



GEF-6 PROJECT IDENTIFICATION FORM (PIF)

PROJECT TYPE: Full-sized Project
 TYPE OF TRUST FUND: GEF Trust Fund

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PART I: PROJECT INFORMATION

Project Title:	Integrated Sustainable Urban Development (SUDP) and environmentally sound management of municipal solid waste project in Cameroon		
Country(ies):	Cameroon	GEF Project ID: ¹	
GEF Agency(ies):	AfDB (select) (select)	GEF Agency Project ID:	9234
Other Executing Partner(s):	Ministry of Environment, Protection of Nature and Sustainable Development (MINEPDED)	Submission Date:	30/07/2015
GEF Focal Area(s):	Multi-focal Areas	Project Duration (Months)	30
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of parent program:	[if applicable]	Agency Fee (\$)	716,120

A. INDICATIVE FOCAL AREA STRATEGY FRAMEWORK AND OTHER PROGRAM STRATEGIES²

Objectives/Programs (Focal Areas, Integrated Approach Pilot, Corporate Programs)	Trust Fund	(in \$)	
		GEF Project Financing	Co-financing
(select) CCM-2 Program 3 (select)	GEFTF	1,734,862	63,000,000
(select) CW-2 Program 3 (select)	GEFTF	6,222,018	52,000,000
Total Project Cost		7,956,880	115,000,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: To strengthen integrated and environmentally sound urban planning and management in Cameroon by improving sustainable land use and waste management systems, resulting in reduced pollution, GHGs, and uPOPs emissions						
Project Components	Financing Type ³	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
1. Sustainable and integrated urban planning and management	TA	1.1 Strengthened capacity of Douala and Yaoundé to plan and manage low-emission urban systems in a sustainable and integrated manner	1.1.1 Municipal coordination mechanisms established to enhance integrated and participatory urban planning (for transport, waste management, land use, etc.) 1.1.2 Creation of sustainability units within urban planning authorities of Douala and Yaoundé 1.1.3 Workshops on integrated land use planning, sound waste management, and transport, to improve technical capacity of ministry staff in urban planning and decentralization 1.1.4 Trainings conducted at municipal level to increase awareness of the environmental and	GEFTF	2,095,871	35,728,750

¹ Project ID number will be assigned by GEFSEC and to be entered by Agency in subsequent document submissions.

² When completing Table A, refer to the excerpts on [GEF 6 Results Frameworks for GETF, LDCF and SCCF](#).

³ Financing type can be either investment or technical assistance.

