on progress;
- The country's legal and institutional framework is reviewed and updated to address both intentionally produced POPs as well as unintentional POPs releases;
- POPs releases and risks are reduced through technical assistance, dedicated investment support demonstrating waste approaches and technologies, improved regulatory framework as well as enforced technical guidelines.

Overall, the project reduces barriers to the implementation of the Stockholm Convention on Persistent Organic Pollutants and integrate POPs management into overall country environmental and health policies. Thus, this project would promote a more holistic approach to the issue of chemicals and waste management, and through this, promote environmentally sound and sustainable development in the country.

Incremental cost reasoning and global environmental benefits: In the baseline scenario, the awareness of decision-makers of the economic and social benefits for promoting sound POPs management is not high enough to lead to substantial improvements in the country.

Even though there is a will to update the chemicals regulatory framework, there is a concern that, without a comprehensive understanding of chemical safety aspects, such regulatory changes made would yet again be too narrow in scope and not comprehensive enough associated enforcement gaps, and leave certain sectors and chemicals such as POPs unaccounted for. GEF support is also incremental in improving the country's institutional capacity to address the UPOPs challenges.

The intentional POPs waste stockpile, consisting of DDT and PCB contaminated oils, would not be solved without the project interventions due to lack of technical expertise and financial assets.

In the Baseline scenario there will be improvements to Belize municipal waste management but the approach is not comprehensive enough for allowing the UPOPs release reduction to be optimized. Indeed, without the project there would be several locations where uncontrolled burning would continue. Only through a concerted effort and financing from local and GEF resources all loopholes and gaps, particularly informal dumps, will be brought under control.

The small scale sugar cane farmers would not get the push and incentives for introducing the Green Harvesting without the project. There may be some increase under non-burning agricultural practices as larger scale sugar estate owned areas would increase acreage under such cultivation.

The Global Environment Benefit from the project would consist of the safe disposal of 21 tons DDT and associated waste and the newly identified 7 tons of PCB contaminated oil as well as reduction of UPOPs into the global environment.

The GEB in form of UPOPs reduction will result from action stopping uncontrolled waste burning by integrating these into the overall waste management structure. During the project it can be expected that 95 % of all uncontrolled burning in the Western Corridor can be integrated into the overall system through GEF and Baseline project action. Some minor burning of waste may still be happening in smaller municipalities without appropriate collection systems.

The initial UPOPs inventory had very optimistic figure of the share of uncontrollably burnt waste at landfill sites. As the project will address both urban and rural waste in the Western Corridor it can be expected that correspond to approximately 5.7 g I-TEQ in air and 11.5 g I-TEQ in land releases of UPOPs. The contribution from changing agricultural practices towards non burn practices is expected to reduce UPOPs releases with around 1 g I-TEQ both in air and land releases. Overall the project will reduce around 8 g I-TEQ of UPOPs releases to air and some 12 g I-TEQ to land per year.

VII. Replicability

The project activities are designed in a way that encourages replication. First of all, the project will support the Government of Belize in harmonization of its policies and legislative framework with international conventions and standards. While these are one-off activities they will require updates and applications in similar related fields. This will increase the sustainability of the regulatory system.

The increased capacity of managing hazardous POPs waste will provide a useful knowledge raising that can be replicated in if and when additional or new POPs waste are identified in the country. It should be noted that the capacity increase will be extremely useful in implementing Belize's other international obligations in the framework of Minamata and Basel Conventions.

The approaches tried out in ameliorating the municipal waste management and associated UPOPs release reduction are directly replicable in other parts of the country particularly in the north and south where there are urban centers. The expansion and replication will require considerable additional financial resources but the approach used in the current project is technically valid.

The project activity area dealing with biomass burning as part of sugarcane cultivation is intentionally designed to be replicable. The project will start working with one harvesting group with the aim of having converted a district branch of harvesting groups into Green Harvesting by the end of the project. With the increased technical and scalability understanding coupled with Fairtrade and other financial resources a replication to full sugarcane growers division can be achieved as well as the a further replication to cover both sugar growing districts of Orange Walk and Corozal.

VIII. Management Arrangements

Department of Environment is primarily responsible for the national waste and chemicals management policy and standards; therefore, it will be the main executing and project coordinating agency.

It should be noted that project execution will be coordinated with the Solid Waste Management Authority, the Department of Agriculture, Ministry of Health and the Pesticide Control Board. The involvement of these entities is key to ensure the alignment of proposed actions with ongoing as well as planned policies and interventions.

The supporting entities mentioned above will constitute the Project Execution Group which provides specific guidance and direction to project implementation as well as provides oversight of technical elements of the proposed initiative.

Outside direction and oversight will be provided by a *Project Steering Committee* consisting of the National Project Director - a senior-level representative of the Department of Environment - as well as senior representatives of the Ministries, NGOs as well as UNDP. This committee will provide management decisions when guidance is required by the Project Manager. The Project Steering Committee will also have final authority on matters requiring official review and approval, including annual work plans, budgets, and key hires.

