



REQUEST FOR CEO ENDORSEMENT
PROJECT TYPE: Full-sized Project
TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title: Environmentally sound management of municipal and hazardous solid waste to reduce emission of unintentional POPs			
Country(ies):	The Republic of Senegal	GEF Project ID: ¹	4888
GEF Agency(ies):	UNIDO (select) (select)	GEF Agency Project ID:	100103 (for PPG), 100114
Other Executing Partner(s):	Ministry of Environment and Sustainable Development (MEDD) - Directorate of Environment and Hazardous Facilities (DEEC), Ministry of Planning and Local Governments, Municipalities of Tivaouane and Ziguinchor	Submission Date: Resubmission Date:	09-4-2014 10-6-2014
GEF Focal Area (s):	Persistent Organic Pollutants	Project Duration(Months)	60
Name of Parent Program (if applicable): ➤ For SFM/REDD+ <input type="checkbox"/> ➤ For SGP <input type="checkbox"/> ➤ For PPP <input type="checkbox"/>		Project Agency Fee (\$):	190,000

A. FOCAL AREA STRATEGY FRAMEWORK²

Focal Area Objectives	Expected FA Outcomes	Expected FA Outputs	Trust Fund	Grant Amount (\$)	Cofinancing (\$)
(select) CHEM-1	Outcome 1.3 POPs releases to the environment reduced.	Output 1.3.1 Action plan addressing unintentionally produced POPs under development and implementation.	GEF TF	2,000,000	17,030,186
(select)			(select)		
(select)			(select)		
(select)			(select)		
Total project costs				2,000,000	17,030,186

B. PROJECT FRAMEWORK

¹ Project ID number will be assigned by GEFSEC.

² Refer to the [Focal Area Results Framework and LDCF/SCCF Framework](#) when completing Table A.

Project Objective: To reduce POPs releases from hazardous and municipal wastes by strengthening technical and institutional capacities of a group of private sectors which can sustain and replicate the best available technique and best environmental practice (BAT/BEP) demonstrated in the project within the context of the implementation of the National Implementation Plan (NIP) under the Stockholm Convention.

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Grant Amount (\$)	Confirmed Cofinancing (\$)
Legal framework and institutional capacities	TA	1. Legal framework and institutional capacities for sound management of hazardous and other wastes strengthened, enacted, and sustained	1.1 Existing laws and regulations on the sound management of hazardous and other wastes assessed and the gaps and needs identified 1.2 Legal frameworks and institutional capacities to support the environmentally sound management of hazardous and other wastes strengthened 1.3 Technical guideline/toolkit on BAT/BEP (in a gender sensitive way) on how to conduct sound waste management in the country developed 1.4 National government and municipality officers trained with gender considerations to develop sound waste management complying with the regulation and enforcement requirement	GEF TF	293,667	1,435,708
Stakeholder engagement in waste management	TA	2. Stakeholders ready to be engaged in properly disposing, sorting and recycling hazardous and other wastes	2.1 National government officers trained on how to establish sound waste management 2.2 Municipal government officers trained on how to conduct sound waste management 2.3 Gender-sensitive	GEF TF	185,333	1,486,780

			<p>awareness raising events held and relevant materials on sound waste management activities distributed for the general public</p> <p>2.4 General public trained on reduce, reuse and recycle (3R) and good waste separation practice</p> <p>2.5 Business operations in private sectors working on sound waste management improved</p>			
Improvement of sound waste management operations	Inv	3. Sound management operations of hazardous and other wastes improved	<p>3.1 Hazardous Waste Management Action Plans reviewed and formulated at municipality levels</p> <p>3.2 Facilities established and used to properly collect hazardous and other wastes within the municipalities</p> <p>3.3 Waste interim storage and sorting facilities established and used by the stakeholders of the selected municipalities</p> <p>3.4 Recycling facilities established and used within the municipalities</p> <p>3.5 The management of final disposal facilities reinforced for hazardous and other wastes in the municipalities</p> <p>3.6 Waste management operations by the companies at the municipal levels improved</p> <p>3.7 Open burning</p>	GEF TF	1,235,000	13,197,010

			controlled to reduce uPOP emissions			
Monitoring and Evaluation	TA	Project progress properly monitored and evaluated	4.1 Project results monitored and reported including gender dimension 4.2 Project evaluated meeting the GEF's evaluation criteria	GEF TF	106,000	536,688
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					1,820,000	16,656,186
Project management Cost (PMC) ³				GEF TF	180,000	374,000
Total project costs					2,000,000	17,030,186

C. SOURCES OF CONFIRMED COFINANCING FOR THE PROJECT BY SOURCE AND BY NAME (\$)

Please include letters confirming cofinancing for the project with this form

Sources of Co-financing	Name of Co-financier (source)	Type of Cofinancing	Cofinancing Amount (\$)
National Government	Ministry of Environment and Sustainable Development (MEDD) - Directorate of Environment and Hazardous Facilities (DEEC)	In-kind	3,955,000
National Government	Ministry of Environment and Sustainable Development (MEDD) - Directorate of Environment and Hazardous Facilities (DEEC)	Cash	1,493,000
National Government	PNGD of the Ministry of Planning and Local Governments	Cash	6,775,650
Local Government	Municipality of Ziguinchor	In-kind	1,554,863
Local Government	Municipality of Ziguinchor	Cash	3,109,725
Local Government	Municipality of Tivaouane	Cash	91,948
GEF Agency	UNIDO	Cash	50,000
Total Co-financing			17,030,186

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, FOCAL AREA AND COUNTRY¹

GEF Agency	Type of Trust Fund	Focal Area	Country Name/ Global	(in \$)		
				Grant Amount (a)	Agency Fee (b) ²	Total c=a+b
(select)	(select)	(select)				

³ PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

(select)	(select)	(select)				
Total Grant Resources						

¹ In case of a single focal area, single country, single GEF Agency project, and single trust fund project, no need to provide information for this table. PMC amount from Table B should be included proportionately to the focal area amount in this table.

² Indicate fees related to this project.

F. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants	198,000	0	198,000
National/Local Consultants	477,000	1,827,016	2,304,016

G. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? No

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

PART II: PROJECT JUSTIFICATION

A. DESCRIBE ANY CHANGES IN ALIGNMENT WITH THE PROJECT DESIGN OF THE ORIGINAL PIF⁴

This CEO Endorsement Document reflects negotiations and discussions during the PPG phase. The major change in the project design is that the project steering committee has selected two cities, Tivaouane and Ziguinchor, as beneficiaries of this project by considering the track records and future plans of the cities in the area of waste management. Due to the co-financing arrangement agreed during the PPG phase in the two cities which have only small scale dump sites, this project will not aim at installing gas pipe collection as described in the PIF but seek external funding opportunities/co-financing contribution for the construction of waste management facilities in both cities including a final disposal facility in Ziguinchor. This project will focus on the waste management business sector development in the two cities. The successful business expansion could be replicated by the local private waste management operators whose capacities will be strengthened by the project.

A.1 National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAS, NAPs, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, Biennial Update Reports, etc.

In April 2014, the UNIDO/GEF project to review and update the NIP (GEF ID: 5469) has started its activities to update the inventory of uPOPs. The updated inventory results will contribute to this project by providing the current level of uPOPs from various emission sources in the country.

The Direction of Environment and of Classified Establishment (DEEC) of the Ministry of Environment and Sustainable Development (MEDD) is responsible for the sound management of industrial hazardous waste and contaminated sites in Senegal. The category of industrial waste generally includes non-hazardous waste, medical waste, electronic waste, and hazardous wastes.

Waste management has become a top strategic priority of the Republic of Senegal. PNGD, "Programme National de Gestion des Déchets", is a national initiative of the government funded by the Islamic Bank of Development to promote the sound waste management in Senegal. A priority program is currently led by the Ministry of Planning and Local Governments for the period 2014-2017.

This program aims at assisting the municipality government to improve the waste management by addressing the social need for keeping good quality of life and generating employment opportunities. The program has five

⁴ For questions A.1 –A.7 in Part II, if there are no changes since PIF and if not specifically requested in the review sheet at PIF stage, then no need to respond, please enter “NA” after the respective question.

components:

- Design or update of the legal framework in the field of waste management;
- Establishment of solid waste management infrastructures;
- Technical and financial support to the municipal governments
- Communication and capacity development
- Coordination, follow-up and evaluation of the program

PNGD will establish sound waste management in four municipalities in Senegal including Dakar, Kaolack, Tivaouane and Touba. This national initiative includes preliminary feasibility studies of infrastructures in the cities and tax system to improve financing plan supporting sound waste management in a long term. It also includes training and awareness raising of the general public and employees working in the waste sector, the installation of appropriate infrastructures and the establishment of appropriate collection, sorting, recycling and final disposal of non-hazardous wastes, which will provide the basis for this UNIDO/GEF project will further build on. After the achievement of this priority phase (2014-2017), PNGD plans to extend and replicate the sound management of municipal wastes in all other major cities throughout the country. This UNIDO/GEF project will provide the technical contribution to ensure that PNGD's intervention is complying with the best available technique and best environmental practice (BAT/BEP) to reduce the emission of uPOPs.

A.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities.

The proposed project is in line with the GEF5's focal area of CHEM-1 to phase out POPs and reduce POPs releases; Outcome 1.3: POPs releases to the environment reduced; Output 1.3.1 Action plans addressing un-intentionally produced POPs under development and implementation as well as sound chemicals management in general.

A.3 The GEF Agency's comparative advantage:

UNIDO's comparative advantage is working with industries related to technical assistance and capacity building including environmentally sound management and disposal of POPs waste, introduction of BAT/BEP to industrial sector mentioned in Article 5 of the Stockholm Convention, management of contaminated sites, and development and implementation of the NIPs. UNIDO also has cleaner production and electronic waste management projects, and therefore the treatment of lead acid batteries is within the UNIDO's expertise. This project fits the UNIDO's focus and thematic areas. UNIDO has been engaged in many projects promoting BAT/BEP to properly manage hazardous and municipal wastes (open burning) in many regions including Africa. Therefore the comparative advantage of UNIDO in this area has been demonstrated by its accumulated experience in designing and implementing related projects.

A.4. The baseline project and the problem that it seeks to address:

To ensure the ownership of the project at the municipality level, among pre-selected three cities of Kaolack, Tivaouane, and Ziguinchor, a competitive based selection process was applied. The Project Steering Committee (PSC) which was established for the on-going NIP update project was consulted to review this PPG phase project development activities as well. The submitted proposals were evaluated by criteria such as the investment and performance of the past 5 years and plans for the next 5 years, sustainability of the project intervention, and co-financing opportunities. The selection group set up under PSC which mainly consisted of DEEC officials, project's national staff, and UNIDO has selected Tivaouane and Ziguinchor as the beneficiaries of the project activities more appropriate at the municipal level.

National strategies and policies

- National Plan for the Management of Hazardous Waste, Nov 1999, (including restructuring of the legislative and institutional framework, integration of the informal recycling sector, requiring financial obligations waste management operation companies, systematic inventorying, etc.). This plan needs to be updated, upgraded, and executed both at the national and municipal levels.

- National Action Plan on Biomedical Waste Management: This plan will be referred to when medical waste strategy at the municipal levels is formulated.
- National Implementation Plan for the Stockholm Convention: The NIP update project and this project are well coordinated and the uPOP inventories updated for the NIP update project will be shared with this project, and vice versa.

Existing Legislative framework

The legal framework on the waste management is given at the national level, and the municipalities are responsible for the execution and enforcement of the legal tools under the jurisdiction of both Ministry of Planning and Local Governments for the municipal waste and MEDD for the hazardous waste. At the national level several regulatory texts already exist with regard to both municipal and hazardous waste management. All the following regulations will be referred to in designing, constructing, and operating the waste management facilities in this project.

- Act 2001-01 as Environmental Code, an introduction to the classification of industries, environmental consulting for urban planning, and waste import ban
- Code of Hygiene on the Obligation for Classified Establishments to treat and dispose their waste
- Decrees on Impact Studies (2001)
- Decree on the Terms of Waste Management (draft)
- Decree regulating the management of biomedical waste in Senegal
- Standard NS 05-061 on Water Discharges (referring to the corresponding French decree set on 01.03.1993)
- Standard NS 05-062 on Air Pollution (referring to the corresponding French decree set on 01.03.1993)
- Law n°2004-13 (March 2004 with modification by Law n°2009-21 in May 2009) on contracts for construction, operation, and transfer of infrastructures

The legislative structure will be updated in order to adopt the sound management of POPs including uPOPs by engaging BAT/BEP to meet the Stockholm Convention's mandate.

International agreements

The country also respects the following international conventions, Basel Convention and related protocols, Rotterdam Convention, Stockholm Convention, Bamako Convention, and the International Convention for the Prevention of Pollution from Ships (MARPOL).

The country also uses the following instruments of the international policy for the management of chemicals and waste, GHS classification and labeling of chemicals, SAICM, International Code of Conduct for the use of pesticides (FAO), Common Regulation of CILSS (Comité permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel, <http://www.cilss.bf/>) countries for the registration of pesticides.

Baseline projects and activities

PNGD

Senegalese municipalities have major difficulties to cope with the waste. In the best cases, there is only a primary waste collection done by an NGO or small local companies. The waste is either left in a transfer site which becomes a dump site or dumped in an open and uncontrolled landfill, where waste is incinerated in an open-burning condition.

PNGD organized an inception and validation workshop on the national campaign for solid waste characterization on 28 May 2014 in Dakar. This workshop intended to inform the major stakeholders working in the field of waste management and environment and gathering their agreements on the methodology that will be followed during the

PNGD waste characterization study. This national campaign for solid waste characterization will be launched by the solid waste management coordination unit of PNGD in partnership with the Polytechnique School of Thiès (EPT).

Waste characterization is a major step in the implementation of an efficient waste management system. It allows to determine the amount and nature of waste fluxes and the physical, chemical and biological properties of wastes. This includes:

- Knowledge of the exact composition of municipal waste generated by residents for a given geographical zone
- Determination of the proportion of recyclable materials and packaging wastes that could be sorted and collected
- Determination of the fluctuations in the waste deposit composition against housing type and season of the year
- Determination of the share of common industrial wastes in municipal wastes

This characterization constitutes a reliable baseline that could then be used to establish further contracts and specifications for the collection, sorting, reuse, recycling and final disposal of wastes and for impact assessment studies. In total, 21 municipalities will benefit from this initiative (Dakar, Diawbé, Dioubel, Fatick, Kaffrine, Kédougou, Kaolack, Kolda, Louga, Matam, Mbour and Saly, Saint Louis, Sédhiou, Tambacounda, Thiès, Tivaouane and Touba, Ziguinchor and the department of Rufisque, Guédiawaye and Pikine).

Considering the absence of a formal collection system in most of the regions (except Dakar), the waste study will be done directly from the source of wastes in the categories of households, shops and artisans. A pilot study will be first conducted in the region of Thiès. Two campaigns will be then conducted. The first one will be done during the dry season (starting in May 2014) and the second one during the wet season (in August and September 2014).

A preliminary study will be done either through a survey to the households or through data collection from the administrative and local authorities such as identification of the neighborhoods in the categories of households, shops and artisans.

This characterization campaign will then be conducted following the MODECOM protocol (a protocol of waste characterisation adopted by the French Environment and Energy Management Agency ADEME), where wastes will be sorted according to thirteen main categories (putrescible wastes, paper, cardboard, complex, textiles and sanitary textiles, wood, plastic, unclassified combustibles, glasses, metals, unclassified incombustibles: rocks and stones, special households wastes and fine elements). The campaign will include: household waste collection, waste sorting and physic-chemical analysis. A report will then be concluded by gathering information including confidence interval for the use of decision makers.