		<p>1.2 Enhanced policy and regulatory frameworks accelerate a low GHG development path and encourage sound waste management in urban settings</p> <p>1.3 Improved awareness, capacity and tools to accelerate the adoption of innovative technologies and practices (regulatory, economic, etc.) that reduce GHG emissions and harmful chemical exposure</p>	<p>social benefits of integrating infrastructure development with sustainable land use planning</p> <p>1.2.1 Legal framework gap analysis conducted at national and city scales</p> <p>1.2.2 New national legislation addressing the sound management of municipal and hazardous waste, specifically targeting the reduction of uPOPs emissions, e-waste, and waste production at the source.</p> <p>1.2.3 Local-level material use policies designed to reduce avoidable waste production and limit the burden of excessive materials entering waste streams.</p> <p>1.2.4 Urban planning strategies for low-carbon, low-emission, low-chemical, and low-chlorine city development assessed and identified for Douala and Yaoundé, for eventual replication in four other cities</p> <p>1.2.5 City-level action plans for the phasing out of unsound waste (including biomass residue), open burning, healthcare waste and e-waste reviewed and strengthened, with regulatory measures formulated to discourage unsustainable practices</p> <p>1.2.6 Identification and assessment of potential waste-to-energy options for Cameroonian cities, with a focus on landfill biogas collection and use</p> <p>1.3.1 An awareness raising program implemented on the adverse effects of toxic chemicals and wastes to which formal and informal sector workers are exposed</p> <p>1.3.2 Capacity building program to enhance local knowledge on effective municipal and hazardous waste management, including measures to reduce health care waste generated at source</p> <p>1.3.3 Identification of diversified financing options for solid waste management, including waste separation and valuation initiatives</p> <p>1.3.4 Development and execution of a plan to promote private sector involvement in waste management</p>		
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<p>2. Environmentally sound waste management technologies</p>	<p>Inv</p>	<p>2.1 Knowledge increased on different waste streams (electronic, healthcare, and municipal solid waste) and use/management options</p> <p>2.2 Controlled landfill pilot demonstrations to reduce dioxin and furan emissions (POPs) and hazardous waste disposal at selected dump sites</p> <p>2.3 Best practices for waste management promoted in selected municipalities, resulting in improved waste valorization and in quantifiable and verifiable tons of POPs eliminated or reduced (including PBDEs released from e-waste)</p>	<p>2.1.1 Information on open burning hotspots, healthcare waste and e-waste dumping collected, mapped and monitored at the institutional level (to assist planning and new urban management approaches)</p> <p>2.1.2 National comprehensive inventory of uPOPs emissions (including PBDEs) from open burning practices of municipal, healthcare and e-waste reviewed and updated</p> <p>2.1.3 Specific e-waste products and plastics containing PBDEs are assessed for waste valorization, with a recycling business plan developed</p> <p>2.2.1 Demonstrating BAT/BEP for municipal and hazardous waste management by establishing controlled dumpsites/landfills at select sites</p> <p>2.2.2 Promote recycling practices and increase local skills in dumpsite/landfill management, and involve stakeholders that can share and replicate lessons learned in other Cameroonian cities</p> <p>2.3.1 BAT/BEP plans developed and implemented in select major dumpsites/landfills and at e-waste hotspots in Douala and Yaoundé, using PPP models in cooperation with Original Equipment Manufacturers (OEMs)</p> <p>2.3.2 Harmonized methodology developed at national level to set up release reduction targets for open burning, healthcare waste and e-waste streams</p> <p>2.3.3 Socio-economic impacts of project intervention on private and informal sectors assessed</p> <p>2.3.4 Improved e-waste handling trainings targeting informal sector workers, leading to a significant reduction of unsound dismantling practices</p>	<p>GEFTF</p>	<p>4,861,009</p>	<p>67,122,504</p>
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3. Knowledge management and dissemination	TA	3.1 Project results monitored and documented	3.1.1 Proper project M&E mechanism and methodology established	GEFTF	700,000	10,348,746
		3.2 Project results disseminated to increase national knowledge of sustainable urban management in Cameroon	3.1.2 Project experiences documented and presented in periodic M&E reports			
			3.2.1 Knowledge products created and shared on formal website, following a strategy for KM			
			3.2.2 Relevant stakeholders engaged through a knowledge sharing platform			
Subtotal					7,656,880	113,200,000
Project Management Cost (PMC) ⁴				GEFTF	300,000	1,800,000
Total Project Cost					7,956,880	115,000,000

For multi-trust fund projects, provide the total amount of PMC in Table B, and indicate the split of PMC among the different trust funds here: ()

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
GEF Agency	African Development Bank	Loans	115,000,000
Recipient Government	Government of Cameroon	In-kind	
Private Sector	Cameroon Development Corporation (CDC)	Unknown	
Total Co-financing			115,000,000

D. INDICATIVE TRUST FUND RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND THE PROGRAMMING OF FUNDS ^{a)}

GEF Agency	Trust Fund	Country/Regional/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee (b) ^{b)}	Total (c)=a+b
AfDB	GEFTF	Cameroon	Chemicals and Wastes	POPS	6,222,018	559,982	6,782,000
AfDB	GEFTF	Cameroon	Climate Change	(select as applicable)	1,734,862	156,138	1,891,000
Total GEF Resources					7,956,880	716,120	8,673,000

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

E. PROJECT PREPARATION GRANT (PPG)⁵

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

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

Project Preparation Grant amount requested: \$300,000	PPG Agency Fee: 27,000
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⁴ For GEF Project Financing up to \$2 million, PMC could be up to 10% of the subtotal; above \$2 million, PMC could be up to 5% of the subtotal. PMC should be charged proportionately to focal areas based on focal area project financing amount in Table D below.