This broad constituency, initially assembled in context of the Belize-UNDP-UNEP Cooperation Project, will continue to be engaged by this project and serve as its Project Steering Committee. Its participation include:

- Belize Agricultural Health Authority
- Belize Customs & Excise Department
- Belize SAICM Initiative
- Caribbean Agricultural Research & Development Institute
- Department of the Environment– (Chairperson)
- Fabrigas Belize Ltd.
- Ministry of Economic Development, Industry and Consumer Protection
- Ministry of Health,
- Pesticides Control Board
- Prosser Fertilizer and Agrotec Co. Ltd
- United Nations Development Programme

The day-to-day activities of the project will be carried out by a part-time Project Manager and full-time Project/Financial Assistant, to be hired immediately upon project initiation. They will work under the support and direct oversight of Department of Environment. National and international consultant services, including the contracted services of firms as well as individuals, will be engaged across all components in various technical areas, including policy and standards development, healthcare waste management program development and

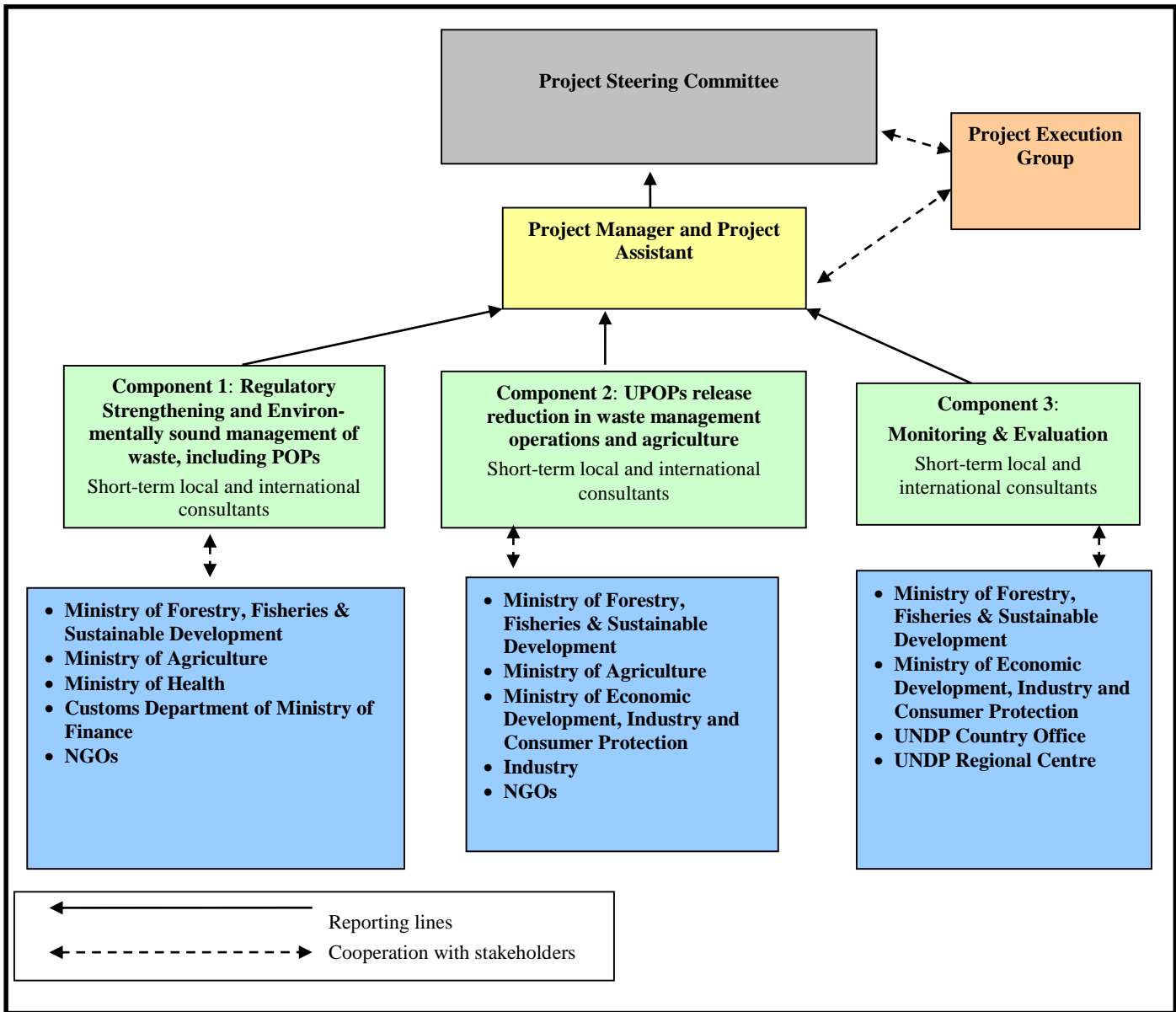
implementation, market assessment, education and outreach, and demonstration project design, implementation, and evaluation.