The methodology and results of the characterization campaign will be assessed by a validation committee composed of a group of specialists. The coordination team of the characterization campaign is constituted by eight experts in the field of waste management and valorization. Seven task teams will be constituted and each team will be supervised by a student of the Polytechnic School of Thiès.

Two Selected Municipalities

To build this project intervention on the baseline activities in the area of sound waste management, previous and on-going activities have been identified in the two selected cities.

Tivaouane

The population of Tivaouane is not large compared to that in Ziguinchor on business-as-usual days. However, Tivaouane receives in total 4 million visitors staying for 10 days during religious events held twice a year. The city's infrastructure is not designed to deal with the high peak of waste generation. The population growth is expected at a rate of 0.9%.

Table 1 Amount of wastes produced in Tivaouane (Estimated considering a daily rate of 0.4 kg/person/day, an estimated value for secondary cities of Senegal.)

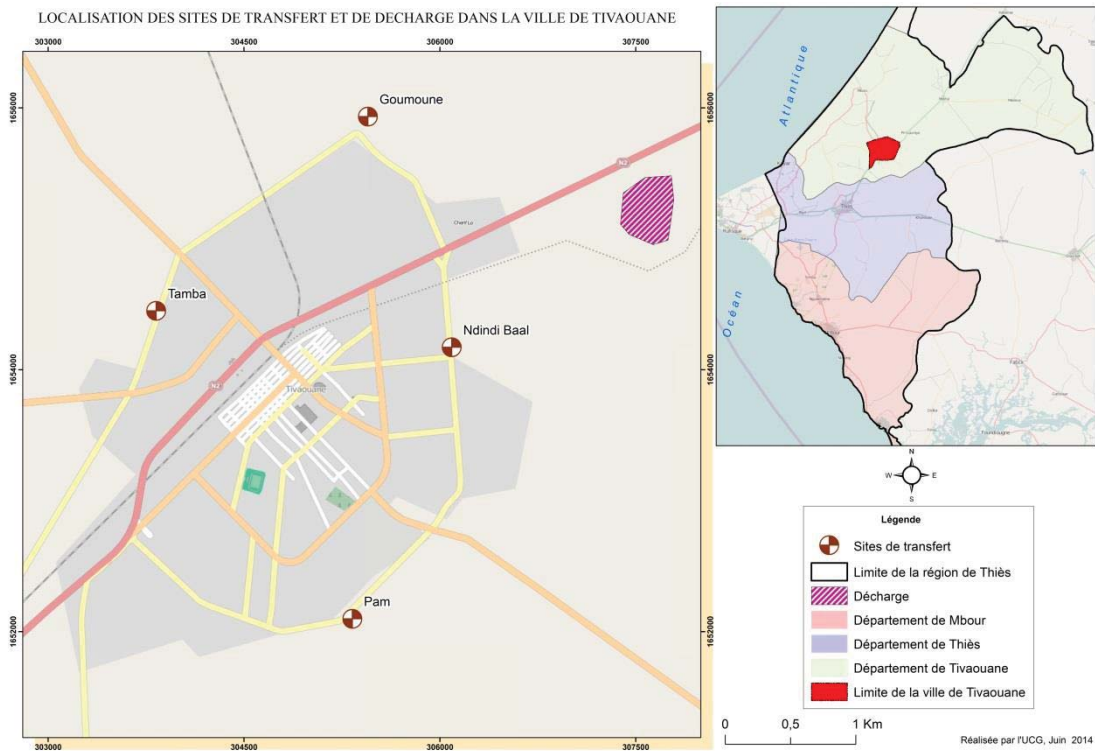
	2013	2014	2015	2016	2017	2018
Population	42,546	42,929	43,316	51,004	55,594	60,598
Waste (tons/day)	17.0	17.2	17.3	20.3	22.2	24.2
Waste (tons/year)	6,211	6,268	6,324	7,446	8,116	8,847

Assuming the same waste generation to be applied to the visitors, additional 16,000 tons need to be treated during the religious events held twice a year.

For PNGD, Tivaouane plans to eradicate all dump sites followed by environmental rehabilitation and construct 4 waste collection/transfer sites and an engineered landfill for final disposal of wastes on a plot of more than 30 ha at the site of "Pire" (Fig. 1). PNGD will invest USD 8 million over four years (2013-2017) in developing sound municipal waste management. PNGD plans to first lead technical, environmental and social studies related to the infrastructures that they plan to build: an engineered landfill, a center and several sites for sorting, recycling and transferring wastes including a waste collection center and waste transfer sites at the district level. An international call for tenders will be opened to consulting companies to conduct these studies. The study will start in September 2014 and should last for 12 months for the engineered landfill and 6-8 months for the other infrastructures. Another international call for tenders is also planned for the construction of the engineered landfill and a national call for tenders for all other constructions and activities. PNGD also plans to recruit local human resources (two engineers and one socioeconomic expert) for the city of Tivaouane throughout the project period. A focal point for waste management was designated at the municipal level. UNIDO plans to coordinate all activities of its project with PNGD to avoid overlapping activities and rather strengthen the impact of the two projects especially in reducing the emission of unintentional POPs. A preliminary waste management plan for Tivaouane has been already developed by PNGD.

The former mayor of Tivaouane was the chair of the Association of Mayors in Senegal (Association des Maires du Sénégal). Therefore the successful delivery of the sound management of municipal and hazardous waste at a municipality level could be replicated through this Association's network. The new chair of the association will be invited to national project meetings to ensure the association's viewpoints are incorporated in the project's strategy and activities.

Fig. 1. Map of Tivaouane showing the four transfer ("transfert") sites planned for collection/transfer for PNGD



Ziguinchor

According to the National Agency of Statistics and Demography (ANSD), the growth rate of the population of the city of Ziguinchor was estimated to be 2.9% in 2009. The growth of the population of Ziguinchor has been estimated using this growth rate in the table below.

Table 2 Projection of the production of solid municipal waste in Ziguinchor

	2013	2014	2015	2016	2017	2018
Population	357,142	367,499	378,156	389,123	400,407	412,019
Waste (tons/day)	224	230	236	243	249	256
Waste (tons/year)	81,806	84,015	86,283	88,613	91,005	93,462

In Ziguinchor there is a need for improving the city's current dump site, avoiding open-burning and adopting best wastes management practices. The dump site in “Bourofaye” (Fig. 2) will need to be replaced by an engineered or controlled landfill. The municipality of Ziguinchor plans to build this new facility for final disposal of municipal wastes with additional/external funding and has already concluded its negotiation with the surrounding villages so as to choose a field of 20 hectares also located in “Bourofaye” (cf. commitment letter of Ziguinchor attached in Annex). With the possible funding from the African Development Bank (AfDB) that was requested by UNIDO, a feasibility study of the engineered or controlled landfill construction on the selected site will be conducted.

Furthermore, it is necessary to close all dump sites (“décharges sauvages”) that are informally used in the city (Fig. 3) by the local residents, rehabilitate the sites, and establish the designated transfer sites with best environmental practice and facilities. The dump site situated in the central market of “Boucotte” that is causing hygiene concerns will be replaced by a more suitable and standardized transfer site.

Fig. 2 Map of Ziguinchor with the location of the actual landfill of Bourofaye situated along the road N4 outside of the city

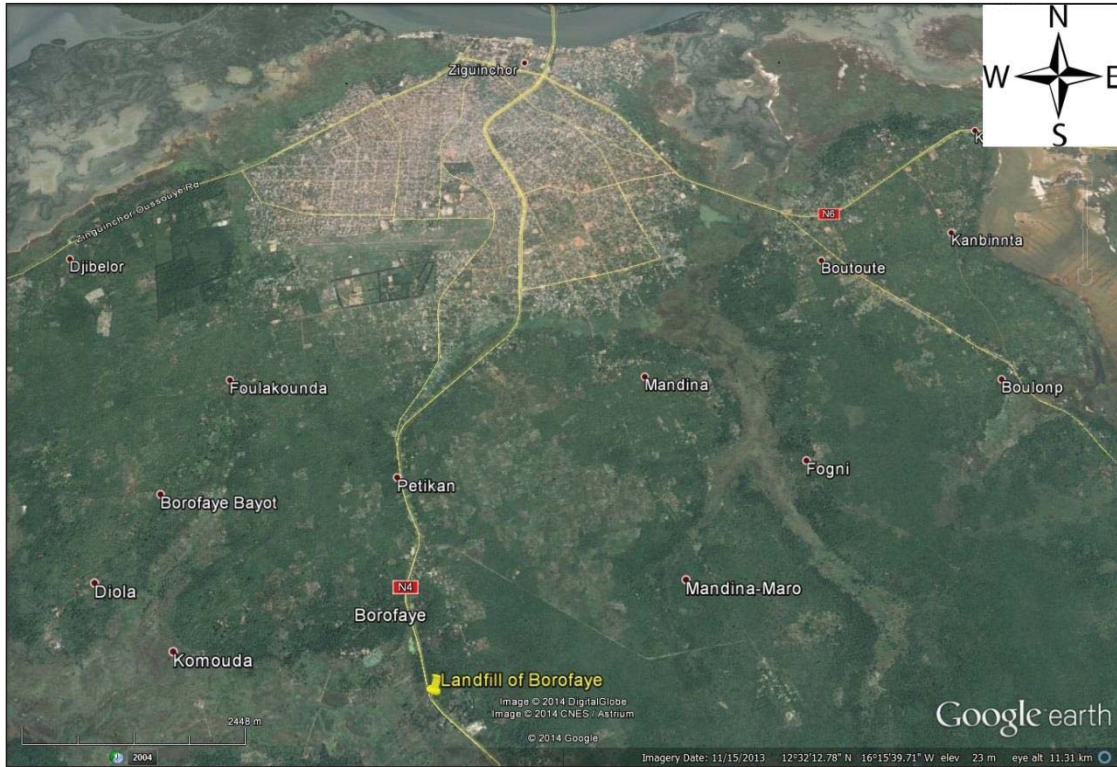
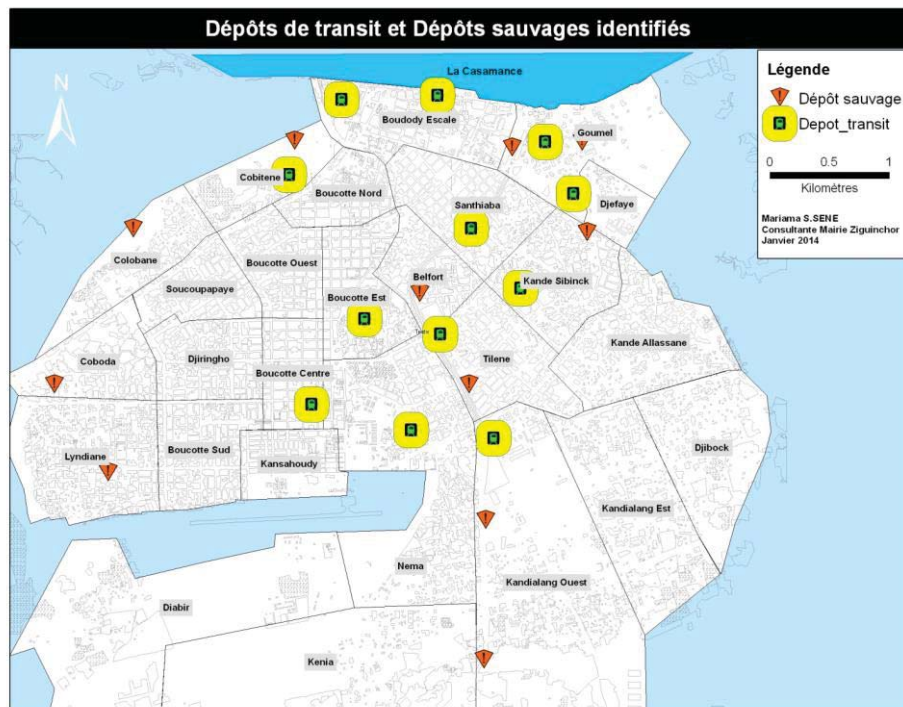


Fig. 3. Map showing the location of transfer sites ("Dépôts de transit") for wastes and dump sites ("dépôts sauvages") in the city of Ziguinchor.



In Ziguinchor, PNGD also plans to lead a campaign of waste characterization starting in May 2014, which will form a good basis to attract investments from private companies in the waste management sector in Ziguinchor. In parallel, an AfDB-funded waste water sanitation project is on-going in Ziguinchor. AfDB offered to cover the awareness raising activities of this GEF project. AfDB has also offered UNIDO to submit a funding request to cover some preliminary studies: economic assessment and financing scheme of waste management; communication plan; concession contract conditions for public-private partnership (PPP).

The city of Ziguinchor has sent its proposal to EU Senegal Office for "Programme Acteurs Non Etatiques (ANE)/Autorités Locales (AL) 2011-2013 (Allocation Sénégal 2013 – volet AL)" (See Annex). A full proposal was submitted in July 2014 requesting EUR 340,000 (70% of the total budget of EUR 440,000) estimating that the project will benefit 356,000 residents (30,000 households), create 260 jobs and support 76 local elected officials. The project objective is the capacity building of the 26 districts in the city of Ziguinchor and planning for improving the city's solid waste management.

Local private sectors active in the area of waste management

In addition to PROPLAST (plastic material recycler) and GRAVITA (lead recycler from automobile lead-containing acid batteries) which were originally identified in the submitted PIF, UNIDO contacted and met with several companies and potential stakeholders working in the area of waste management in Senegal; EREKO, EAD suarl, PERVENCHE Environnement, and SeTic.

The "Etablissement Abdula Daire (EAD) suarl" is a company founded in 2004. It works on waste management in partnership with several cities in the region of Dakar ("Etente CADAKAR"). It holds 20 trucks (including three skip loaders), one excavator and is currently collecting about 300 tons of wastes per day for five municipalities. The company is aiming at also covering the cleaning of streets. At the moment EAD has little capacity, but the company is currently discussing with an Italian partners (Ecotech) to reinforce their capacity in landfill management and especially in the management of sorting center and waste transformation to recover bio gas. The company plans to expand for others cities. They can offer trucks, material and technical organization for people collecting wastes. At the moment they have 30 employees including their secretariat staff, the drivers and the mechanics. So far they have invested their own capital only. However, they are confident that they are qualified to successfully obtain a loan from a local bank for investments whenever needed. Managers are interested in capacity development opportunities including business management training to be provided by this project.

Pervenche is a starting company working in the area of recycling. It has a partnership with a French company working in waste management (PénaEnvironnement). Pervenche plans to transfer technology from PénaEnvironnement to Senegalese partners. PénaEnvironnement has experience in the treatment of industrial wastes.

These companies are potential partners who could receive the project's intervention on the business sector development and financing opportunities to expand their operation scales. Whithin the course of the project, how the technologies offered by these international and local private sectors would best fit will be validated in designing the project requirements to be described in the Terms of Reference for waste operators considering costs/benefits.

Problems to address in this project:

In Tivaouane, there is a need to improve its hazardous waste management including medical wastes, electric and electronic wastes, lead and mercury containing wastes, etc, because PNGD only focuses on non-hazardous wastes. The mayor's office particularly listed medical wastes, used acid batteries and other electric and electronic wastes as emerging hazardous waste that needs to be better dealt with by the city. Furthermore, two industries located in the region are also producing industrial wastes: Grande Côte Opération (GCO) and the Senegalese Chemical Industry (ICS). The city should incorporate these industrial wastes into its waste management plan and financing scheme.