⁵ PPG requested amount is determined by the size of the GEF Project Financing (PF) as follows: Up to \$50k for PF up to \$2m (for MSP); up to \$100k for PF up to \$3m; \$150k for PF up to \$6m; \$200k for PF up to \$10m; and \$300k for PF above \$10m. On an exceptional basis, PPG amount may differ upon detailed discussion and justification with the GEFSEC.

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁶ (b)	Total c = a + b
AfDB	GEF TF	Cameroon	Multi-focal Areas	POPS	200,000	18,000	218,000
AfDB	(select)	Cameroon	Biodiversity	(select as applicable)	100,000	9,000	109,000
Total PPG Amount					300,000	27,000	327,000

F. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS⁷

Provide the expected project targets as appropriate.

Corporate Results	Replenishment Targets	Project Targets
1. Maintain globally significant biodiversity and the ecosystem goods and services that it provides to society	Improved management of landscapes and seascapes covering 300 million hectares	<i>Hectares</i>
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>Hectares</i>
3. Promotion of collective management of transboundary water systems and implementation of the full range of policy, legal, and institutional reforms and investments contributing to sustainable use and maintenance of ecosystem services	Water-food-ecosystems security and conjunctive management of surface and groundwater in at least 10 freshwater basins;	<i>Number of freshwater basins</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	<i>Percent of fisheries, by volume</i>
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO _{2e} mitigated (include both direct and indirect)	<i>2.5million metric tons</i>
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	<i>20 g-TEQ/year reduction in releases of dioxins and furans metric tons</i>
	Reduction of 1000 tons of Mercury	<i>2.5 metric tons</i>
	Phase-out of 303.44 tons of ODP (HCFC)	<i>ODP tons</i>
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	<i>Number of Countries:</i>
	Functional environmental information systems are established to support decision-making in at least 10 countries	<i>Number of Countries:</i>

PART II: PROJECT JUSTIFICATION

1. *Project Description.* Briefly describe: 1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed; 2) the baseline scenario or any associated baseline projects, 3) the proposed alternative scenario, GEF focal area⁸ strategies, with a brief description of expected outcomes and components of the project, 4) [incremental/additional cost reasoning](#) and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and [co-financing](#); 5) [global environmental benefits](#) (GEFTF) and/or [adaptation benefits](#) (LDCF/SCCF); and 6) innovation, sustainability and potential for scaling up.

⁶ PPG fee percentage follows the percentage of the Agency fee over the GEF Project Financing amount requested.

⁷ Provide those indicator values in this table to the extent applicable to your proposed project. Progress in programming against these targets for the projects per the *Corporate Results Framework* in the [GEF-6 Programming Directions](#), will be aggregated and reported during mid-term and at the conclusion of the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and/or SCCF.

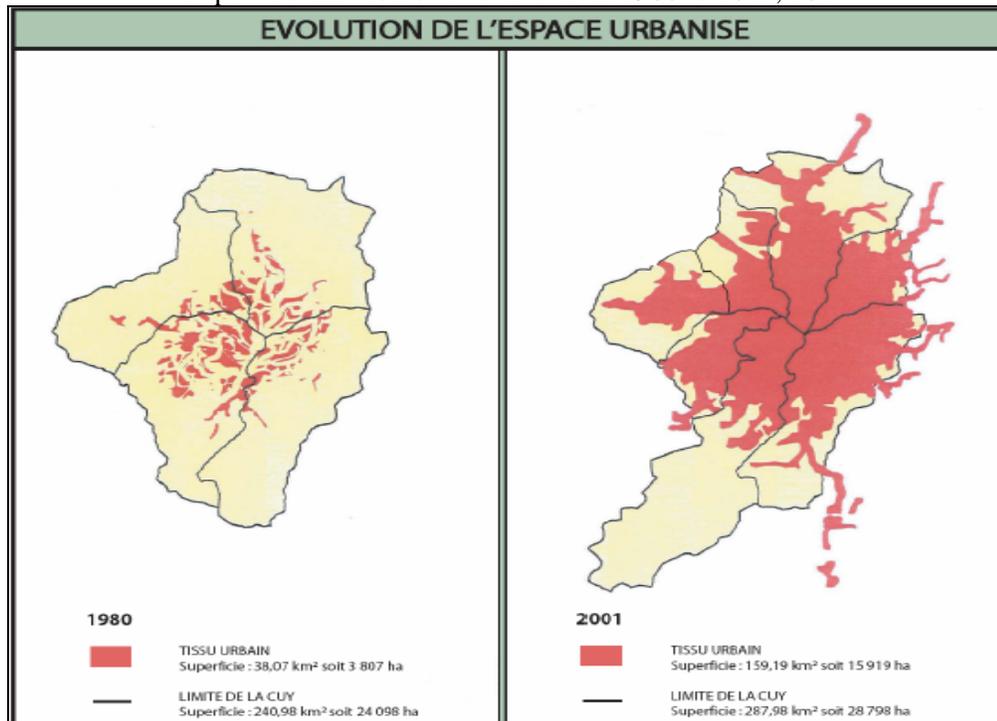
⁸ For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