UNDP will act as GEF Implementing Agency for this Project. The project builds on UNDP's strong experience in Belize and in Central America with promoting environmental protection, and building capacity of governmental organizations and the general public. UNDP has conducted recent projects in Belize in diverse environment subject areas, including climate change; renewable energy; biodiversity protection; disaster risk reduction; integrated water resources management and sustainable land management; waste and chemicals management.

UNDP also supports national partners in areas related to inclusive development, democratic governance and other areas.

UNDP's Country Office in Belize will be responsible for ensuring transparency, appropriate conduct and financial responsibility. This office will oversee annual financial audits, as well as the execution of independent Project Midterm and Terminal Evaluations. All financial transactions and agreements, including contracts with staff and consultants, will follow the rules and regulations of United Nations. The UNDP Regional Coordinating Unit will provide regular programmatic and administrative oversight as well.

Figure 1: Project management structure



IX. Monitoring Framework and Evaluation

The project will be monitored through the following M&E activities. The M&E budget is provided in the table below.

Project start:

A Project Inception Workshop will be held within the first two months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

The Inception Workshop should address a number of key issues including:

- a) Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff vis-à-vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.
- b) Based on the project results framework and the relevant GEF Tracking Tool if appropriate, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.
- c) Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.
- d) Discuss financial reporting procedures and obligations, and arrangements for annual audit.
- e) Plan and schedule Project Steering Committee meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned. The first Project Steering Committee meeting should be held within the first 12 months following the inception workshop.

An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

Quarterly:

- Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.
- Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.
- Other ATLAS logs can be used to monitor issues, lessons learned etc. The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

Annually:

- Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual).
- Lesson learned/good practice.
- AWP and other expenditure reports
- Risk and adaptive management
- ATLAS QPR
- Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

Periodic Monitoring through site visits:

UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.

Mid-term of project cycle:

The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation (approximately end 2015). The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Center (ERC).

The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

End of Project:

An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center (ERC).

The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Audit: The project will undergo annual audit by a certified auditor according to UNDP rules and regulations, policies and procedures.

Learning and knowledge sharing:

Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

The project will identify and participate, as relevant and appropriate, in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyse, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

Communications and visibility requirements:

Full compliance is required with UNDP's Branding Guidelines. These can be accessed at <http://intra.undp.org/coa/branding.shtml>, and specific guidelines on UNDP logo use can be accessed at: <http://intra.undp.org/branding/useOfLogo.html>. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects needs to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be

accessed at: http://www.thegef.org/gef/GEF_logo. The UNDP logo can be accessed at <http://intra.undp.org/coa/branding.shtml>.

Full compliance is also required with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines"). The GEF Guidelines can be accessed at: [http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08 Branding the GEF%20final_0.pdf](http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08_Branding_the_GEF%20final_0.pdf). Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items.

Where other agencies and project partners have provided support through co-financing, their branding policies and requirements should be similarly applied.

Monitoring Framework and Evaluation, and Budget

<i>Type of M&E activity</i>	<i>Responsible Parties</i>	<i>Budget (US\$) excluding project staff time; all figures are indicative</i>	<i>Time frame</i>
Inception Workshop (IW) & associated arrangements	<ul style="list-style-type: none"> ▪ Project Manager (PM) ▪ UNDP CO 	1,000	Within first two months of project start up
Inception Report	<ul style="list-style-type: none"> ▪ Project Team ▪ UNDP CO ▪ National and international consultant support if needed 	0 (included in routine project staff activity)	Immediately following IW
APR/PIR	<ul style="list-style-type: none"> ▪ PM ▪ UNDP CO 	0 (included in routine project staff activity)	Annually
Meetings of Steering Committee and relevant meeting proceedings (minutes)	<ul style="list-style-type: none"> ▪ PM ▪ UNDP CO ▪ National implementing agency 	1,000	Once a year, ideally immediately following Technical Advisory Board meetings
Quarterly status reports	<ul style="list-style-type: none"> ▪ Project team 	0 (included in routine project staff activity)	To be determined by Project team and UNDP CO
Technical monitoring, evaluation, and reporting within project components.	<ul style="list-style-type: none"> ▪ Project team ▪ National and international consultants as needed 	0 (included in routine project staff and counterpart activity)	Continuous, starting from project inception
Midterm Evaluation (external)	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP CO ▪ UNDP/GEF RCU ▪ External Consultants (i.e. evaluation team) 	8,000	At the midpoint of project implementation.
Final Evaluation (external)	<ul style="list-style-type: none"> ▪ External Consultants (i.e. evaluation team) ▪ Project team ▪ UNDP CO ▪ UNDP/GEF RCU 	25,000	At the end of project implementation
Final Report	<ul style="list-style-type: none"> ▪ External Consultant ▪ Project team 	(costs included in Terminal	At least one month before the end of the

<i>Type of M&E activity</i>	<i>Responsible Parties</i>	<i>Budget (US\$) excluding project staff time; all figures are indicative</i>	<i>Time frame</i>
	<ul style="list-style-type: none"> ▪ UNDP CO 	Evaluation, above)	project
Compilation of lessons learned	<ul style="list-style-type: none"> ▪ Project team ▪ UNDP CO ▪ UNDP/GEF RCU 	0 (included in routine project staff activity)	Annually
Financial audit	<ul style="list-style-type: none"> ▪ UNDP CO ▪ Project team ▪ External auditors 	3,000	Annually
Visits to field sites	<ul style="list-style-type: none"> ▪ PM ▪ UNDP CO ▪ UNDP/GEF RCU (as appropriate) ▪ National implementing agency 	2,000	Annually or more frequently
TOTAL INDICATIVE COST	(Excluding project team staff time and UNDP staff and travel expenses)	41,000	

X. Legal Context

This document, together with the CPAP, which was signed by the GOB and UNDP and is incorporated by reference, constitutes a Project Document as referred to in the SBAA. All CPAP provisions apply to this document.