In Ziguinchor, there is a need to develop both hazardous and non-hazardous waste sound management in partnership with co-financing partners including AfDB and PNGD. Ziguinchor does not have access to the Islamic Development Bank (IDB) fund during the current priority phase of PNGD and therefore the city does not have a plan to build infrastructures in the coming years . The city of Ziguinchor and this project will continue to seek additional funds/investment from private companies and other donors such as development banks in order to initiate

the construction of the new engineered landfill. Studies should be conducted to estimate the economic and financial aspects of waste management, geotechnical studies to assess the feasibility of the projected infrastructures (sorting and recycling center, controlled or engineered landfill), the socio-economic impact of the project, a communication plan and the concession contract between the municipality and private companies for the operation of the waste management infrastructures. The city of Ziguinchor has identified the following priorities and actions to achieve sound waste management:

1. Building of an appropriate infrastructure to accept wastes for final disposal (engineered or controlled landfill);
2. Establishment of facilities to transform organic wastes including fishery wastes and sort plastic wastes;
3. Acquisition of trash containers to collect waste (12 containers of 16 m³);
4. Strengthening/building capacities of actors working in waste management;
5. Development and execution of a communication plan.

At the national level, NIP also pointed out the shortage of qualified technical personnel for the management and analysis of POPs and associated wastes, in addition to very poor national technical infrastructure, weak knowledge and very low awareness on POPs. There is also a gap in legislations that would need to be filled, and a very little recovery of the tax for waste management (TOM) that should be replaced by a new and more efficient way to finance waste management. There is a need for the execution of national hazardous waste management plan by involving all stakeholders working with wastes (national, municipal and private sectors).

The estimated emission of uPOPs at the two selected sites are as follows.

In Tivaouane, the number of residents is 43,000 in 2013. Assuming the waste generation is 0.4kg/person/day, the municipal waste amount was estimated by the municipal office as 6,200 tons/year. The amount received by the two dump sites is recorded as 1,955 tons/year. The emission factors to air of open burning is 300 micrograms-TEQ/tons of waste-burned. The estimation of uPOP emission is made within a range of the worse case scenario and safe side estimation, which are 0.3 to 0.6 g-TEQ/year from open burning.

In Ziguinchor, in 2013, the municipal waste amount was estimated as 82,000 tons/year for a population of 356,000. The estimated medical waste amount is 220 kg/day equal to 80 tons/year. The industrial waste from the fishery sector in the city is estimated as 792 tons/year taking into account a fishing rate of 110 tons/month and the non-edible part of fish is 60%. Among the above, the uPOPs emissions are caused by the municipal waste dump site and incineration of medical waste in a small incinerator in the hospital premise. The emission factors to air of open burning and medical waste incineration are 300 micrograms-TEQ/tons of waste-burned and 40,000 micrograms-TEQ of medical waste incinerated, respectively. The estimation of uPOP emission is made within a range of the worse case scenario and safe side estimation, which are 12 to 25 g-TEQ/year from open burning and 1.6 to 3.2 g-TEQ/year, respectively.

A. 5. Incremental /Additional cost reasoning: describe the incremental (GEF Trust Fund/NPIF) or additional (LDCF/SCCF) activities requested for GEF/LDCF/SCCF/NPIF financing and the associated global environmental benefits (GEF Trust Fund) or associated adaptation benefits (LDCF/SCCF) to be delivered by the project:

This UNIDO/GEF project will focus on an improvement in the waste management operations of main stakeholders, especially existing private and informal sectors to revamp their business and operations for sound waste management in Senegal. The project will contribute to strengthening of the local capacities to properly absorb the knowhow and develop business in a competitive manner so as to offer waste management services sustainably and reduce POPs emissions. The project activities conducted in the two selected municipalities will serve as examples to be replicated in other municipalities at both national and regional levels. The driving force of the replication would be mainly by private sectors which are chartered by the national government and municipalities. During the UNIDO's visit, it was found that very few private sectors were active in Kaolack in the area of waste management. Such municipalities would benefit from the replication of this project's results in the future.

The reduction of unintentional POPs (uPOPs) will be achieved by better preventing plastics and metallic wastes from being mixed with the municipal and organic wastes that are subject to spontaneous combustion and consequently causes higher emissions of uPOPs. The spontaneous combustion will be also better controlled by

improving uncontrolled dump sites through separation, segregation, recycling of municipal and hazardous waste as well as more frequent top soil coverage and other measures to prevent uncontrolled fire. The reduction of such uncontrolled combustion through the execution of the sound waste management policy would consequently lead to the reduction in uPOPs emission in Senegal.

The Ministry of Planning and Local Governments commits itself through PNGD to the acquisition of equipment, the realization of infrastructures, building of technical capacities of the actors and awareness raising of the populations in the municipalities of Tivaouane and Ziguinchor. The Ministry of Planning and Local Governments jointly executes the project to insure the capitalization of waste management experiences and sustainability of the accumulated knowledge.

Outcome 1: Legal framework and institutional capacities for sound management of hazardous and other wastes strengthened, put in place, and sustained

Output 1.1 Existing laws and regulations on the sound management of hazardous and other wastes assessed and the gaps and needs identified

At the national level, the government (through PNGD) will recruit a national consultant to assess the existing laws and regulations on the sound management of municipal solid wastes and identify the gaps and needs. The project will focus on identifying gaps between the National Action Plan for the Management of Hazardous Waste (Nov 1999) and present country's needs to address hazardous waste in a technically sound manner. The gap between the existing legal framework on hazardous wastes and Stockholm Convention's mandate will be also analyzed. Even though Senegal has signed and ratified the Stockholm Convention, some efforts are still needed to build robust legal framework by filling the gap and enforcing the law within the country.

In particular, the National Plan for the Management of Hazardous Waste (Nov 1999) recommends that the future regulations on hazardous waste management should contain the following: Definition of the objectives of the legislation on hazardous waste; Definition of the responsibilities of producers and operators; Classification of waste and of their sources; Modalities concerning the acquisition of license to operate and build structures for hazardous waste management; Establishment of norms for water, air and soil releases and norms for the transportation of hazardous waste; Ban of specific operations and practices; Surveillance of the emission, transport and final disposal; Decontamination of polluted sites; Penalty fees in case of noncompliance to the regulation; and Incentives for research on the development and management of hazardous waste management centers.

These recommendations will be reviewed and taken into consideration in analyzing legal framework gaps and drafting the national regulation on hazardous waste management.

In drafting national plan, internationally accepted guidelines such as "Guidelines for National Waste Management Strategies" by UNEP/UNITAR under the framework of the Inter-Organization Programme for the Sound Management of Chemicals (IOMC).

Output 1.2 Legal frameworks and institutional capacities to support the environmentally sound management of hazardous and other wastes strengthened

For the municipal solid waste, based on the recommendations of the consultant report within Output 1.1, the national government (through PNGD) will draft legislation texts and provide supports to stakeholders particularly municipalities to strengthen their institutional framework capacities to execute the environmentally sound management of municipal solid wastes. For the hazardous waste, this project will help the national government to upgrade the existing National Action Plan on the Hazardous Waste (Nov 1999) to a national legislation. In the new regulations, hazardous wastes possibly containing POPs and hazardous waste treatment processes emitting POPs (particularly uPOPs) should be listed as the target of the regulations in order to comply with the Stockholm Convention. The drafting process of the regulations shall involve the key stakeholders including waste management private sectors and Non-Governmental Organizations (NGOs) such as academic communities and Civil Society Organizations (CSOs) to ensure that the regulations meet both the realistic technical requirement and general expectations of the civil society.

The current legal framework will be fully utilized from the business development viewpoints including public private partnership policy (Law 2004-13 on contracts for construction, operation, and transfer of infrastructures) as well as licensing scheme for the nation-wide waste management operations. This is critical to ensure the

sustainability of the project intervention by strengthening private sectors as driving force for improving the waste management service in the country.

Output 1.3. Technical guideline/toolkit on BAT/BEP (in a gender sensitive way) on how to conduct sound waste management in the country developed

The national government is expected to develop a technical guideline/toolkit for key governmental stakeholders to utilize in developing technical specifications and for private sectors to execute the waste management operations. The development of the guideline on the municipal solid waste will be carried out by PNGD. This project will, in consultation with the PNGD activities, develop the guidance on collecting, separating, recycling, and disposing of hazardous wastes both from households and businesses. The coordination between PNGD and this project will be needed to clearly define the categories of municipal and hazardous wastes particularly for the hazardous wastes generated by general consumers that contain plastic and metals. This is because the mixed waste of plastic and metals could be the worse combination that could cause higher emissions of uPOPs when burned together at dump sites.

A part of the guideline / toolkit will be dedicated to provide information relevant for women, pregnant women, and children. More gender-sensitive information would be needed with regard to reduction, collection, sorting/segregation, reuse, and recycling, as mostly men are usually involved in the final disposal process. Those women who are involved in sorting, reuse and recycling process in particular should be aware of exposure risks to chemicals and biohazards from the waste stream for themselves and their children as well. The guideline will also consider the need for women in the work conditions and infrastructure. For example, the best practices recommended in the guideline should have feedback from women as well. Furthermore, the facilities built for the project should have toilets and other rooms needed for women and infants, where relevant.

Output 1.4 National government and municipality officers trained with gender considerations to develop sound waste management complying with the regulation and enforcement requirement

The resources and tools prepared for hazardous waste management in the above Outputs 1.2 and 1.3 will be disseminated through training opportunities offered to the governmental officers working at the national and municipal levels. Such training events ensure that the legal framework and governmental control over the waste management will meet the private sector's needs and consider gender dimension. For Tivaouane, the training for the municipal solid waste will be provided by PNGD, and the project will offer the training mainly on the hazardous waste including medical waste. For Tivaouane, there are also about 4 million visitors in total to the city during the period of religious events that are held twice a year. The municipal infrastructure's needs to deal with the high peak of waste disposal shall be one of the main topics of the training. For Ziginchor, however, without PNGD activities in the coming years the project shall need to offer the training activities for both the municipal solid and hazardous waste.

The training will promote the gender dimension as an important aspect in promoting the sound management of waste. A regulation should be designed by incorporating women's viewpoints and social roles. The involvement of women as technicians as well as vulnerable stakeholders is critical to fully meet the social needs in designing and executing the waste management system.

Outcome 2: Stakeholders ready to be engaged in properly disposing, sorting and recycling hazardous and other wastes

Output 2.1 National government officers trained on how to establish sound waste management

The project will train national government officers working in the counterpart Ministries particularly on hazardous waste related topics. The training will aim to improve their knowledge and awareness on how to efficiently coordinate action between Ministries and municipalities, encourage the development of private business and enforce the sound waste management regulations taking into account the gender dimension at the national level. The project will organize a workshop gathering responsible persons from all relevant services of the government (DEEC of the Ministry of Environment and Sustainable Development (MEDD), Ministry of Planning and Local Governments, Ministry of Health, etc.). The objective will be to 1) find an efficient way to coordinate action between the Ministries and with the municipalities through discussions and exercises, 2) perform trainings on how to promote and encourage the development of the private sector in waste management, 3) enforce the sound waste management

in compliance with the national regulation, the Stockholm Convention and international standards through trainings on BAT/BEP, discussions and exercises.

Output 2.2 Municipal government officers trained on how to conduct sound management are provided

The government (through PNGD) plans to provide the municipality of Tivaouane with human resources for waste management. Training activities (trainings in each municipality on how to improve sound waste management will be provided by PNGD to the municipal government officers. This project will conduct this output in Ziguinchor in close collaboration with the Coordination Unit of DEEC of the Ministry of Environment and Sustainable Development (MEDD), PNGD, and also other relevant governmental institutions (e.g. Ministry of Health and Social Action). If approved, the AfDB will fund the training and awareness raising activities in the field of sanitation and waste management in Ziguinchor.

The municipality's commitment is key to successful operations of the sound management of hazardous and municipal waste, as the municipalities face decisions to be made daily to ensure the waste management operation is improved following the municipal waste management plan. The training materials particularly on the allocation of the responsibilities and priorities regarding this project (such as which waste categories will be addressed by this project) will be further discussed with municipalities in consultation with PNGD and AfDB. The training will also promote to take advantage of the public private partnership articulated under the Law 2004-13 on contracts for construction, operation, and transfer of infrastructures.

Output 2.3 Gender-sensitive awareness raising events held and relevant materials on sound waste management activities distributed for the general public

The awareness raising targeting the general public whose cooperation is indispensable to the successful waste separation at the collection points. This is particularly important to avoid the hazardous wastes from households and small businesses to be mixed in the municipal solid waste stream. The government (through PNGD) plans to conduct some awareness raising activities in Tivaouane. This project shall offer technical expertise in the PNGD's events as its contribution to PNGD. This project will conduct this output in Ziguinchor in close collaboration with local NGOs (PANAFRICA and PACTE) with their particular experiences in training and awareness raising activities for the general public. Also, the governmental institutions and the AfDB that have funds for training and awareness raising activities in the field of sanitation and waste management shall contribute to the training events and development of dissemination materials.

This project will also incorporate gender dimension into its training activities and dissemination materials. The training should start by helping understand the current practice and analyze what can be improved by also incorporating a difference in expected social roles between male and female. Then, by showing what could be the best practice in each city, the participants should be asked to make proposals on how to improve the waste management practice. If relevant, a session only for women could be arranged to ensure all participants feel comfortable to speak out their ideas. The execution of the training events should adopt a participatory approach and encourage bottom-up proposals.

Output 2.4 General public trained on reduce, reuse and recycle (3R) and good waste separation practice

As the internationally accepted principle, 3R and good separation practice will be promoted throughout the project activities, but this series of training events will target local communities to provide site-specific guidance. It is also necessary for the general public to understand why the separation at the collection point is critical to the sound waste management. The efforts and resources needed to set up processes for the following sorting and recycling of municipal and hazardous wastes shall be shared with the general public in designing the waste management operations in Ziguinchor. Some feedback from the general public will be reflected into the city's operational plan. In Ziguinchor, AfDB plans to support research conducted by a local university on waste sorting in pilot projects. This project will strengthen this initiative by providing training in both cities in collaboration with on-going partnerships (for instance in Ziguinchor, the municipality already has an initiative on awareness raising on waste management with NGOs) on how to properly sort, store and dispose wastes at the household level, especially emphasizing on hazardous wastes and practices that must be avoided in throwing away municipal solid waste to reduce uPOPs emissions at the final discharge site.

Output 2.5 Business operations in private sectors working on sound waste management improved

The two national experts who will be recruited for this project will be the main driver of this Output. One in business development will ensure the potential operators and selected operator will be well guided in terms of business strategies in the area of waste management. The advice given by the national expert will be in line with the national government's strategy and other on-going projects such as PNGD. The other national expert will be in the area of financing. S/he will advise the potential operators and selected operator in terms of financing schemes to support the execution of the business strategy.

This project will perform two 2-day training workshop events in each city that are open to existing companies and persons from the informal sector working on waste management on proper practices to achieve sound waste management in Senegal especially in the selected cities. This project will also strengthen the competitiveness of companies through trainings on business management and facilitate the creation of cluster operations within the sector. There are some small companies which already started investing in the area of industrial waste from medium and large scale companies. Such companies at the cutting edge of the waste management investment in the country will be particularly targeted to further refine their business decisions and operations. Business management in the area of waste management and technical requirements for sound waste management shall be the main agenda of the training. It also provides the opportunity for the potential investors to learn the waste management system to be promoted by the national government and municipalities. The training is expected to help formulate their business strategies and consequently facilitate investment decisions in the waste management sectors. Selected international and regional waste management companies will be invited as trainers to stimulate opportunities for local companies to absorb internationally accepted technical requirements and practices.