1) *The global environmental and/or adaptation problems, root causes and barriers that need to be addressed*

Cameroon has experienced rapid urban growth since gaining independence in 1960. The United Nations Statistics Division indicates that Cameroon's urban population accounted for 52% of the total national population, and there was an estimated average urban growth rate of 3.2% between 2010 and 2015. From 1998 to 2010, the country's population nearly doubled, resulting in increasing anthropogenic GHG emissions, waste management and pollution issues, and environmental degradation. Rapid uncontrolled and mismanaged urban growth puts increasing pressure on already strained urban infrastructure and resources and is inevitably accompanied by geographical and social segregation and fragmentation of urban space, resulting in urban development patterns which are highly detrimental to the preservation of the environment and fragile ecosystems, and exposes urban communities to precarious conditions which are exacerbated by a changing climate, particularly in the two main cities of Douala and Yaoundé. In these two cities, two main urban planning and infrastructure issues that need to be urgently addressed include waste management and transportation, both of which contribute greatly to an increase in hazardous air, water, and soil pollution, and to human health problems, including the proliferation of water-borne diseases resulting from events like flooding due to poorly planned roadways; accessibility to economic opportunities and services; and overall quality of life.

Yaoundé is the capital city, an agglomeration of 304 square kilometers with roughly 1.5 million inhabitants and an average population growth of 6.8% annually. The population of Yaoundé has increased by more than 6% annually since the early 1990s, with population growth driven by rural migration and high birth rates. Douala is the largest city in Cameroon, home to more than 2 million residents, which is nearly 20% of the total population, and serves as the country's economic hub, with one of the largest ports on Africa's Atlantic coast. Rapid and poorly planned urbanization, coupled with poverty, unemployment, crime, and a lack of basic infrastructure and services has resulted in staggering inequality and the proliferation of informal settlements and slums, which are often cut off from urban services, including transportation and waste collection links, and are often highly vulnerable to flooding and contamination by hazardous chemicals and waste. Demographic changes, rapid urbanization and unsustainable settlement processes are threatening the population's health and wellbeing and are contributing to environmental degradation and avoidable GHG emissions. Issues of waste management, sustainable transport and safe housing are at the center of Cameroon's urban development challenges.

Rapid urbanization of Yaoundé from 1980 to 2011, 20x



Waste management issues

Rapid urbanization in Cameroon is worsening already difficult waste collection and management issues. Cities are traditionally engines of social transformation and economic growth. For Cameroon, demographic changes and urbanization have led to worsening urban problems and challenges, in particular as regards municipal solid waste management and its impact on health and the environment. The constant increase in flows of goods and services, and a change in lifestyle and ways of consumption, have affected the waste sector directly or indirectly. Municipal solid waste management constitutes a critical human and environmental health process. The largest cities in Cameroon produce an average 4,200 tons of waste per day, in addition to 500 tons of industrial waste. Annual production for Cameroon is around 483,902 tons/year, with Douala and Yaoundé producing almost 60% of that. Only these two cities have services for household and industrial waste collection and treatment. On average, almost 70% of household waste is composed by easily biodegradable materials. Even though these cities are using 30 percent of their budget for solid waste management, only 20-50 percent of the waste is collected. Illegal dumping still contributes to 50 percent of health problems and environmental degradation.