Consistent with the Article III of the SBBA, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner.

The Implementing Partner shall: a) put into place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried out; b) assume all risks and liabilities related to the Implementing Partner's security and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required herein shall be deemed a breach of this agreement.

The Implementing Partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism, and that the recipients of any amounts provided by UNDP herein do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via <http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm>. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

Audit clause

The GOB will provide the Resident Representative with certified periodic financial statements, and with an annual audit of the financial statements relating to the status of UNDP (including GEF) funds according to the established procedures set out in the Programming and Finance manuals. The audit will be conducted according to UNDP's financial regulations, rules, and audit policies by the legally recognized auditor of the GOB, or by a commercial auditor engaged by the GOB.

XI. Annexes

Annex A. Project Results Framework

This project will contribute to achieving the following Country Programme Outcome as defined in CPAP or CPD: UNDP Country Programme 2013- 2017 Outcome 6: Public policies and institutional capacities are strengthened and capacitated to manage Belize’s natural resource base in a sustainable manner, and for a more effective and multi-sectoral preparedness and response to natural disasters and climate-induced events.
Country Programme Outcome Indicators: 1. National compliance with multi-lateral environmental agreements strengthened. 2. Strengthened policy framework and institutional arrangements for integrated water and land resource management
Primary applicable Key Environment and Sustainable Development Key Result Area (same as that on the cover page, circle one): ???
Applicable GEF Strategic Objective and Program: GEF-5 Chemicals Strategy: Objective 1: Phase out POPs and Reduce POPs Releases.
Applicable GEF Expected Outcomes: Outcome 1.3 POPs releases to the environment reduced. Outcome 1.4 POPs waste prevented, managed, and disposed of, and POPs contaminated sites managed in an environmentally sound manner. Outcome 1.5 Country capacity built to effectively phase out and reduce releases of POPs.
Applicable GEF Outcome Indicators: Indicator 1.3.1 Amount of un-intentionally produced POPs releases avoided or reduced from industrial and nonindustrial sectors; measured in grams TEQ against baseline as recorded through the POPs tracking tool. Indicator 1.4.1 Amount of PCBs and PCB-related wastes disposed of, or decontaminated; measured in tons as recorded in the POPs tracking tool. Indicator 1.4.2 Amount of obsolete pesticides, including POPs, disposed of in an environmentally sound manner; measured in tons. Indicator 1.5.1 Progress in developing and implementing a legislative and regulatory framework for environmentally sound management of POPs, and for the sound management of chemicals in general, as recorded in the POPs tracking tool.

	Indicator	Baseline	Targets		Sources of verification	Risks and assumptions
			Mid-term	End of project		
Project Objective: To protect human health and the environment locally and globally by reducing releases harmful POPs substances and increasing the capacity for hazardous chemicals and waste management.						
Outcome 1.1: <i>Institutional capacities strengthened through enhanced policies and regulatory framework supporting sound management of chemical life cycle</i>	Chemicals Bill legally in force.	Draft National Integrated Chemicals Management Bill developed.	Chemicals Bill legally adopted.	Coherent legal and Institutional framework for the sound management of chemicals in Belize agreed.	Official Gazzette. Meeting records of the National Integrated Chemicals Management Authority.	Risk: Delay in adoption as overlapping mandates of ministries not resolved Assumption: Project's multi-stakeholder coordination and frequent meetings will ensure coordination and agreement between the ministries.
	Number of official meetings of National Integrated Management Authority. Target: 3		National Integrated Chemicals Management Authority Secretariat operational			
	Number of base regulations and POPs specific guidelines adopted.	No specific chemicals and waste regulations or drafts exist.	Draft Industrial and Consumer Chemicals regulations and PCBs specific guidelines adopted.	Target: 5, POPs waste, UPOPs, pharmaceuticals, cosmetics and pre-cursor chemicals regulations and guidelines adopted	Official Gazzette. Publications of Ministries of Health and Environment	Assumption. Chemicals Bill adopted
Number of inspections undertaken to enforce chemicals/POPs regulations. Training days of inspectors and authorities for	No specific Chemicals Bill inspections. Chemicals inspected as a part of inspections of industrial installations	10 chemicals emphasizing industrial inspections a year.	30 chemicals emphasizing industrial inspections a year. Target: 100 training man days in chemicals and POPs regulation enforcement and inspections.	Work records, attendance sheets and reports from Department of Environment	Assumption: Regional Caribbean POPs management project will provide additional capacity building and inspector training.	