Outcome 3: Sound management operations of hazardous and other wastes improved

The knowledge and awareness raised by the activities under Outcome 2 will be indispensable to the successful execution of the activities under Outcome 3 as described below.

Output 3.1 Hazardous Waste Management Action Plans reviewed and formulated at municipality levels

By encouraged by this project's decision to select Ziguinchor as one of the two project sites, PNGD plans to establish a sustainable municipal solid waste management plan at the municipality level not only for Tivaouane but also Ziguinchor as PNGD's co-financing contributions. A close cooperation between PNGD, this GEF project, AfDB, and EU will be monitored and assured by the mayor's office of Ziguinchor. The latest National Action Plan on Hazardous Waste Management was prepared in November 1999. This will be reviewed and upgraded as regulations in Output 1.2. This plan will outline an updated legal framework on the sound hazardous waste management at the national level, and each municipality will need to develop municipality specific action plan following the National Action Plan.

Therefore this project will formulate the hazardous waste management action plans in both cities that include medical and other industrial wastes. The UNIDO delegate assessed a dump site next to a school construction site during its visit to Tivaouane where medical waste (medicine glass bottles and some plastic medical equipment) was dumped with other municipal solid waste. Such situations need to be rectified and similar practices must be prevented in the future.

Output 3.2 Facilities established and used to properly collect hazardous and other wastes within the municipalities

In Tivaouane, PNGD plans to invest in material and equipment to set up collection points and strengthen the actual municipal capacities for collection. This project with PNGD will build or strengthen the municipal and private sector's knowledge and capacities for the collection of hazardous and other wastes in both cities. The project will particularly focus on strengthening business competitiveness and efficiency using BAT/BEP for the collection of hazardous waste such as medical wastes from hospitals and other industrial sectors such as automobile industries.

In Ziguinchor, this project will support the city of Ziguinchor to improve the planned collection points or find ways to raise public funds or private investment to better equip the collection points as indicated in Fig. 3. Some of the current collection points are well managed. However, other collection points, particularly the ones that are set up temporarily by local business owners and residents for convenience are causing a nuisance with odor and clogged drainage. A participatory process to improve such collection points will be held to ensure the collection points will meet the user's needs but also are used properly. In Ziguinchor, the UNIDO delegate witnessed electronic wastes are

mixed in the municipal waste stream which ends up in the dump site. Therefore the collection points in Ziguinchor will need to consider the e-waste stream as well.

There is already another project on-going on the collection of lead-containing acid batteries. However, the expansion of the battery collection has not been successful partly due to a lack of collection points and social capital to promote such collection. This project will facilitate a one-stop collection point for various types of hazardous wastes so that the collection rates will be improved. The project will work in collaboration with existing companies of this sector such as GRAVITA for recycling used batteries.

This project will also ensure that potentially mercury-containing waste will be separated at the above collection points.

Output 3.3 Waste interim storage and sorting facilities established and used by the stakeholders of the selected municipalities

In Tivaouane, PNGD will build waste interim storage and sorting facilities for municipal solid wastes. There are also some private sectors started planning to invest their own capitals targeting industrial waste sorting/recycling in the region. In Tivaouane, this project will focus on the strengthening of the waste operators' technical capacity building for sorting including advice on technical options meeting local needs but also BAT/BEP requirements.

This project will support the city of Ziguinchor to construct the interim storage and sorting facilities for municipal solid waste or find ways to raise public funds or private investment to build these facilities. In Ziguinchor, hazardous wastes discharged by households will be brought to the collection point or collected by the private companies with tractors. An interim storage is needed in the city to generate a certain mass of hazardous waste enough to make business sense for further aggregation by recyclers or exporters as valuable resources such as ferrous and precious metals. Sorting at the collection points in the middle of the cities shall need the household disposers' cooperative actions to separate the hazardous waste at the collection points. Each collection point will need to be monitored by the neighbors particularly until the general public will become familiarized with the sound practice on the separation of hazardous wastes. Sorting should be also done at the interim storage which could be built adjacent to the planned future landfill site with enough space available for such facilities.

In both cities, the project will perform training for the municipal employees and to the scavengers on how to properly store and sort including safety and gender dimensions. The project will particularly encourage small business and informal sectors in both cities to form associations so as to improve the operation efficiency and promote the best practice in a concerted manner.

This project will also ensure that the interim storages carefully consider potentially mercury containing waste in designing their facilities.

Output 3.4 Recycling facilities established and used within the municipalities

In both Tivaouane and Ziguinchor, based on the information collected during the PPG phase, PNGD will conduct in-depth feasibility studies providing basic information needed to establish recycling facilities for municipal solid waste including plastic materials. This feasibility study could help attract investors to the two cities in the area of municipal solid waste management and recycling. For example, the project identified recycling companies such as PROPLAST which collect and process used plastic items to remold them into plastic pellets or new products such as plastic sheets and commodities. PROPLAST has shown a great interest and has expressed its willingness to expand and work with more cities in Senegal and its need for more raw materials to response to the demand of its clients.

This project will support the establishment of hazardous waste recycling processes including plastic materials in both cities. Some plastic materials contain toxic plasticizers such as lead, cadmium, and polybrominated diethylethers (PBDEs). PBDEs is a group of POPs that are regulated under the Stockholm Convention. Recycling of plastic items mixed with those containing the toxic plasticizers should be particularly avoided in remolded food and drink containers as well as toys that are designed to have a direct physical contact with human bodies. Technically, the detection and removal of plastic materials containing the toxic plasticizers is a challenge even in the developed part of the world. In this project, training opportunities will be offered to existing companies and potential investors on both empirical knowhow and screening test equipment which could be engaged to remove plastic items that could possibly contain toxic plasticizers from the recycling process.

There are other private sectors identified which operate processes to recycle hazardous wastes locally. For example, GRAVITA collects used automobile lead-containing acid batteries and extracts lead in the form of ingot to be exported to India. The thermal extraction process is not a completely closed process. There is an end-of-pipe gas cleaning process attached. This project could assist the measurement of uPOPs from the process so as to recommend how to reduce the uPOP emission from the lead secondary process. Such interventions would also bring co-benefits to reduce the emission of lead fume from the process and therefore curtail occupational exposure of workers to lead fume. The impact of reduction in uPOP emission to the environment would not be comparable to that from open burning that can be reduced in both cities due to the small amount of lead recycled in the company (The emission factor of open burning at a dump site is 6,000 times larger). But the co-benefit from the mitigated lead exposure is worth the allocation of the project resources. According to the UNEP Toolkit 2013 the emission factor to air for "Lead production from Polyvinyl chloride/chlorine free scrap in highly efficient furnaces, with air pollution control devices including scrubbers" is 0.05 micrograms-TEQ /ton-lead. Assuming 200 tons of annual lead production, the current total possible emission of uPOPs at GRAVITA would be 10 micrograms -TEQ per year.

This project also ensures that potentially mercury containing waste will not be mixed in the recycling process.

Output 3.5 The management of final disposal facilities reinforced for hazardous and other wastes in the municipalities

In Tivaouane, PNGD will fund and lead the construction of an engineered landfill following the recommendations given by the planned feasibility study. This project will play a role to provide technical advice on BAT/BEP requirements for the design and operational conditions of the final disposal facilities.

For Ziguinchor, the site for a future engineered landfill has been already selected by the municipality with the land owner's consent (see a commitment letter in Annex). At the time of the submission of this document, UNIDO has requested AfDB for a feasibility study. The design of the new engineered landfill or the improvement plan for the existing discharge will be generated with the AfDB fund when approved. Nevertheless, this UNIDO/GEF project will continue to seek funding opportunities to raise public and private funding to build a final disposal facility (an engineered landfills) and associated waste management facilities from funding partners and the Government of Senegal. As part of the UNIDO's effort to raise funds for the construction of the engineered landfill at the selected site, the Senegal office of UNIDO will host a workshop to share this project outline and solicit additional public/private funding for the construction of the Ziguinchor's new engineered landfill site.

In case that the project opts for the improvement of the existing discharge located in the southern suburb of Ziguinchor, due to a unsuccessful result to identify external funding for constructing the final disposal facility, the waste management facilities will be established by the project combining the project, private sectors, and governmental resources. The national PPP policy will need to be referred to in this case. Such facilities could be comprised of one collection point in the city and other waste management facilities at the discharge site including final sorting, disassembling, composting, and an interim storage. The sound management of waste including hazardous waste that will be promoted through this project's activities in Ziguinchor will lead to (1) the reduced waste amount to be disposed, (2) the lower content of plastics and metals mixed in the municipal solid waste dumped at the discharge, and as a result (3) the reduction in uPOP emission.

This project will also perform a participatory discussion forum in partnership with PNGD to the municipal employees in Ziguinchor on how the city should work with private sectors for the operation of the engineered landfill or improved discharge to achieve sound and sustainable waste management. The results of the discussion should be reflected into the PPP plan of Ziguinchor.

One of the potential PPP modality for Ziguinchor is build–operate–transfer (BOT) or build–own–operate–transfer (BOOT). In this modality, a private sector is delegated to design and build infrastructure and to operate and maintain these facilities for a certain period determined by the concession agreement. The private sector is responsible for raising the finance and is entitled to retain all revenues generated from the infrastructure during the concession period. At the end of the period, the facility will be transferred to the municipality without any remuneration of the private entity involved. The following key players need to be involved in this type of PPP modality.

- The national government/municipality: The government initiates the infrastructure project and decides if the BOT (BOOT) model is appropriate to meet its needs. The government contributes to the project in some form, for example, by providing land or updating laws.

The concessionaire: The project sponsors who act as concessionaire create a special purpose entity which is capitalised through their financial contributions.

Lending banks: Most BOT project are funded by commercial debt. The bank will be expected to finance the project on “non-recourse” basis meaning that it has recourse to the special purpose entity and all its assets for the repayment of the debt.

Parties to the project contracts: Because the special purpose entity has only limited workforce, it usually issues a subcontract to a third party to perform its obligations under the concession agreement.

Output 3.6 Waste management operations by the companies at the municipal levels improved

When the activities of the above outputs are unfolded and partly executed, this project will ensure that private companies active in the area of waste management at the municipal level will be offered participatory opportunities to self-assess and improve their waste management operations. The institutional and technical capacities of the existing private and informal sectors shall be strengthened through this output. Consequently, waste will be more properly separated, collected, sorted, stored and disposed throughout the waste management cycle in both cities. A particular effort will be made to train local workers to operate the engineered landfill or improved discharge site in both cities. In designing the waste management scheme and the Terms of Reference for private sectors following the national PPP policies and regulations, existing concepts such as zero emission, pollutor pay principle, 3R, and industrial ecology that are building blocks of inclusive and sustainable industrial development (ISID) will be adopted.

In Tivaouane, PNGD plans to call for an international bidding to operate the landfill after the construction of an engineered landfill is complete. The selected service provider will have the obligation to train national engineers and technicians to operate the landfill according to relevant international standards.

In Ziguinchor, the construction of waste management facilities (except final disposal facility that will not be funded by the GEF fund) will be arranged through an international bidding, whereas the waste collection in the city and the operation of the waste management facility will be delegated to a selected local operator through a national bidding. The waste management operator needs to be familiar with the local conditions and operation experiences.

Furthermore, the project will strengthen the national private sector in waste management by providing training on business management and formulation of associations and clusters followed by investment opportunity matching events. The matching events will be held by inviting the international and regional companies active and expanding their businesses in the area of waste management. Despite a lack of capacity in sound waste management in West Sub-Saharan Africa in general, some regional companies have emerged as regional players in the area of waste management. Some of them are identified as specialized waste management operators which expressed their informal interests in investing their own resources in expanding their businesses to Senegal and neighboring countries. These regional waste management operators will be invited to present their demonstrated business operations and seek business matching and investment opportunities. The final selection of private sectors receiving any project resources must be concluded following the national or UNIDO procurement/concession policy.

This output will also offer a participatory forum to discuss how to further improve the PPP operations to sustain the waste management system in both cities. The discussion results and received feedback shall be incorporated into the National Action Plans of Hazardous Waste Management and technical guidelines that will be drafted in Output 1.

Output 3.7 Open burning controlled to reduce uPOP emissions

This output directly contributes to the reduction in uPOPs emissions by applying BAT/BEP in the categories of waste management/open burning. The uPOPs emission will be reduced by discouraging spontaneous/intentional combustion of the disposed waste at the discharges / dump sites. However, caution needs to be taken as high organic containing waste may cause other public nuisance such as odors and pests. In order to avoid such side effects of reducing combustions, reducing the volume of the waste by separating organic wastes is indispensable to the establishment of sound waste management at the discharge/dump sites. Internationally accepted guidelines such as

the World Bank's "Strategic Planning Guide for Municipal Solid Waste Management" will be referred to in finalizing the standard operating procedures in the two cities.

Improved waste management following BAT/BEP and international standards combined with the application of the sound waste management practices will lead to the reduction in open burning at dumpsites and consequently reduce uPOP emissions, in particular dioxins and furans. The separation of waste will reduce plastics and metals that more likely emit uPOPs in open burning. The hygienic need for the open burning will be determined when the final waste composition is more known after the project intervention. The organic component could be reduced by introducing compost.

The project will will train officers from the Ministry of Environment and Sustainable Development (MEDD and DEEC), municipality employees, engineers and technicians in the sector of waste management to keep recording and analyze data to estimate the reduced amount of uPOPs attributed to the project interventions using the latest UNEP dioxin toolkit as part of their project monitoring activities.

This project will aim at 50% reduction in the currently estimated uPOPs emissions from open burning (0.6 g-TEQ/year in Tivouane and 25 g-TEQ/year in Ziguinchor in worse cases) as a result of the project intervention including improved sound management of wastes and the application of BAT/BEP at the final disposal premises. Therefore the total uPOPs emission reduction goal of this project is 13 g-TEQ/year in both cities. Considering the project cost of USD 2 million of GEF or 10 million of the total cost, the contribution to the global environmental benefit of this project could be 6.5 g-TEQ or 1.3 g-TEQ/USD 1 million. This cost to achieve the global environmental benefit is not as high as those in developed countries where most quick and affordable options to reduce uPOPs emission have been already taken particularly considering the project cost includes all project components.

In finalizing the technical requirement to reduce uPOPs from the open burning/control landfill gas, internationally accepted guidelines such as Key Issue Papers prepared by the International Solid Waste Associations (ISWA).

This output will also give an analysis of the project's impact on the mercury emission as far as the project resources allow.