In Cameroon, like in other parts of the African region, the implementation of integrated waste management practices, including the management of healthcare waste and electronic waste (e-waste), is generally still new. Indeed, high-tech waste treatment facilities (such as properly managed incinerators, industrial waste recycling facilities or sanitary landfills) are very few, and sound reuse/recycling practices uncommon. Therefore, municipal waste and other types of waste are usually dumped in open dumpsites and eliminated by highly polluting open burning practices. Even e-waste is often subjected to crude recycling methods involving open burning and unregulated dumping that, in addition, result in poor recovery of valuable materials. In urban areas, municipal waste is mainly composed of food residues, packaging of goods and some hazardous wastes (such as healthcare waste, batteries including used acid lead batteries (ULABs), and waste electrical and electronic equipment (WEEE)), whereas in sub-urban or rural zones, these shares decrease compared to agricultural wastes. The hazardousness of wastes is generally ignored by a large part of the population, while their potential economic and industrial value is also not considered as a potential valuable secondary raw material that can be processed using environment friendly techniques in the spirit of the Ecological Industry. Non-skilled, uninformed and poorly equipped people under socio-economic stress, including women, unemployed young people and children, daily handle different kinds of waste in various unsound manners that expose themselves and the environment to the adverse effects of hazardous chemicals, including unintentionally produced POPs (uPOPs), newly listed industrial POPs like polybrominated diphenyl ethers (PBDEs), heavy metals, including mercury, and various other toxic persistent substances.

In 2012, the Government of Cameroon signed a decree to regulate the management, transportation, sorting, recycling and final disposal of wastes. This decree was followed by regulations which specify, among other things:

- The management, treatment and final disposal of dangerous and/or toxic industrial wastes;
- The management of medical and pharmaceutical wastes;
- The use of non-biodegradable packaging, with light plastic being banned.

The enforcement of this new legislation will enable the future reduction of unintended emissions of dioxins and furans resulting from the burning of medical, municipal and household wastes. Cameroon elaborated its National Implementation Plan (NIP), as a requirement under the Stockholm Convention, in 2012 and developed four action plans, one of which is to reduce dioxins and furans in the country. Four specific activities are proposed:

- Reduce emissions of dioxins and furans related to burning of agricultural residues;
- Reduce emissions of dioxins and furans related to landfill fires and uncontrolled burning of domestic waste;
- Reduce emissions of dioxins and furans due to forest and savannah fires;
- Reduce emissions of dioxins and furans related to poor management of medical wastes.

Dioxins and furans are unintentionally produced in Cameroon through various human activities and industrial processes. The results of the dioxins and furans inventory in Cameroon for the baseline year 2009 carried out within the framework of the Stockholm Convention, reveals the presence of nine sources of emissions in Cameroon which contribute towards a total discharge of 596 g TEQ/a. Out of these nine sources, six are considered more urgent,

actions to be taken in the short, medium and long term. These sources include, in order of decreasing importance, savannah and forest fires (54% of emissions), medical waste incineration (18.3%), burning of municipal waste and household waste (15.2%), and burning of agricultural residues (11%).

Healthcare waste: Healthcare waste collection and management in large medical facilities is usually carried out even though there is still much to do for the existing management schemes to reach environmentally acceptable standards. Conversely, in many small medical facilities and especially in remote countryside and private clinics, it is common that waste is not properly collected for special treatment, and rather ends in uncontrolled disposal which could result in breakage of mercury-containing devices (such as thermometers and blood pressure meters) and in the consequent release of this global contaminant into the environment. Moreover, it is recognized that poorly mixed materials and the presence of chlorinated or brominated precursors and catalytic metals (copper, iron) from electrical, electronic and medical devices are the main factors for the formation and release of uPOPs (chlorinated or brominated) in open burning processes as well as other pollutant releases. Finally, the current trend in injections and IV drips for administering medicine (as opposed to pills) increases the avoidable presence of plastics in the waste stream.