	Indicator	Baseline	Targets		Sources of verification	Risks and assumptions
			Mid-term	End of project		
	enforcement of chemicals bill.					
<u>Outcome 1.2: Management and disposal of existing POPs waste</u>	Successful export disposal of existing POPs waste.	21 DDT and associated waste packed for disposal at KWCH hospital. 7 tons of PCB contaminated waste in barrels at private entity.	Capacity building undertaken and disposal contract awarded.	Safe disposal of all POPs in Belize undertaken	Project documentation. Disposal Certificate	Risks: Delays caused by difficulties in finding a shipping line for transport.
<u>Outcome 2.1: Measureable reduction in dioxin release from formal and informal waste dumps</u>	Tonnage of waste being uncontrollably burned at waste sites in the Western Corridor	20,000 tons of waste burnt at waste dumps and households both urban and peri-urban 6 g I-TEQ PCDD/Fs	Less than 10,000 tons burnt < 3 g I-TEQ PCDD/Fs	Less than 2,000 tons burnt < 0.6 I-TEQ PCDD/Fs	Transfer station and final landfill weighted data. Monitoring and evaluation estimates	
	Number of waste dumps closed and transfer centers built and operational	3 dumps closed and transfer station construction commenced	4 dumps closed and transfer operational; 3 Mile, San Ignacio, San Pedro, Caye Caulker	6 dumps closed and transfer operational; 3 Mile, San Ignacio, San Pedro, Caye Caulker, Belmopan, Boom	Solid Waste Management authority documentation. Visual verification of construction and operation.	Assumption: Full government funding allocation assumed and critical.
<u>Outcome 2.2: Reduction of UPOPs releases from uncontrolled, open burning of agricultural and other wastes</u>	Sugar Cane area under Green Harvesting (non-burning) among small holding farmers	0 acres	400 acres	6,000 acres	Sugar Cane Producer association reports SIDRI documentation	Assumption: Replication of project demonstration successful.

	Indicator	Baseline	Targets		Sources of verification	Risks and assumptions
			Mid-term	End of project		
	Tonnage of sugarcane Green Harvested (non-burning)	80,000 tons (BSI) Releases 5.0 g I-TEQ PCDD/Fs	100,000 tons Releases 4,9 g I-TEQ PCDD/Fs	300,000 tons Releases 4,0 g I-TEQ PCDD/Fs	Sugar Cane Producer association reports SIDRI documentation	Assumption: increase from small scale farmers.
	Price of Green Harvested sugarcane	Green Harvested cane does not fetch a higher price.	Proposals for including the green harvesting as requirement for premium price schemes developed	Green harvesting included as requirement for premium price schemes Price premium for green harvested cane > 10 \$ per ton.	Premium price schemes (Fairtrade) production standards. Sugar industry data for purchase price at gate.	Assumption: Premium price schemes, weights environmental over employment benefits in setting standards.
Outcome 3: Monitoring, learning, adaptive feedback, outreach, and evaluation.	M&E and adaptive management applied to project in response to needs, mid-term evaluation findings with lessons learned extracted.	No Monitoring and Evaluation system, nor evaluation of project output and outcomes.	Monitoring and Evaluation system developed during first year. Mid-term evaluation of project output and outcomes conducted with lessons learnt.	Final evaluation carried out.	Inception workshop report. APR/PIR. Independent mid-term evaluation report. Final evaluation report.	None.

Annex B. Total Budget and Work Plan

Award ID:	???	Project ID(s):	
Award Title:	???		
Business Unit:			
Project Title:	Belize Chemicals and Waste Management Project		
PIMS no.	5158		
Implementing Partner (Executing Agency)	Department of Environment		

GEF Outcome/Atlas Activity	Responsible Party/Implementing Agent	Fund ID	Donor Name	Atlas Budgetary Account Code	ATLAS Budget Description	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Total (USD)	See Budget Note:
Component 1. Environmentally sound management and regulatory strengthening of chemicals and waste, including POPs	UNDP	62000	GEF	71200	International consultants	15,000	15,000	0	30,000	1
				71300	National consultants	23,000	24,000	20,000	67,000	2
				72100	Contractual services	20,000	75,000	0	95,000	3
				71600	Travel	8,000	8,000	2,000	18,000	4
				75700	Workshops	8,000	8,000	8,000	24,000	5
				74200	Communications and publications	5,000	5,000	5,000	15,000	6
					sub-total GEF	79,000	135,000	35,000	249,000	
	Total Outcome 1	79,000	135,000	35,000	249,000					
Component 2: Dioxin release reduction in waste management operations and agriculture	UNDP	62000	GEF	71200	International consultants	12,000	0	0	12,000	1
				71300	National consultants	10,000	20,000	20,000	50,000	2
				72100	Contractual services	90,000	50,000	0	140,000	3
				72100	Contractual services	150,000	100,000	100,000	350,000	
				71600	Travel	5,000	1,000	1,000	7,000	4
				75700	Workshops	12,000	12,000	12,000	36,000	5