A.6 Risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and measures that address these risks:

Table 3 Risks, Risk Mitigation Measures and Their Ranking

RISKS	RISK MITIGATION MEASURES	RANKING
Lack of interests to replicate the project approaches and strategies in other cities of the country	The civil society "Association des Maires du Sénégal" will be involved to incorporate local customs and replicate the project's approach through the Association's network. The private sectors whose capacities and business development skills will be strengthened by this project are expected to be a driving force of this replication. The legal framework will be update for private sectors to be able to easily replicate the same business model to other parts of the country.	Low
Weak commitment of counterparts in waste management - political leaders at the national and municipal level, the private sector, and the general public to participate and adopt sound waste management practices and techniques	Project activities are designed in consultation with the national and municipal governments. The municipalities have been chosen on a competitive basis by reviewing their proposals. An emphasis will need to be put on awareness raising and capacity building of national and municipality officers and private sector operators as well as general public throughout the country.	Medium

RISKS	RISK MITIGATION MEASURES	RANKING
Government and municipality officials are either not willing or not available to participate in training activities and law-making/regulatory bodies are not responsive to recommendations	Government officials are closely involved in project planning so that they are aware that new regulations need to be practical and financially feasible at the national and municipality levels. Relevant stakeholders are invited as steering committee members and closely informed of the project's needs on the new regulations. High level government officials will be kept aware of the progress of the project and training activities for their officers.	Low
Lack of enforcement to realize the sound management of municipal and hazardous waste throughout the county	The inspectorate team of the Ministry and other enforcing wings of the government will be invited to the training and consulted before initiating related project activities. Tools and guidelines will be prepared for enforcement.	Medium
Local private companies are not capable of absorbing technical competitiveness needed to emerge as a waste management sector	There are some small companies identified which are willing to invest their own resources to develop sorting and recycling facilities. Those local companies will be invited to the project's training events. If necessary, internationally and regionally active private sectors will be invited as the trainer who would be also expected to play advisory role while seeking investment opportunities in the country. UNIDO's technical resources in the area of business development will be also engaged as needed.	Medium
Lack of financial flow to sustain the waste management operations established by the project	In designing the project's public-private sector partnership modality, a financial mechanism will be an important aspect of the waste management system. Waste management operators will be given a certain level of financial incentives that are proportional to the quality and quantity of the waste management treatment tasks performed by the operators.	Medium
The waste may not be adequately separated as planned due to a lack of proper collection points and cooperative actions by households and business offices	Awareness raising opportunities will be offered to the general public. The collection points will be monitored by personnel responsible for proper use of the waste management facility. Incentives and penalties will be set by the municipalities. The project will ensure the collection vehicles (trucks, tractors, and/or donkeys) put into place should be able to collect wastes in separate categories	Medium

RISKS	RISK MITIGATION MEASURES	RANKING
The co-financing contributions may be delayed causing a delay or unsuccessful deliver of the project results	Multiple potential external resources have been currently contacted to seek co-financing cash resources by UNIDO as well as the city of Ziguinchor. This project strategy will be finalized depending on which and when those co-financing funding opportunities will be made available. For the worst case scenario where no funding is available, the project will proceed by leveraging resources provided by national government and private sectors with minimum hardware facility construction funded by the project.	Medium
(Climate Change Risk) Flood risks at the waste management facilities as well as final disposal locations	The feasibility study prior to the construction of project facilities should consider the historical flood records and changes in the weather in the areas to avoid or mitigate the flood risk.	Low
(Climate Change Risk) Increase in methane emission from dump sites	Reduction in uPOPs emission could be achieved by avoiding spontaneous combustion at the dump sites. However, methane in biogas produced from an organic component at dump sites will increase when combustion is suppressed. Compost facilities are expected to minimize the carbon transformation to methane. The collection of biogas will be also considered as a technical option and the price and benefits will be compared to see if biogas collection would make sense in the two selected cities.	Low

A.7. Coordination with other relevant GEF financed initiatives

The Government of Senegal is currently undertaking the UNIDO/GEF project (GEF ID: 5469) to update the National Implementation Plan of the Stockholm Convention (NIP update) including renewing the inventories of the 12 old POPs and conducting new inventories of ten new POPs (PBDEs, PFOS, Endosulfan, etc.) that have been added to the list of the Stockholm Convention in 2009 and 2011. The updated NIP will have priorities in the area of POPs considering all previous projects executed since the original NIP. The inception and training workshop has been launched and the inventory teams have been constituted. The updated uPOPs inventory using the latest dioxin toolkit will be provided as baseline information for this project.

Another GEF project implemented by UNEP, “Demonstration of a regional approach to environmentally sound management of PCB liquid wastes and transformers and capacitors containing PCBs” (GEF ID: 2770), is currently on-going and is expected to set the environmentally sound management of PCBs by 2015. The project is currently at the stage of designing regulations to properly manage and final disposal of PCBs. It will then improve theregional capacity for ESM of PCB containing equipment. A final disposal plan still needs to be designed. The overall project will contribute to reducing PCBs and strengthening regulation on PCBs and POPs management in general, which will serve as a good baseline for this project. The chemicals management capacity being built for the PCB project will be applied to this project to seek synergies between the two projects.

Senegal has also benefited from a global GEF project implemented by UNDP, “Demonstrating and promoting best techniques and practices for reducing health-care waste to avoid environmental releases of dioxins and mercury” (GEF ID: 1802). The project is completed and the country has built capacities in the field of sound medical wastes management. It installed three pieces of equipment (autoclave) to properly treat medical wastes before final disposal. This knowledge and experience can be applied for this project to further build capacity in the two selected municipalities in this particular field as improving sound management of medical waste will also contribute to reducing POP emissions.

UNIDO is implementing a sub-regional GEF mercury project to improve human health and the environment of artisanal and small scale gold mining (ASGM) communities by reducing mercury emissions and promoting sound chemical management (GEF ID: 4569), which started in 2012 and will end in 2015. The project site located in Kedougou will introduce mercury-free extraction techniques and the organization of communities to access ethical gold markets. In GEF 6, UNIDO will work with the Government of Senegal and five other countries in the region to develop their Minamata Convention Initial Assessment project. Mercury management will be a key component of this project and the experience gained in POPs management promoted by this present proposal will create cross benefits for the country.

B. ADDITIONAL INFORMATION NOT ADDRESSED AT PIF STAGE:

B.1 Describe how the stakeholders will be engaged in project implementation.

The Government of Senegal will lead national activities of the project through the Directorate of Environment and Hazardous Facilities (DEEC) of the Ministry of Environment and Sustainable Development (MEDD). Under the authority of the MEDD, DEEC is in charge of executing the environmental policy of the Government of Senegal, in particular the protection of nature and human being from pollution and nuisance. In this regard, DEEC’s mission includes:

- Prevention and control of pollutions and nuisances ;
- Follow-up of actions lead by several departments and organisms working in the field of environment ;
- Elaboration of legal texts in matter of environment.

Under the UNIDO's contractual agreement, DEEC will support the project by taking up the execution responsibility, participating in national and international meetings, organizing meetings, providing project office, and recruiting officers to lead and follow-up activities and hire experts when needed.

To strengthen the commitment of the Senegalese municipalities that will benefit from the project, a competition was organized during the preparatory phase of the project to only select two cities out of three among Kaolack, Tivaouane and Ziguinchor. Two cities were selected following a pre-established and concerted selection procedure. The selection criteria included among others general information, as well as their waste management plans, municipal capacities, budgets in the past and coming years, capacities of establishing partnerships with the private sector, universities and funding institutions to support the financing of the present project. The proposals of the cities of Ziguinchor and Tivaouane were selected by the evaluation committee, which was confirmed by the field mission of the UNIDO delegation to the three cities in March 2014.

Both IDB and AfDB are directly injecting their funds to the Government of Senegal, and their projects are then executed at the municipality level.

The IDB is currently funding the PNGD initiative led by the Ministry of Planning and Local Government. This initiative aims at developing sound management of municipal wastes in Senegal with a priority phase (2014-2017) for four cities (Dakar, Kaolack, Touba and Tivaouane), where specialized infrastructures will be built (transfer, sorting and final disposal facilities) and trainings will be given to the municipalities employees. AfDB will partly support the costs of training and awareness raising activities related to BAT/BEP in waste management of the project in Ziguinchor and will engage the time of its employees in the participation and follow-up of the activities of the project.

The output-specific co-financing contributions are listed in the table below. The project will continue to seek more co-financing during the project implementation phase to support the construction of specialized infrastructures in Ziguinchor.

Table 4 Output-specific co-financing contributions of key stakeholders

Activities	GEF-funded activities	Co-financing contributions
		1. Government of Senegal: Ministry of Environment and Sustainable Development (MEDD) and Direction of Environment and Classified

		<p>Facilities (DEEC)</p> <p>2. Government of Senegal: Ministry of Planning and Local Governments through PNGD with a fund of the Islamic Development Bank (IDB)</p> <p>3. Municipality of Tivaouane</p> <p>4. Municipality of Ziguinchor</p> <p>5. African Bank of Development Group (AfDB) upon approval of the project</p>
<p>Outcome 1: Legal framework and institutional capacities for sound management of hazardous and other wastes strengthened, enacted, and sustained</p>		
<p>Output 1.1 Existing laws and regulations on the sound management of hazardous and other wastes assessed and the gaps and needs identified</p>	<p>International consultants</p> <p>National project staff and consultants</p> <p>National travel for DEEC and project staff</p> <p>International and National Workshops and training costs</p> <p>Equipment</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Governmental officials work time (1.)</p> <p>National travel by Ministry officials (1.)</p> <p>A national consultant is hired (2.)</p> <p>Organization of national meetings (1.)</p>
<p>Output 1.2 Legal frameworks and institutional capacities to support the environmentally sound management of hazardous and other wastes strengthened</p>	<p>International consultants providing workshops and training on legal framework, ESM, BAT/BEP in sound waste management according to international standards by international consultants</p> <p>National travel for DEEC and project staff</p> <p>National project staff and consultants drafting legal framework and developing institutional tools such as project focal points, POPs team, relevant materials, guidelines and procedures, permits, and/or checklists</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Government officials and employees work time (1.)</p> <p>National travel by Ministry officials (1.)</p> <p>A national consultant is hired (2.)</p> <p>Organization of national meetings (1.)</p> <p>Co-financing partners provide inputs/feedback on the legal framework and institutional tools developed</p> <p>Ministry and its partners officially initiate the process to legislate the legal framework on POPs and waste management (hazardous and other wastes)</p> <p>Co-financing partners officially acquire permits and adopt the BAT/BEP in sound waste management</p>

<p>Output 1.3. Technical guideline/toolkit on BAT/BEP (in a gender sensitive way) on how to conduct sound waste management in the country developed</p>	<p>International consultants National project staff and consultants National travel for DEEC and project staff National meeting and training costs Subcontract to draft the guideline and generate toolkits</p>	<p>Project furnished office with electricity, internet and phone (1.) Government and municipal officials and employees work time (1. and 4.) National travel by Ministry officials (1.) Use of a car with gasoline and a driver (4.) A national consultant is hired (1.) Participation to the support and organization of national meetings (1.) Co-financing partners' time to participate to meetings and in the drafting of the document Travel costs to participate to international meetings (1.) The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)</p>
<p>Output 1.4 National government and municipality officers trained with gender considerations to develop sound waste management complying with the regulation and enforcement requirement</p>	<p>International consultants National project staff and consultants Awareness raising materials printing cost</p>	<p>Project furnished office with electricity, internet and phone (1.) Government and municipal officials and employees work time (1. and 4.) National travel by Ministry officials (1.) Use of a car with gasoline and a driver (4.) A national consultant is hired (1.) Co-financing partners' time to participate in and present their efforts and future plans at the workshops and trainings Organization of national meetings (1.) PNGD: workshop and training costs and awareness raising cost for the city of Tivaouane (2.) The Municipality of Tivaouane makes a commitment to launch into all the processes of planning,</p>

		implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)
Outcome 2: Stakeholders ready to be engaged in properly disposing, sorting and recycling hazardous and other wastes		
Output 2.1 National government officers trained on how to establish sound waste management	<p>International consultants</p> <p>National project staff and consultants</p> <p>National travel for DEEC, and project staff</p> <p>National workshop and training costs related to hazardous wastes management and gender dimension</p> <p>Awareness raising materials printing cost related to hazardous wastes management and gender dimension</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Work time of the Government officials and employees from the municipalities, PNGD and AfDB</p> <p>National travel by Ministry officials (1.)</p> <p>Use of a car with gasoline and a driver (4.)</p> <p>Organization of national meetings (1.)</p> <p>Co-financing partners' time to participate in and present their efforts and future plans at the workshops and trainings</p> <p>The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)</p>
Output 2.2 Municipal government officers trained on how to conduct sound management are provided	<p>International consultants</p> <p>National project staff and consultants</p> <p>National travel for DEEC, municipal employees and project staff</p> <p>National and international workshops and training costs related to hazardous wastes management and gender dimension</p> <p>Awareness raising materials printing cost related to hazardous wastes management and gender dimension</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Work time of the Government officials, employees from the municipalities and project partners</p> <p>National travel by Ministry officials (1.)</p> <p>Use of a car with gasoline and a driver (4.)</p> <p>A national consultant is hired (1.)</p> <p>Co-financing partners' time to participate in and present their efforts and future plans at the workshops and trainings</p>

		<p>Organization of national meetings (1.)</p> <p>PNGD: workshop and training costs and awareness raising cost for the city of Tivaouane (2.)</p> <p>The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)</p>
<p>Output 2.3 Gender-sensitive awareness raising events held and relevant materials on sound waste management activities distributed for the general public</p>	<p>National project staff and consultants</p> <p>National travel for DEEC, and project staff</p> <p>National and international workshops and training costs related to hazardous wastes management and gender dimension</p> <p>Awareness raising materials printing cost related to hazardous wastes management and gender dimension</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Work time of the Government officials, employees from the municipalities and project partners</p> <p>National travel by Ministry officials (1.)</p> <p>Use of a car with gasoline and a driver (4.)</p> <p>Work time of the Government officials, employees from the municipalities and project partners</p> <p>Organization of national meetings (1.)</p> <p>PNGD: workshop and training costs and awareness raising cost for the city of Tivaouane are subcontracted (2.)</p> <p>The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)</p>
<p>Output 2.4 General public trained on reduce, reuse and recycle (3R) and good waste separation practice</p>	<p>National project staff and consultants</p> <p>National travel for DEEC, and project staff</p> <p>National workshops and training costs related to hazardous wastes management and gender dimension</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Work time of the Government officials, employees from the municipalities and project partners</p> <p>National travel by Ministry officials (1.)</p> <p>Use of a car with gasoline and a driver</p>

	<p>Awareness raising materials printing cost related to hazardous wastes management and gender dimension</p>	<p>(4.)</p> <p>Co-financing partners' time to participate in and present their efforts and future plans at the workshops and trainings</p> <p>Organization of national meetings (1.)</p> <p>The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)</p>
<p>Output 2.5 Business operations in private sectors working on sound waste management improved</p>	<p>National project staff and consultants</p> <p>National travel for DEEC, and project staff</p> <p>National workshop and training costs related to hazardous wastes management and gender dimension</p> <p>Awareness raising materials printing cost related to hazardous wastes management and gender dimension</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Work time of the Government officials, employees from the municipalities and project partners</p> <p>National travel by Ministry officials (1.)</p> <p>Use of a car with gasoline and a driver (4.)</p> <p>Co-financing partners' time to participate in and present their efforts and future plans at the workshops and trainings</p> <p>Organization of national meetings (1.)</p> <p>The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)</p>
<p>Outcome 3: Sound management operations of hazardous and other wastes improved</p>		
<p>Output 3.1 Hazardous Waste Management Action Plans reviewed and formulated at municipality levels</p>	<p>International consultants</p> <p>National project staff and consultants</p> <p>Costs related to the formulation of a sound waste management of hazardous wastes and POPs emission reporting and also</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Work time of the Government officials, employees from the municipalities and project partners</p> <p>National travel by Ministry officials</p>