E-waste: The presence of hazardous substances in e-waste makes it imperative to effectively manage their disposal, as well as to strictly implement regulations concerning their proper disposal. E-waste have components that are covered under the Stockholm Convention (2009) on POPs. These include certain brominated flame retardants (BFRs) that are listed in Annex A of the Convention, and are: (a) hexabromobiphenyl (HBB) and (b) polybrominated diphenyl ethers (PBDEs) - commercial-OctaBDEs and commercial pentaBDEs. There is no specific exemption for the production or uses of HBB, while production and use of POP-PBDEs have to be eliminated by Parties subject to the exemptions allowed by the Convention. PBDEs production data for 1970-2005 ranged between 1.3 million to 1.5 million tonnes as estimated by the POPs Reviewing Committee (POPRC) of the SC (UNEP, 2010). During this period, global usage for c-PentaBDE and c-OctaBDE was estimated at around 100,000 tonnes each. Production of c-pénarde and c-OctaBDE ended in 2004, while c-DecaBDE production continues. Commercial-DecaBDE production until 2005 was estimated to be at least 1.1 million tonnes. Although not listed at present, higher brominated PBDEs can be debrominated during its lifetime and thus could potentially be precursors of lower PBDEs, such as the POPS-PBDEs. It is also worth noting that, although the other PBDE homologues are no longer produced, recycling of plastic casings in computers and other WEEE products that contain PBDE into new plastic products may give rise to secondary contamination and its associated health risks. Hence, the use of recycled plastics can be potentially more hazardous than its original intended use. This information will be closely considered as the project team explores options for safe strategies for transforming and valorizing waste.

There are a number of barriers to sound and sustainable waste management in Cameroon, including policy and capacity barriers. There is currently no legislation covering environmental standards and/or sustainable approaches in the waste management sector, but the Ministry of Environment and Sustainable Development has incorporated the concept of sustainable development in its waste management strategy. Financing is also an issue. Cameroonian waste management remuneration levels are at less than 6 euros per ton, compared to between 40-120 euros per ton in Europe. At these levels, it is difficult to comply with local environmental standards and even more so with international standards, such as the International Finance Corporation's (IFC) environmental and social performance standards. Taxation related to municipal solid waste management in Cameroon is based on a system of direct local taxes dedicated to financing local services. The fundamental issue is that the base from which tax is drawn is too narrow, limited to the formal and public sectors which represent less than 10% of the population. In Douala and Yaoundé, this tax finances less than 1/10 of the waste collection and processing activities – the remainder is covered by central state subsidies.