				72100	Communications and publications (television, web, print, etc.)	3,000	5,000	7,000	15,000	6	
					sub-total GEF	282,000	188,000	140,000	610,000		
					Total Outcome 2	282,000	188,000	140,000	610,000		
Component 3: Monitoring, learning, adaptive feedback, outreach, and evaluation	UNDP	62000	GEF	71200	International consultants	0	0	20,000	20,000	1	
				71300	National consultants	0	8,000	5,000	13,000	2	
					Audit	1,000	1,000	1,000	3,000		
				71600	Travel	500	1,000	500	2,000		
				75700	Workshops	1,000	1,000	1,000	3,000		
					sub-total GEF	2,500	11,000	27,500	41,000		
					Total Outcome 3	2,500	11,000	27,500	41,000		
Project management (This is not to appear as an Outcome in the Results Framework)	UNDP	62000	GEF	71300	National consultants	23,000	24,000	26,000	73,000	10	
				72200	Equipment	5,000	0	0	5,000	11	
				71600	Travel	1,000	1,000	1,000	3,000	4	
				72400	Communications (phone, fax, internet)	1,000	1,000	1,000	3,000	12	
				72500	Office supplies	300	300	300	900		
				74500	Executive Group meetings	500	500	500	1,500	13	
				74599	UNDP Cost Recovery Charges	1,200	1,200	1,200	3,600		
					sub-total GEF	32,000	28,000	30,000	90,000		
				UNDP	71300	National consultants	8,000	8,000	9,000	25,000	14
						sub-total UNDP	8,000	8,000	9,000	25,000	
				Total Management	40,000	36,000	39,000	115,000			
PROJECT TOTAL (GEF only)						395,500	362,000	232,500	990,000		
PROJECT TOTAL (incl. UNDP)						403,500	370,000	241,500	1,015,000		

Budgetary Notes

1. International consultant rates are estimated at US\$ 700/daily.
2. National consultant rates are estimated at US\$ 120/day, and include DSA for local travel.
3. Services for partial repacking transport and final disposal of 21 tons DDT, 7 tons of PCB contaminated and associated waste. Including training by waste disposal company.
4. Travel costs for project staff and national experts within Belize are estimated at US\$ 100-400 per trip, depending on distance and duration.
5. Average costs of a full day workshop are estimated at US\$ 25 per participant, and include venue rent and catering.
6. Communications and publications include hard copies of the reports, workshop and educational materials to be disseminated via various media, including print, television, websites, and/or others.
7. These costs include the procurement of: small sugar cane harvester, spare parts for 5 seasons, training of use and maintenance by equipment provider.
8. Part-time project manager+20 % of the salary of a full time project assistant
9. This item includes workstations for the Project Manager and Project Assistant plus shared printer and networking equipment.
10. This item includes phone, fax, and Internet service.
11. This item includes direct costs of Project Executive meetings, not including travel or paid staff or consultant time.
12. 80% of a full time project assistant

Summary of Funds: ¹	Amount	Amount	Amount	Total
	Year 1	Year 2	Year 3	
GEF	395,500	362,000	232,500	990,000
UNDP	8,000	8,000	9,000	25,000
Ministry of Forestry, Environment and Sus.Dev				0
Ministry of Environmental Protection				0
Solid Waste Management Authority				
Private Sector				0
NGOs				0
TOTAL	403,500	370,000	241,500	1,015,000

Private (2013 - 2017)	\$ Belize	US\$
ADM Mills	20,000	10,000
Total	20,000	10,000

NGOs	\$ Belize	US\$
SugarCane Growers association	300,000	150,000
		0
Total		0

Annex C. Risk analysis

The table below shows the most significant risks to project implementation, with an outline of mitigation strategies.

Risk		Risk Mitigating measures
Insufficient financial resources available to continue national interventions for sound management of chemicals	Low	Awareness raising among decision makers and resource managers within the context of SAICM and the Stockholm Convention and wider sustainable chemical management is being further continued throughout the project, especially component 1.
Institutional weakness to implement regulations	Low	The project seeks to address those capacities and to augment current national programmes designed to facilitate monitoring and enforcement.
Climate Risks are related to Belize classification as a SIDS in an area that is prone to tropical storms / hurricanes.	Low	The component 2 considering UPOPs releases from municipal and agricultural waste management improves the resilience to climate change by constructing adequate waste management infrastructure at a non-flooding prone area. The facility includes also surface water system for the control of flooding and leachate generation. While no landfill gas recovery is considered in the first phase the emissions should be neutral as a compared with current uncontrolled burning scenario.
Conflicting interests of key ministries in developing sound chemicals management policies, legal instruments and institutional responsibilities.	Low	Project's multi-stakeholder coordination and frequent meetings will ensure appropriate information exchange, coordination and venues for finding agreements between the ministries.
Risk of unsuccessful demonstration projects and low replication.	Low	The municipal waste management part will not suffer from unsuccessful demonstration as there is sufficient capacity and funding available. Demonstration stage risks are higher in Green Harvesting of sugar cane, where the acceptability and cultural traditions may be difficult to overcome. Due consideration for information and community outreach has been included in project approach to address this.
Risk of low replication for full project impact.	Moderate	Replication of both sound municipal waste management and Green Harvesting of sugar cane will require considerable cash investments beyond the project's capabilities. For waste management tangible amelioration of local environment is expected to bring forward additional national resources. For green harvesting, working with premium trade schemes, like Fairtrade, is expected to bring in both the impetus as well as the financial resources to continue replication.