	<p>considering the gender dimension</p> <p>National workshops and training costs related to the formulation and use of an hazardous wastes management plan considering also the gender dimension</p> <p>Equipment to perform inventories/analysis</p>	<p>(1.)</p> <p>Use of a car with gasoline and a driver (4.)</p> <p>Co-financing partners' time to participate in and present their efforts and future plans at the workshops and trainings</p> <p>Organization of national meetings (1.)</p> <p>PNGD will support the costs of the formulation of a sustainable municipal solid waste management plan at the municipality level for the cities of Tivaouane and Ziguinchor.(2.)</p> <p>The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)</p>
<p>Output 3.2 Facilities established and used to properly collect hazardous and other wastes within the municipalities</p>	<p>International consultants</p> <p>National project staff and consultants</p> <p>Purchase of small protecting equipment</p> <p>Performance of National training workshop on BAT/BEP in waste collection in collaboration with specialists from the private sector, especially hazardous wastes for the municipal employees, wastes scavengers and national private companies also considering the gender dimension</p> <p>Subcontract with private companies</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Work time of the Government officials, employees from the municipalities and project partners</p> <p>National travel by Ministry officials (1.)</p> <p>Use of a car with gasoline and a driver (4.)</p> <p>Co-financing partners' time to participate in and present their efforts and future plans at the workshops and trainings</p> <p>Organization of national meetings (1.)</p> <p>In Tivaouane, PNGD will purchase collection equipments for municipalities (2.)</p> <p>The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community</p>

		frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)
Output 3.3 Waste interim storage and sorting facilities established and used by the stakeholders of the selected municipalities	<p>International consultants</p> <p>National project staff and consultants</p> <p>Purchase of some equipment to develop proper storage and sorting facilities in the municipalities especially for hazardous wastes</p> <p>Performance of national training workshop in collaboration with specialists of the private sector on BAT/BEP in waste storage and sorting, especially hazardous wastes, for the municipal employees, wastes scavengers and national private companies also considering the gender dimension</p> <p>Subcontract with private companies</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Work time of the Government officials, employees from the municipalities and project partners</p> <p>National travel by Ministry officials (1.)</p> <p>Use of a car with gasoline and a driver (4.)</p> <p>Organization of national meetings (1.)</p> <p>Co-financing partners' time to participate in and present their efforts and future plans at the workshops and trainings</p> <p>In Tivaouane, PNGD will build waste interim storage and sorting facilities</p> <p>The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)</p>
Output 3.4 Recycling facilities established and used within the municipalities	<p>International consultants</p> <p>National project staff</p> <p>Purchase of some equipment to develop proper recycling facilities in the municipalities, especially for hazardous wastes (battery, e-wastes, etc.)</p> <p>Performance of a training workshop in collaboration with specialists of the private sector on BAT/BEP in waste storage and sorting, especially hazardous wastes, for the municipal employees, wastes scavengers and national private companies also considering the gender dimension</p> <p>Subcontract with private companies</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Work time of the Government officials, employees from the municipalities and project partners</p> <p>National travel by Ministry officials (1.)</p> <p>Use of a car with gasoline and a driver (4.)</p> <p>Organization of national meetings (1.)</p> <p>Co-financing partners' time to participate in and present their efforts and future plans at the workshops and trainings</p> <p>In both Tivaouane and Ziguinchor, PNGD will perform studies providing informations on municipal solid waste quantity and quality (2.)</p>

		The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)
Output 3.5 The management of final disposal facilities reinforced for hazardous and other wastes in the municipalities	<p>International consultants National project staff</p> <p>Purchase of protecting material to work in the landfill and to secure the actual landfill</p> <p>Performance of National training and workshops in collaboration with specialists of the private sector on BAT/BEP in final disposal facilities, especially for hazardous wastes, for the municipal employees, wastes scavengers and national private companies also considering the gender dimension</p> <p>Subcontract with private companies</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Work time of the Government officials, employees from the municipalities and project partners</p> <p>National travel by Ministry officials (1.)</p> <p>Use of a car with gasoline and a driver (4.)</p> <p>Organization of national meetings (1.)</p> <p>Co-financing partners' time to participate in and present their efforts and future plans at the workshops and trainings</p> <p>In Tivaouane, PNGD will support the costs of an engineered landfill (2.)</p> <p>In Ziguinchor, PNGD will conduct a multicriteria analysis to select a proper site to build a controlled or engineered landfill (2.)</p> <p>The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)</p>
Output 3.6 Waste management operations by the companies at the municipal levels improved	<p>International consultants National project staff and consultants</p> <p>Costs related to the training of national professional working in waste management to develop or strengthen their business sustainability and competitiveness</p> <p>Subcontract with private</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Work time of the Government officials, employees from the municipalities and project partners</p> <p>National travel by Ministry officials (1.)</p> <p>Use of a car with gasoline and a driver</p>

	companies	<p>(4.)</p> <p>Organization of national meetings (1.)</p> <p>Co-financing partners' time to participate in and present their efforts and future plans at the workshops and trainings</p> <p>The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)</p>
Output 3.7 Open burning controlled to reduce uPOP emissions	<p>International consultants</p> <p>National project staff and consultants</p> <p>Subcontract with private companies</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Work time of the Government officials, employees from the municipalities and project partners</p> <p>National travel by Ministry officials (1.)</p> <p>Use of a car with gasoline and a driver (4.)</p> <p>Organization of national meetings (1.)</p> <p>Co-financing partners' time to participate in and present their efforts and future plans at the workshops and trainings</p> <p>The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)</p>
Outcome 4: Project progress properly monitored and evaluated		
Output 4.1 Project results monitored and reported including the gender dimension	<p>National project staff and consultants</p> <p>Steering Committee meeting costs</p>	<p>Project furnished office with electricity, internet and phone (1.)</p> <p>Co-financing partners provide their inputs/feedback to calculate the indicators and draft project monitoring report</p> <p>National travel by Ministry officials</p>

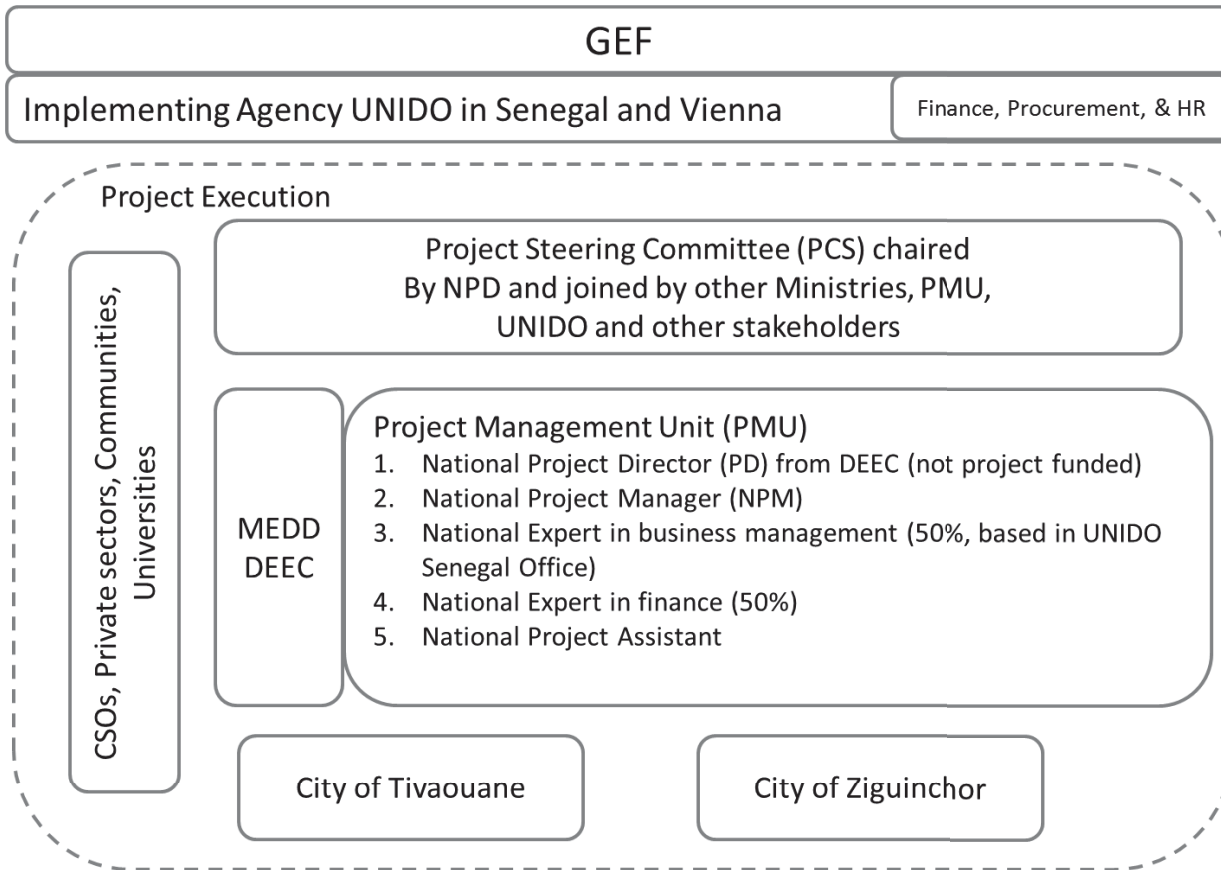
		<p>(1.) Use of a car with gasoline and a driver (4.) Organization of national meetings (1.) Co-financing partners attend the Steering Committee meetings and contribute to the proper execution of the project The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)</p>
Output 4.2 Project evaluated meeting the GEF's evaluation criteria	<p>International consultants for evaluation National project staff and consultants</p>	<p>Project furnished office with electricity, internet and phone (1.) National travel by Ministry officials (1.) Use of a car with gasoline and a driver (4.) Organization of national meetings (1.) Co-financing partners accept the evaluators and project staff at their premises and participate in the interview/feedback process Co-financing partners review the evaluation reports and provide comments/feedback The Municipality of Tivaouane makes a commitment to launch into all the processes of planning, implementation and follow-up evaluation of strategies and required actions and to assure the effective implementation of the community frames of mobilization, support of the process, the civic participation and the integration of all the actors (3.)</p>
Project Management	<p>National project staff and consultants National travel for DEEC and project staff National workshops and meeting</p>	<p>Project furnished office with electricity, internet and phone (1.) Government officials work time (1.) National travel by Ministry officials (1.)</p>

	costs Office supplies and communication costs	Communication costs
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Project Execution Modality

The Direction of Environment and Hazardous Facilities (DEEC) of the Ministry of Environment and Sustainable Development (MEDD) is designated as the National Execution Agency (NEA). UNIDO will exchange a contractual agreement with the Government of Senegal for NEA to execute the project following the execution modality as described below.

Fig. 4. Project Management Structure



The project will begin with the establishment of the Project Management Unit (PMU), appointment of the members of the Steering Committee, and the project launching through an Inception Workshop and convening of the first Project Steering Committee (PSC) meeting.

Project Steering Committee (PSC)

A Project Steering Committee (PSC) will be established by NEA with the members officially nominated in writing. PSC will act as the coordinating committee for the execution of this project. PSC will be responsible for setting the project strategy, making recommendations to UNIDO, reviewing/updating the work plan, and monitoring/endorsing the delivered results. Relevant ministries, representatives working in the field of waste management, representatives from hazardous wastes management companies, and NGOs could be also invited as PSC members. PSC will decide on the frequency of the meetings and its working procedures, and will hold its

sessions throughout the execution as needed. PSC will oversee the project-related work of the PMU and co-financing partners. All decisions of the committee, such as respective responsibilities, timelines and the budget in the form of its recommendations to UNIDO will be clearly communicated to those concerned in writing. Some activities will be executed through subcontracts. Terms of Reference, submitted tenders, contracts and Memorandums of Understanding (between the government and private sectors) will be reviewed and evaluated by PSC as agreed in the UNIDO's contractual agreement. Any major changes in the project plans or programmes deviating from this project document (CEO Endorsement document) will require review and endorsement by PSC following the procedures described in GEF PROJECT AND PROGRAMMATIC APPROACH CYCLES, GEF/C.39/Inf. 3. PSC members will facilitate the execution of project activities in their respective organizations and capacities, ensure that cooperative activities are executed in a timely manner and facilitate the integration of project-inspired activities into existing programmes and practices at the national and municipal levels. The representatives of co-financing organizations not represented in PSC will be invited to attend the PSC meetings as needed.

Project Management Unit (PMU)

NEA will set up the Project Management Unit (PMU) which is responsible for the overall coordination of the project and day-to-day operations and monitoring activities including updating indicators to measure progress and addressing potential barriers in advance to meet the milestones of the project on schedule. PMU consists of National Project Director, National Project Manager, National Expert in Business Management, National Expert in Finance and Project Assistant. NEA will be responsible for the recruitment process and arrange the project management setting including office spaces except National Expert in Business Management. UNIDO will directly recruit National Expert in Business Management who will be based in the UNIDO's field office in Dakar. The selection procedure of all project members of PMU will be made by a joint decision by the NEA and UNIDO.

The National Project Director (NPD) will be appointed by NEA without remuneration from the project. NPD represents the project in DEEC and the government of Senegal and ensures the smooth execution of the project at a high political level. NPD chairs PSC and provides institutional support and strategic direction of the project.

The National Project Manager (NPM) of NEA will be recruited, on a full-time basis, who reports to NPD, PSC and UNIDO through project quarterly monitoring reports and other means of communication. NPM will assume the overall responsibility for the successful execution of project activities and the achievement of planned project outputs. NPM as an expert in waste management will also provide technical advice and inputs to the project. NPM will coordinate the day-to-day management of the project and will ensure adherence to the work plan, which will be finalized during the first phase of the project execution. NPM's main responsibilities will include advising on and monitoring of all technical aspects of the project execution as well as the financial disbursement over the project execution. NPM will work in close cooperation with GEF Operational Focal Point, POPs Focal Point and UNIDO's project manager. NPM will be responsible for facilitating UNIDO's project monitoring duties as described in the M&E section, which includes drafting biannual monitoring reports in the UNIDO's format and annual monitoring and project implementation report in the GEF formats, organizing PSC and other meetings, making logistical arrangement for field trips, and confirming the quality of the project's outputs.

The National Expert in Finance will be recruited on a part-time basis (50%) by NEA and based in the NEA's project office. S/he provides advice, critical feedback and support on the technical aspects of the project to PSC and NPM, as technical expert in finance for business management. S/he will work in close consultation with key stakeholders i.e. ministries, government commissions, major private sector associations and NGOs relevant to

the project and provide strategic guidance in her/his areas of expertise. S/he will ensure that the project will propose proper financial mechanism to initiate and sustain the sound waste management operations at the municipal level. S/he will prepare technical documents on the financial mechanism that will be referred to in establishing the relevant legal framework and promoting corporate investment decisions. S/he will design the financial flows for the municipality office and service providers and organize and/or provide, with international technical expert assistance, training and guidance to the key stakeholders. S/he will be responsible for verifying the work for the various project activities.

The National Expert in Business Management will be recruited on a part-time basis (50%) by UNIDO and will be based in UNIDO's offices in Dakar. S/he should have experience in waste management operations or related business operations in private sector with an advanced degree in a related field. S/he will work in close consultation with key stakeholders i.e. ministries, government commissions, major private sector associations and NGOs relevant to the project and provide strategic guidance in her/his areas of expertise. S/he will ensure that highly technical documents are translated in a plain language understandable for the decision makers, stakeholders, and the broader public. S/he will propose candidates for key positions in the municipalities and potential private sector operators and prepare the terms of references for their positions. S/he will organize and/or provide, with international technical expert assistance, training and guidance to the private sectors on business plans, adherence to the legal framework and technical guidelines on waste management operations. S/he will be responsible for verifying the work, ensuring the technical validity of their work and products. S/he will compile the project results and for producing (with or without international technical expert assistance) the final reports jointly with NPM. S/he will closely cooperate with the international expert in his or her field of expertise and provide the international expert with necessary local support.

Project Assistant will support project activities including daily coordination and stakeholder consultation. S/he will participate in day-to-day activities related to project execution by providing assistance to NPM. S/he will be responsible for daily communication with project partners and assigned project tasks (such as organizing workshops, meetings, trainings, preparation of minutes of the meetings and background documents). S/he will also participate in project team and PSC meetings, and maintain day-to-day records of project execution.

The Job Descriptions for the above project funded positions are attached in the Annex.

B.2 Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF):

The socio-economic benefits at the national level is a sociopolitical momentum sustained to further improve the waste management operations with higher expectations and norms on the quality of the delivered governmental services in the area of waste management. The related regulations updated and financial flows (from waste generators through public organizations to waste management operators) established by this project will serve as a basis to retain the social momentum. This momentum then will encourage the private sector active in the area of waste management to prepare for the business plan and reduce socio-economic barriers to mid to long term investment decisions. Collectively, the green market in the area of waste management will grow as a result of this enabling environment generated by this project (http://www.un.org/esa/dsd/dsd_aofw_ni/ni_pdfs/NationalReports/germany/waste.pdf), leading to more economic and social values generated in the country supported by the enhanced competitiveness of the Senegalese companies in the region.

At the sector level, this project will provide an example of UNIDO's Inclusive and Sustainable Industrial Development (ISID) approach. UNIDO is promoting inclusive and sustainable industrial development (ISID) in which the following objectives are set (1) every country achieves a higher level of industrialization in their

economies, and benefits from the globalization of markets for industrial goods and services; (2) No one is left behind in benefiting from industrial growth, and prosperity is shared among women and men in all countries; (3) Broader economic and social growth is supported within an environmentally sustainable framework; (4) Unique knowledge and resources are combined of all relevant development actors to maximize the development impact of ISID. This project will aim at delivering UNIDO's services to help the country achieve ISID.

At the local levels in both cities, the socio-economic benefits of the project centers on the improved sanitation conditions in daily life, formalized private sector operations throughout the waste management process, improved workers' safety involved in the waste management operations, segregated waste flows, and reduced emissions of toxic pollutants to air, water, and land. With improved sanitation conditions that are visible to municipal officers and local residents, the mayors' offices of the selected municipalities will have means and resources to self-sustain the daily waste management operations. The general public will cooperate to segregate the wastes at the household and office levels. All of these will be conducive to the increase in social capital in the area of public sanitation of the two municipalities. This is a critical step to decouple waste generation from economic growth at the local level.

The improvement in each step of the municipal and hazardous waste will consequently lead to the reduced emissions of uPOPs at the final disposal premises. This will be mainly achieved by (1) removal of metals and plastics that function as catalysis causing the formation of uPOPs in spontaneous combustion and (2) better controlled final disposal facilities with less frequency of open burning of waste with the introduction of compost facilities and frequent top soil coverage. This will eventually contribute to diminished impact on human health and the environment at the global level.

This project will develop new habits and behaviors regarding gender awareness and considerations through all workshops and tenders (e.g. number of expected female workers for the project task to be proposed by bidders) during the project implementation phase following the UNIDO's policy on Gender Equality and the Empowerment of Women. The project will also drive the change in formats and reporting requirements needed for gender analysis. The use of such reporting formats and requirements is expected to spill over to other international and national projects in the country. With the new habits and repeated attentions to the gender mainstreaming requirement during the project, it is expected that the project could contribute to building bottom-up social momentum on gender mainstreaming. Some women participating in awareness raising events and/or training workshops could become change agents to disseminate the importance of women's contribution to the waste management. In particular, project activities along the waste stream from collection to sorting will benefit from cooperative behaviors of women who are often likely responsible for waste disposal in their households. Such cooperative waste conscious behaviors could not only help improve the total waste management quality but also hygienic status in their households.

This project will aim at 50% reduction in the currently estimated uPOPs emissions from open burning (0.6 g-TEQ/year in Tivouane and 25 g-TEQ/year in Ziguinchor in worse cases) as a result of the project intervention including improved sound management of wastes and the application of BAT/BEP at the final disposal premises. Therefore the total uPOPs emission reduction goal of this project is 13 g-TEQ/year in both cities. Considering the project cost of USD 2 million of GEF or 10 million of the total cost, the contribution to the global environmental benefit of this project could be 6.5 g-TEQ or 1.3 g-TEQ/USD 1 million.

B.3. Explain how cost-effectiveness is reflected in the project design:

The total uPOPs emission reduction goal of this project is 13 g-TEQ/year in both cities. Considering the project cost of USD 2 million of GEF or 10 million of the total cost, the contribution to the global environmental benefit of this project could be 6.5 g-TEQ or 1.3 g-TEQ/USD 1 million including all project activities such as capacity development and regulation updates. This level is not as high as that compared to the end-of-pipe solutions applied to waste incinerators in developed countries (ref such as <http://www.mfe.govt.nz/publications/hazardous/dioxin-reduction-cost-effectiveness-aug01.pdf>).

UNIDO has several on-going projects including other GEF projects including NIP update. Although the PMU will be needed specifically for this project, some of the project resources will be shared among all the on-going projects that will be coordinated by the UNIDO's field office in Senegal. This will bring down some administration cost while encouraging to share relevant capacities among the on-going projects. Under the UNIDO's contractual agreement,

UNIDO will transfer the project operational and monitoring responsibilities to NEA and the UNIDO's field office, which will also improve the overall cost-effectiveness due to the proximity to the project field and personnel.

UNIDO has explored with all stakeholders already working on the establishment of sound waste management in Senegal including stable financial partners that are internationally recognized and reliable financial institutions such as European Union, PNGD with a fund from IDB, AfDB and JICA to coordinate actions and avoid overlapping to optimize the use of international aid resources.

Senegal has been building technical and institutional capacities in the area of waste management as a result of the ongoing project such as PNGD. Therefore the engagement of national consultants or local companies representing international companies will be considered first in seeking consultants and service providers for the technically challenging tasks such as establishment of waste recycling facilities and final disposal facilities.

C. DESCRIBE THE BUDGETED M & E PLAN:

Monitoring of project activities and evaluation of their results in the project will serve a dual function. First, it will facilitate tracking execution progress toward the outputs and outcome. They will also facilitate learning, feedback, and knowledge sharing on results and lessons among the primary stakeholders to improve knowledge and performance.

According to the Monitoring and Evaluation policy of the GEF and UNIDO, follow-up studies including Country Portfolio Evaluations and Thematic Evaluations can be initiated and conducted. All project partners and contractors are obliged to (i) make available studies, reports and other documentation related to the project and (ii) facilitate interviews with staff involved in the project activities.

Below is an estimated budget for M&E:

M&E activity	Responsible Parties	Budget US\$	Co-financing	Time frame
Measure impact indicators on a bi-annual basis	DEEC, Project Unit, UNIDO	26,500	120,000	Biannually
Prepare Annual Project Reports	Project Unit, UNIDO	26,500	110,000	Annually
Hold annual Project Steering Committee meetings (the cost to be charged to PMC)	DEEC, Project Unit	0	0	Annually
Carry out mid-term evaluation	Evaluation Consultant, UNIDO	20,000	110,000	30 th month
Carry out final external evaluation	Evaluation Consultant, UNIDO	30,000	110,000	60 th month
Complete the Terminal Report	UNIDO	3,000	22,000	66 nd month
Total Budget		106,000	472,000	

Monitoring and evaluation of the project will be conducted in accordance with established UNIDO and GEF procedures by the Project Management Unit (PMU) as well as UNIDO's field office in Senegal and its Headquarters in Austria. The Project Logical Framework provides performance and impact indicators for project execution along with their corresponding means of verification.

Prior Obligations and Prerequisites

GEF grant assistance will be provided subject to UNIDO being satisfied that obligations and pre-requisites listed below have been fulfilled or are likely to be fulfilled. When fulfillment of one or more of these prerequisites fails to materialize, UNIDO may, at its discretion, either suspend or terminate its assistance.

- Prior to project effectiveness, financing by co-financiers other than the GEF and UNIDO specified in the CEO Endorsement project document and the respective commitment letters is to be made available to the Project,
- During project implementation, progress reports and Project Implementation Review (PIR) reports should be prepared as per monitoring plan of the CEO Endorsement project document.

Legal Context

The Government of the Republic of Senegal agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed on 4 July 1987 and entered into force on 31 July 1991.



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

- A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT(S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the Operational Focal Point endorsement letter(s) with this form. For SGP, use this OPF endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Mr. Ndiaye Cheikh Sylla	Political/Operational Focal Point	MINISTRY OF ENVIRONMENT	01/04/2012

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for CEO endorsement/approval of project.

Agency Coordinator, Agency Name	Signature	Date (Month, day, year)	Project Contact Person	Telephone	Email Address
Mr. Philippe R. Scholtès, Managing Director, Programme Development and Technical Cooperation Division - PTC, UNIDO GEF Focal Point		10-6-2014	Fukuya IINO 	+43-1-26026-5218	f.iino@unido.org

Annex list

- Annex A: Project results framework**
- Annex B: Responses to project reviews**
- Annex C: Status of implementation of project preparation activities and the use of funds**
- Annex D: Calendar of expected reflows (if non-grant instrument is used)**
- Annex E: GEF Budget**
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 - Annex J.1 Directorate of Environment and Hazardous Facilities (DEEC)
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 - Annex J.5 Rural Community of Ziguinchor
 - Annex J.6 ONG PACTE for Ziguinchor
 - Annex J.7 African Bank of Development Group (AfDB) for Ziguinchor
 - Annex J.8 UNIDO letter and request to the AfDB and answer of AfDB (funds request)
 - Annex J.9 European Union (EU) funds request for Ziguinchor done by the municipality and EU answer
 - Annex J.10 Ministry of Planning and Local Governments for the "Programme National de Gestion des Déchets" (PNGD) and its translation in English
- Annex K: Order of the Minister for the creation of the project Steering Committee**
- Annex L: Letter of the Director of Environment and Hazardous Facilities to each municipality and Terms of Reference for the selection of municipalities**
- Annex M: Proposal of the municipality of Kaolack for the sound waste management**
- Annex N: Proposal of the municipality of Tivaouane for the sound waste management**
- Annex O: Proposal of the municipality of Ziguinchor for the sound waste management**
- Annex P: Report of the Steering Committee on the municipalities' selection during the final workshop and list of attendance**

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

Interventions	Objectively Verifiable Indicators (Target, TBD: to be determined with more information collected)	Means for Verification	Assumptions	Mitigation Measures
<p>Objective: To reduce POPs releases from hazardous and municipal wastes by strengthening technical and institutional capacities of a group of private sectors which can sustain and replicate the best available technique and best environmental practice (BAT/BEP) demonstrated in the project within the context of the implementation of the National Implementation Plan (NIP) under the Stockholm Convention</p>	<ul style="list-style-type: none"> · Number of companies adopting best practices (4) - Numero f jobs created (male/female) (16/4) · Number of general public served by the sound waste management systems established by the project (populations of the two selected municipalities) · Estimated amount of unintentional POPs reduced - Materials recycled (TBD) - Commercial value of materials recycled (TBD) 	<ul style="list-style-type: none"> · Record of waste properly handled · Copy of contracts for workers · Transaction record of materials recycled or sold to recyclers · Progress reports with estimated unintentional POPs estimation · Comments of people served by the sound waste management systems · Budget committed and disbursed by the national and municipal governments and co-financing partners · Evaluation report 	<ul style="list-style-type: none"> · All counterparts in waste management, national government, local governments, private operators and general public are committed and efficient in absorbing sound waste management practices and techniques for the replication 	<ul style="list-style-type: none"> · Project activities are designed in consultation with the national and municipal governments, and potential private operators and investors from the beginning including the preparatory phase with a competition between local governments (only two municipal cities out of three will be selected based on their proposals and commitment of the mayors)
<p>Outcome 1: Legal framework and institutional capacities for sound management of hazardous and other wastes strengthened, enacted, and sustained</p>	<ul style="list-style-type: none"> · Number of regulatory framework promoting the sound waste management (environmental policies, strategies, laws) approved/enacted (3) · Number of institutions capable of supporting and sustaining the waste management systems and operations (3) 	<ul style="list-style-type: none"> · Copies of regulations approved/enacted · Training workshop reports · Technical guidelines · Meeting minutes of Steering Committee · Budget and personnel allocated to strengthen institutional capacities 	<ul style="list-style-type: none"> · Appropriate regulations and institutions that are agreed, sustainably implemented and enforced will efficiently support the sound management of municipal and hazardous waste 	<ul style="list-style-type: none"> · A national government officer will be appointed as National Project Director who will monitor progress and leverage his/her political commitment in the government to enact legal and regulatory measures supporting sound waste management
<p>Output 1.1 Existing laws and regulations on the sound management of hazardous and other wastes assessed and the gaps and needs identified</p>	<ul style="list-style-type: none"> · Number of existing regulations identified on environmentally sound management of municipal and hazardous waste (2) · A report on the gaps between the Stockholm Convention requirements and existing legal/regulatory framework and institution to enforce it are identified 	<ul style="list-style-type: none"> · Texts of existing laws and regulations · Gap assessment report 	<ul style="list-style-type: none"> · National government, municipalities, and other stakeholders are willing to share their information on the existing laws and regulations 	<ul style="list-style-type: none"> · Stakeholders will be consulted in the assessment process

<p>· A report on the gaps in the national regulation and institutions to enforce it and achieve sound waste management in the country are identified</p>	<ul style="list-style-type: none"> · Gap assessment report 	<ul style="list-style-type: none"> · Relevant stakeholders are invited as steering committee members and closely informed of the project's needs on the new regulations · Government officials are closely involved in project planning so that the new regulations are practical and meeting the needs at the national and communal levels
<p>Output 1.2 Legal frameworks and institutional capacities to support the environmentally sound management of hazardous and other wastes strengthened</p>	<ul style="list-style-type: none"> · Number of legal frameworks newly approved and enacted (1) · Number of new guidelines and tools adopted for potential waste management operators (2) 	<ul style="list-style-type: none"> · Government officials are willing and available to participate in training activities · Law-making and regulatory bodies are responsive to recommendations
<p>Output 1.3. Technical guideline/toolkit on BAT/BEP (in a gender sensitive way) on how to conduct sound waste management in the country developed</p>	<ul style="list-style-type: none"> · A technical guideline/toolkit is published on how to build and sustainably operate sound waste management in the country (1) · Number of meetings and consultations with all stakeholders including private sector and key stakeholders (3) 	<ul style="list-style-type: none"> · Trainings/meetings are conducted to raise awareness on the usefulness of such a guideline and how to use it · A team of national/international experts is contracted to help design the document in consultation with all major stakeholders · National government, municipalities, private sectors, NGOs, and other stakeholders with gender perspectives understand the importance of having a guidelines and are willing to join the drafting process
<p>Output 1.4 National government and municipality officers trained with gender considerations to develop sound waste management complying with the regulation and enforcement requirement</p>	<ul style="list-style-type: none"> · Number of trainings (3) · Number of participants/trainees (male/female) (80/20) 	<ul style="list-style-type: none"> · Training programs, materials, and presentations · National government and municipalities are committed to executing sound waste management taking into account the concerns of the population and private companies · A competition was established to strengthen the engagement of municipalities: two cities among three with more robust proposals are chosen to select cities with more commitment both from communal organizations and local residents