Annex D. Agreements and Letters of Support

Letter of Agreement for Direct Project Services

Letter of Agreement

STANDARD LETTER OF AGREEMENT BETWEEN UNDP AND THE GOVERNMENT OF BELIZE FOR THE PROVISION OF SUPPORT SERVICES

1. Reference is made to consultations between officials of the Government of *Belize* (hereinafter referred to as “the Government”) and officials of UNDP with respect to the provision of support services by the UNDP country office for nationally managed programmes and projects. UNDP and the Government hereby agree that the UNDP country office may provide such support services at the request of the Government through its institution designated in the relevant programme support document or project document, as described below.
2. The UNDP country office may provide support services for assistance with reporting requirements and direct payment. In providing such support services, the UNDP country office shall ensure that the capacity of the Government-designated institution is strengthened to enable it to carry out such activities directly. The costs incurred by the UNDP country office in providing such support services shall be recovered from the administrative budget of the office.
3. The UNDP country office may provide, at the request of the designated institution, the following support services for the activities of the programme/project:
 - (a) Identification and/or recruitment of project and programme personnel;
 - (b) Identification and facilitation of training activities;
 - (c) Procurement of goods and services;
4. The procurement of goods and services and the recruitment of project and programme personnel by the UNDP country office shall be in accordance with the UNDP regulations, rules, policies and procedures. Support services described in paragraph 3 above shall be detailed in an annex to the programme support document or project document, in the form provided in the Attachment hereto. If the requirements for support services by the country office change during the life of a programme or project, the annex to the programme support document or project document is revised with the mutual agreement of the UNDP resident representative and the designated institution.
5. The relevant provisions of the Special Standard Agreement between the Government of Belize and the United Nations Development Programme in Belize, (the “SSA”), including the provisions on liability and privileges and immunities, shall apply to the provision of such support services. The Government shall retain overall responsibility for the nationally managed programme or project through its designated institution. The responsibility of the UNDP country office for the provision of the support services described herein shall be limited to the provision of such support services detailed in the annex to the programme support document or project document.

6. Any claim or dispute arising under or in connection with the provision of support services by the UNDP country office in accordance with this letter shall be handled pursuant to the relevant provisions of the SSA and the project document.
7. The manner and method of cost-recovery by the UNDP country office in providing the support services described in paragraph 3 above shall be specified in the annex to the programme support document or project document.
8. The UNDP country office shall submit progress reports on the support services provided and shall report on the costs reimbursed in providing such services, as may be required.
9. Any modification of the present arrangements shall be effected by mutual written agreement of the parties hereto.
10. If you are in agreement with the provisions set forth above, please sign and return to this office three signed copies of this letter. Upon your signature, this letter shall constitute an agreement between your Government and UNDP on the terms and conditions for the provision of support services by the UNDP country office for nationally managed programmes and projects.

Yours sincerely,

Signed on behalf of UNDP
Resident Representative

For the Government
[Date]

Attachment

DESCRIPTION OF UNDP COUNTRY OFFICE SUPPORT SERVICES

1. Reference is made to consultations between the Ministry of Forestry, Fisheries and Sustainable Development, the institution designated by the Government of Belize and representatives of UNDP with respect to the provision of support services by the UNDP country office for the nationally managed programme or project xxxx **Belize Chemicals and Waste Management Project** (award xxxx) “the Project”.

2. In accordance with the provisions of the letter of agreement signed on *Date of signature (LOA)* and the project document, the UNDP country office shall provide support services for the Project as described below.

3. Support services to be provided:

Support services* (insert description)	Schedule for the provision of the support services	Cost to UNDP of providing such support services (where appropriate)	Amount and method of reimbursement of UNDP (where appropriate)
1. Payments, disbursements and other financial transactions	During project implementation	Universal Price List	Support Services
2. Recruitment of staff, project personnel, and consultants	During project implementation	Universal Price List	Support Services
3. Procurement of services and equipment, and disposal/sale of equipment	During project implementation	Universal Price List	Support Services
4. Organization of training activities, conferences, and workshops, including fellowships	During project implementation	Universal Price List	Support Services
5. Travel authorizations, visa requests, ticketing, and travel arrangements	During project implementation	Universal Price List	Support Services
6. Shipment, custom clearance, vehicle registration, and accreditation	During project implementation	Universal Price List	Support Services

* UNDP direct project support services will be defined yearly, and for those executed during the period, direct project costs will be charged at the end of each year based on the UNDP Universal Pricelist (UPL) or the actual corresponding service cost

4. Description of functions and responsibilities of the parties involved:

The project will be conducted through the National Implementation modality of UNDP (NIM). The Ministry of Forestry, Fisheries and Sustainable Development, will act as the National Implementing Partner³, through the Department of Environment, and with the support of UNDP as a GEF Implementing

³ National Execution partner under new harmonized definition.