<p>Outcome 2: Stakeholders ready to be engaged in properly disposing, sorting and recycling hazardous and other wastes</p>	<ul style="list-style-type: none"> · Number of companies adopting best practices on sound waste management and final disposal options (3) · Number of private sectors which participated in the training (5) · Number of participants/trainees (male/female) (40/10) 	<ul style="list-style-type: none"> · Operators' records on collection, sorting, and recycling following the technical guidelines · Training reports with participant lists (male/female) 	<ul style="list-style-type: none"> · All stakeholders (National, municipalities, private sector and general public) understand their roles in collecting, sorting and recycling wastes for smooth operations · Each stakeholder receives proper training on their role (national, municipalities, private sectors and general public) and can financially and technically operate the waste management system
<p>Output 2.1 National government officers trained on how to establish sound waste management</p>	<ul style="list-style-type: none"> · Number of training (1) · Number of participants/trainees (male/female) (24/6) 	<ul style="list-style-type: none"> · Training reports with participant lists (male/female) 	<ul style="list-style-type: none"> · National government officers understand how and why executing sound waste management taking into account gender considerations is important and committed to the execution · Trainers will be recruited who are familiarized with locally adequate sound waste management and gender issues to provide the training and awareness raising operations
<p>Output 2.2 Municipal government officers trained on how to conduct sound management are provided</p>	<ul style="list-style-type: none"> · Number of training (2) · Number of participants/trainees (male/female) (32/8) 	<ul style="list-style-type: none"> · Training reports with participant lists (male/female) 	<ul style="list-style-type: none"> · Trainers will be recruited who are familiarized with locally adequate sound waste management and gender issues to provide the training and awareness raising operations · Municipal officers understand how and why executing sound waste management taking into account gender considerations is important and committed to the execution.
<p>Output 2.3 Gender-sensitive awareness raising events held and relevant materials on sound waste management activities distributed for the general public</p>	<ul style="list-style-type: none"> · Number of awareness raising events (3) · Number of participants/trainees (male/female) (60/40) 	<ul style="list-style-type: none"> · Copies of advocacy material and movies on sound waste management in the country diffused to the population taking into account the gender dimension 	<ul style="list-style-type: none"> · The project will develop materials that are comprehensive to general public using signs and figures · The project will reach them through media coverage: brochure, TV, and film · The general public is interested in learning more on the impact of their behaviors towards waste management
<p>Output 2.4 General public trained on reduce, reuse and recycle (3R) and good waste separation practice</p>	<ul style="list-style-type: none"> · Number of awareness raising events (2) · Number of participants/trainees (male/female) (120/80) 	<ul style="list-style-type: none"> · Training reports with participant lists (male/female) · Copies of training materials 	<ul style="list-style-type: none"> · The project will involve respected local community leaders to convey the information and perform trainings to the population · The general public is willing to cooperate, and understand and accept to be trained for improving waste management

<p>Output 2.5 Business operations in private sectors working on sound waste management improved</p>	<ul style="list-style-type: none"> · Number of trainings(2) · Number of private sectors willing to invest their own resources for sound waste management (4) · Amount of wastes collected, sorted and recycled (tons) (TBD) · Commercial value of materials recycled (USD) (TBD) · Number of new business (2) · Number of jobs created (male/female) (16/4) · Amount of incremental investment (USD) (TBD) · Estimated amount of unintentional POPs reduced 	<ul style="list-style-type: none"> · Training reports with participant lists (male/female) · Comments given by private sectors · Operators records on collection, sorting, and recycling · Transaction record of materials recycled or sold to recyclers · Copy of contracts for workers · Project progress reports · Copies of Waste Management Plans 	<ul style="list-style-type: none"> · Potential private companies are willing to improve their business efficiencies at their own cost by participating in the training to deliver services more efficiently and competitively · Municipal organizations and other stakeholders are willing to adopt the new business practices and establish financial mechanisms 	<ul style="list-style-type: none"> · The project will involve UNIDO's business development resources to strengthen business capacity and competitiveness of local private companies · Municipalities have submitted their proposals to be chosen for the project and will be involved from the project design phase as well as invited to the project steering committee
<p>Outcome 3: Sound management operations of hazardous and other wastes improved</p>	<ul style="list-style-type: none"> · Number of Waste Management Plans formulated and agreed at the municipality levels (2) 	<ul style="list-style-type: none"> · Copies of Waste Management Plans at municipality levels 	<ul style="list-style-type: none"> · Key stakeholders (including the ones with gender perspectives) and private sectors will be consulted to reflect the local capacities, resources, and requirement. 	
<p>Output 3.1 Hazardous Waste Management Action Plans reviewed and formulated at municipality levels</p>	<ul style="list-style-type: none"> · Total amount of hazardous and other wastes collected (TBD) · Total budget allocated to waste collection by national and municipal governments and operators (TBD) · Revenues generated from collection (TBD) 	<ul style="list-style-type: none"> · Operators' records on collection · Contracts issued to operators · Project monitoring report · Interviews with operators · Financial audit report, if relevant 	<ul style="list-style-type: none"> · All waste is disposed in separate categories so that the collection can be done easily with minimum separation · Municipal governments are committed to imposing penalties on disposers who do not follow the guidelines · The project will support the establishment of a sustainable mechanism for the company to sustain waste collection 	
<p>Output 3.2 Facilities established and used to properly collect hazardous and other wastes within the municipalities</p>	<ul style="list-style-type: none"> · Total amount of hazardous and other wastes sorted (TBD) 	<ul style="list-style-type: none"> · Operators' records on sorting · Contracts issued to operators 	<ul style="list-style-type: none"> · Some private companies invest for sorting and interim storage facilities for hazardous and other wastes · Financial mechanisms function with revenues generated and some funds reallocated to maintain the facilities 	<ul style="list-style-type: none"> · Potential private companies will be kept informed of the project updates and major decisions through reports, direct communication (appointments, e-mails and phone calls)
<p>Output 3.3 Waste interim storage and sorting facilities established and used by the stakeholders of the selected municipalities</p>				

	<ul style="list-style-type: none"> · Total budget allocated to waste sorting by national and municipal governments and operators (TBD) · Revenues generated (TBD) 	<ul style="list-style-type: none"> · Project monitoring report · Interviews with operators · Financial audit report, if relevant 	<ul style="list-style-type: none"> · One private company per municipality will be selected to operate the waste management facilities (engineered landfill, sorting and recycling centre) through bidding
<p>Output 3.4 Recycling facilities established and used within the municipalities</p>	<ul style="list-style-type: none"> · Total amount of hazardous and other wastes recycled (TBD) · Total budget allocated to waste recycling by national and municipal governments and operators (TBD) · Revenues generated (TBD) 	<ul style="list-style-type: none"> · Operators' records on recycling · Contracts issued to operators · Project monitoring report · Interviews with operators · Financial audit report, if relevant 	<ul style="list-style-type: none"> · Potential private companies will be kept informed of the project updates and major decisions through reports, direct communication (appointments, e-mails and phone calls) · Some private companies invest for recycling facilities and recycled materials could be sold to recover some values · Financial mechanisms function with revenues generated and some funds reallocated to maintain the facilities · One private company per municipality will be selected to operate the waste management facilities (engineered landfill, sorting and recycling centre) through bidding
<p>Output 3.5 The management of final disposal facilities reinforced for hazardous and other wastes in the municipalities</p>	<ul style="list-style-type: none"> · Number of training and workshops (2) · Number of trained workers (male/female) (16/4) · Amount of incremental investment (USD) (TBD) · Number of companies adopting best practice (2) 	<ul style="list-style-type: none"> · Training and workshop reports with participant lists (male/female) · Technical guideline drafts · Project monitoring report · Transaction record of facilities and equipment acquired, built or improved according to guidelines and legislations 	<ul style="list-style-type: none"> · Two cities with local commitment are chosen. · Municipalities and other stakeholders will receive training from local operators and consultants with adequate experiences · Regional development banks have been contacted for the municipality's needs particularly for Ziguinchor to construct a new final disposal facility · BAT/BEP for final disposal facilities will be demonstrated by experts with adequate experiences
<p>Output 3.6 Waste management operations by the companies at the municipal levels improved</p>	<ul style="list-style-type: none"> · Number of companies adopting best practices (2) 	<ul style="list-style-type: none"> · Records of waste treated following the technical guidelines 	<ul style="list-style-type: none"> · Policy and political environments encourage the business investment in the waste management sector · Potential private companies will be kept informed of the project updates and major decisions through reports, direct communication (appointments, e-mails and phone calls)

	<ul style="list-style-type: none"> · Number of training workshops (2) · Number of participating institutions (6) · Revenues generated (TBD) 	<ul style="list-style-type: none"> · Workshop reports with participant lists (male/female) · Copies of dissemination materials 	<ul style="list-style-type: none"> · One private company per municipality will be selected to operate the waste management facilities (engineered landfill, sorting centre) through bidding
<p>Output 3.7 Open burning controlled to reduce uPOP emissions</p>	<ul style="list-style-type: none"> · Amount of waste properly sorted, recycled, and disposed before and after the project (TBD) · Approximate weight of waste burned before and after the project (TBD) · Total reduction of uPOPs emitted due to open-burning of wastes before and after the project (13 g-TEQ/ year) · Number of standard operating procedures developed specifically for the disposal sites in the two cities (2) 	<ul style="list-style-type: none"> · Record of operations at the recycling and disposal sites · Estimated uPOPs emission reduction using the toolkits · Copies of standard operating procedures 	<ul style="list-style-type: none"> · Municipal officers will receive specific training to use the Dioxin tool · A technical requirement will include the mandatory reporting of the waste treated and estimation of uPOPs emissions using the Dioxin tool · A national expert is hired to train stakeholders to collect and compute uPOPs emission · Municipalities and waste management operators maintain proper records of the waste treated following the guidelines
<p>Outcome 4: Project progress properly monitored and evaluated</p>	<ul style="list-style-type: none"> · Project management structure established · A Project Steering Committee established and members recruited taking into account gender dimension (6/4) · A project office established with each member's responsibility clearly described in job descriptions · Project progress monitored and work plan prepared 	<ul style="list-style-type: none"> · List of Project Steering Committee members officially appointed · Steering Committee's meeting minutes · List of project staff members and contracts 	<ul style="list-style-type: none"> · The monitoring and evaluation will be performed following the rules and regulations of UNIDO and GEF · A diligent monitoring and evaluation will ensure the successful delivery and sustainability of a sound waste management system in the country
<p>Output 4.1 Project results monitored and reported including the gender dimension</p>	<ul style="list-style-type: none"> · Project progress monitored and work plan prepared 	<ul style="list-style-type: none"> · List of Project Steering Committee members appointed including gender consideration · List of project staff members and contracts including gender consideration · Project progress reports and updated work plans 	<ul style="list-style-type: none"> · Project progress closely monitored against the original work plan and logframes · Qualified project staff and stakeholder workers will be selected and provided with proper technical training

Output 4.2 Project evaluated meeting the GEF's evaluation criteria

· Evaluations adequately conducted according to the GEF's standard (2)

· Evaluation report

· Evaluators will be given required information and granted access to data needed for proper evaluation

· Project progress will be closely monitored against the original work plan and logframe

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Comments by GEF SEC	UNIDO responses
<p>At CEO endorsement stage, please identify CHEM-3 in FA Strategy Framework as well, since this project also mentioned management of e-waste and lead in batteries which fall under Sound Chemicals Management.</p>	<p>CHEM-3 (mercury and SAICM) was carefully considered compared to the project current design. The project itself will not directly tackle the e-waste and lead in batteries, and therefore CHEM-3 was not added.</p>
<p>Comments by STAP</p>	
<p>The project is quite thoughtfully designed, with attention paid to problem definition not only from a technical but a socio-economic, gender and vulnerable group's perspective. The majority of the GEF resources are to be channeled into the installation of vertical gas collection pipes and covering the site surface at the eventual target site(s). The selection of eventual site(s) will be contingent on waste site renovation and waste management master plan reviews by other international agencies. Gap analysis is to be funded by government co-financing.</p> <p>Still, the risks associated with the timing and realization of complementary investment and grant opportunities should be listed, since this is out of control of the GEF project. Indeed given the fact that the other activities are concerned with waste/waste water management plans for the potential sites of the GEF project, then it might be wise to consider a place for these other initiatives on the project steering committee from the PPG going forward.</p> <p>Also though it is recognized that the project is focusing on curtailing uPOPs at waste sites, it would be beneficial to link awareness efforts (output 2.3) to any other government or other efforts to promote the merits of waste minimisation. Particularly as relates to the medical waste sector, there might possibility to promote appropriate procurement practices, material substitution, safe reuse, source reduction and the like; as well as the improvement of waste segregation and processing practices, which would augment protection of vulnerable groups who operate in the waste sites, and lend to long term reduction of uPOPs.</p>	<p>UNIDO recognizes STAP's important contribution to safeguarding the qualities of GEF projects and appreciates its guidance. Please find below some of the highlighted aspects of the latest project design that has been evolved during the PPG phase.</p> <p>First of all, the largest dump site in the country, Mbeubeuss, will not be within the scope of this project due to a project still on-going funded by the World Bank which holistically deals with this issue with a larger resource than this project. The project site selection has been concluded in a competitive manner by the project steering committee so that two cities have been chosen (Tivaouane and Ziguinchor) out of three based on their proposal including co-financing activities. UNIDO had consultation meetings with the project coordinator as well as the Islamic Development Bank (IDB) on a waste management project on municipal waste (PNGD). For Tivaouane where PNGD will allocate a significant part of its resources to strengthen the waste management capacity, this project will focus on the hazardous waste management (collection, separation and recycling) and business sector development rather than building infrastructures. For Ziguinchor, the African Development Bank (AfDB) has been contacted and a feasibility study project fund has been requested. If accepted by AfDB, UNIDO and the Government of Senegal as well as the municipality of Ziguinchor will carry out the feasibility study while continuing efforts to identify external finances to build a new landfill site in a newly designated site. In case that this project cannot leverage other external funding, this project will allocate its resources to improve the operation of the existing waste discharge. In any case in both selected cities, the landfill volume is not large enough to install vertical gas collection pipes to collect emitted gas.</p> <p>Following the STAP advice, the waste minimization activities throughout the project phase have been adopted</p>

	as part of the awareness raising targets such as the promotion of 3R among the general public. The STAP advice on the medical waste will be incorporated in case the medical waste management will be chosen by the city of Tivaouane in consultation with PNGD.
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ANNEX C: STATUS OF IMPLEMENTATION OF PROJECT PREPARATION ACTIVITIES AND THE USE OF FUNDS⁵

A. PROVIDE DETAILED FUNDING AMOUNT OF THE PPG ACTIVITIES FINANCING STATUS IN THE TABLE BELOW:

PPG Grant Approved at PIF: USD 130,000			
<i>Project Preparation Activities Implemented</i>	<i>GEF/LDCF/SCCF/NPIF Amount (\$)</i>		
	<i>Budgeted Amount</i>	<i>Amount Spent To date</i>	<i>Amount Committed</i>
International Consultant	31,000	28,214	2,775
Travel	27,000	26,983	16
National Consultant	48,400	46,351	2,048
National Meeting	11,000	9,596	1,403
International Meeting	2,900	1,572	1,327
Equipment	0	0	0
Subcontract	0	0	0
Miscellaneous	9,700	8,130	1,569
Total	130,000	120,846	9,138

⁵ If at CEO Endorsement, the PPG activities have not been completed and there is a balance of unspent fund, Agencies can continue undertake the activities up to one year of project start. No later than one year from start of project implementation, Agencies should report this table to the GEF Secretariat on the completion of PPG activities and the amount spent for the activities.

ANNEX D: CALENDAR OF EXPECTED REFLOWS (if non-grant instrument is used)

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