Agency. The Department of Environment will be responsible for directing and managing the project and monitoring compliance with project work plans as a basis for project execution. Within the Department of Environment a Project Management Unit (PMU) will be created, which will be responsible for the daily implementation of activities, including direct supervision in coordination with UNDP, for all activities that are carried out by the project.

To ensure an effective assimilation of the Project in permanent institutional structures, the PMU will convene a Steering Committee. This committee will be part of the project supervision and is a continuance of the experience of the Preparatory Phase, which adopted this method with good results.

UNDP will provide technical and operational support necessary for the implementation of activities and the results of this project, with constant support from the PMU. The UNDP office will ensure that all consultant contracts, purchase orders and contracts for company services are in compliance with UNDP standards and procedures. In those cases in which the UNDP Resident Representative has to sign the contracts mentioned above, UNDP will participate in the processes for selection and recruitment. UNDP will also provide advances payments to the project to make direct payments and maintain accounting and financial control of the project.

The project authorities will carry out the procurement and contracts for all purchases less than USD\$ 2,500. These minor operations shall comply with rules and procedures contained in the National Implementation Manual. According to the above, ownership of equipment, supplies and other property financed with project funds will be conferred to UNDP. Transfer of ownership rights shall be determined in accordance with the policies and procedures of UNDP. All goods will be considered UNDP property for the following five years since purchased.

UNDP will assist in the administration of funds provided by GEF and UNDP itself. UNDP will be able to assist in the management of any other additional fund for co-financing this project. These arrangements will be included in the relevant Memorandum of Understanding. Contributions will be subject to internal and external audits established in UNDP rules and financial regulations.

Annex E. Terms of Reference of Key Project Personnel

Position: National Project Manager
Project: Belize Chemicals and Waste Management Project
Type of Contract: Service
Place of Work: Belmopan, Belize
Period: July 2014 through December 2017

Brief description

The Project Manager (PM) will be responsible for the daily management of all project activity at the national level. The PM will head the work of the Project Implementation Group, providing supervision of all consultants, contracted companies, and technical and administrative staff. The PM will work under the general oversight of the National Project Director and the Project Steering Committee, with supervision from the project coordinator at UNDP.

This is a part-time position. The PM is responsible for the following:

- Effective project planning and implementation, with participation of all interested parties, in accordance with the project document
- Preparation, tracking, and implementation of annual work plans for the project
- Organization and management of the work of the Project Implementation Group
- Development of Terms of Reference and contracts for national and international consultants
- Provision of effective interaction with relevant state agencies, private companies, NGOs and other interested parties
- Development of relations with other relevant GEF programs or other regional programs on POPs mercury, and healthcare waste management;
- Dissemination of information of project activity and results to project partners and the general public (including the creation and updating of project web page)
- Supervision of internal processes for quality control, including creation of logs of risks, problems and quality indicators of project activity, monitoring and maintaining these logs, and making necessary changes
- Provision of progress reports on project implementation in accordance with the project document
- Delivery of needed information to independent outside project evaluators
- Regular reporting and communication with the Project Board and UNDP about project status, including problems
- Control of spending of project funds on intended purposes in accordance with the approved budget of each project outcome
- Monitoring and coordination of the delivery of co-financing as stipulated in the project document.

The overall goal for the PM's work is the successful implementation of the project in accordance with the goals, work plan and budget set forth in the project document.

Required qualifications

- Higher education (specialist designation, bachelor's degree, or equivalent, as granted by a university or institute) in a field related to environment protection, and/or environmental sanitation
- Technical knowledge and work experience of not less than 5 years in waste and chemicals management
- Experience in strategic planning and project management
- Experience in supervision of employees and consultants
- Excellent abilities to motivate and supervise a diverse team
- Excellent computer skills
- Familiarity with the structure and strategic priorities of UNDP and GEF projects is preferable
- Fluency and excellent English presentation and drafting abilities.

Position: Project Assistant
Project: Belize Chemicals and Waste Management Project
Type of Contract: Service
Place of Work: Belmopan, Belize
Period: July 2014 through December 2017

Description

The Project Assistant (PA) will provide administrative and other support for the Project Manager (PM) and other project staff and consultants.

This is a full-time position, under the direct supervision of the PM. The PA's duties will include:

- Administrative activity and logistics in support of the project
- Financial administration as per UNDP rules in force
- General administration of the project office
- Business correspondence, telephone calls, and other communication related to the project
- Maintenance of business and financial documentation, according to requirements of the UNDP and donor organizations
- Preparation of internal reports and recording of meetings
- Organizing and executing meetings and workshops
- Assistance to project manager in preparation of financial and other reports.

Required qualifications

- Work experience and skills in office administration
- Ability to work effectively under pressure
- Perfect computer skills
- Fluency in English.