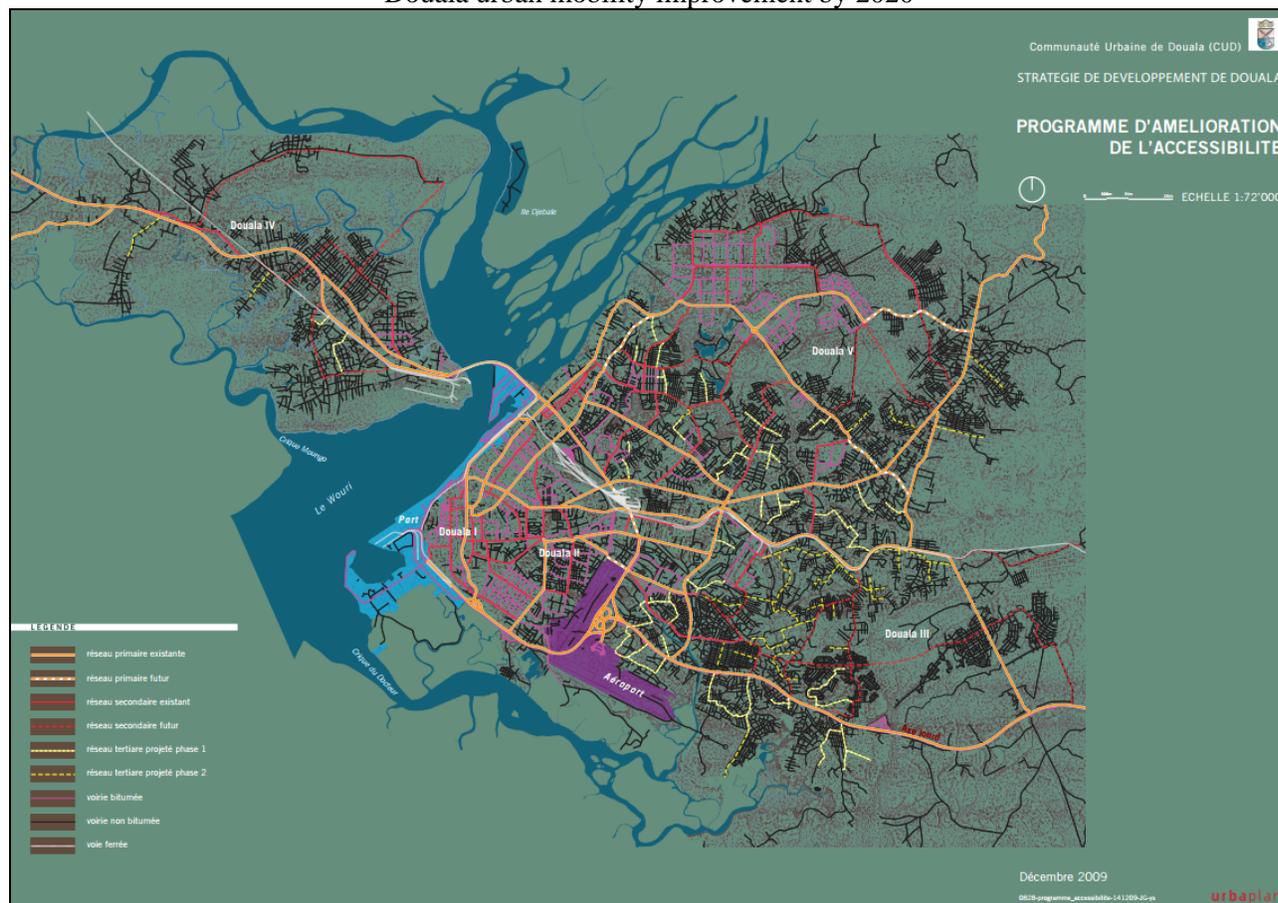
The main barriers that need to be addressed are therefore related to the limited knowledge, capacity and facilities for the sound management of waste at both disposal and source stages, and to the financial resources and market-based mechanisms that assist in their collection, re-use or disposal. The proper sorting and re-use of waste can also generate additional revenue sources, which, in turn, may have a positive impact on poverty reduction, economic diversification and resilience.

Climate Change and urban planning issues

In June 2014 Douala was hit by massive flooding following large storms attributed to changing climatic patterns. The impact of strong rains in a context of unregulated urban housing development resulted in widespread and unprecedented devastation that forced more than 80,000 people from their homes (Reuters). Although this is not an adaptation intervention, the project does address urban planning and sustainability issues in an integrated, holistic manner, such that urban emissions are addressed concurrently to mobility and sound planning issues. In this way, the project addresses climatic variability, and its impact on urban infrastructure; urban planning issues, including for waste management practices and their relation to sanitation problems (aggravated by events such as floods), and a sector (transport) that is one of the highest contributors to national GHG emissions.

Urban areas always present some risk of flooding when rainfall occurs, but this risk is exacerbated by a changing climate that results, in certain areas, in stronger storms. In poorly planned urban areas it is common for buildings or infrastructure to be constructed in ways that actually obstruct natural drainage channels, thus increasing the risk of flooding. Hundreds of millions of urban dwellers in African cities are threatened by the direct and indirect impacts of climate change, and Cameroonian cities are no exception. Without effective integrated sustainable urban planning there will be very serious consequences for cities, for national economies, and also for human and environmental health. Informal settlements have driven urban expansion in Cameroonian cities, resulting in the worst type of urban sprawl. Human settlements have expanded on hill-slopes and onto wetlands, due to the availability of cheaper land, resulting in millions of inhabitants living in squatter settlements which are more vulnerable to floods. Inhabitants and entire communities within these sprawling informal settlements are cut off from formal transportation links and to some basic goods and services, including waste management processes. It is for this reason that the unregulated informal transport sector has proliferated and flourished in Cameroonian cities, driven by transportation demand in disconnected informal settlements, creating an unorganized urban system which is ill-fitted to serve urban populations in a sustainable way.

Douala urban mobility improvement by 2020



Serious insufficiencies in institutional capacities for effective and sound longterm urban planning in Cameroon is a major barrier to sustainable urban and other land use planning. It is also a barrier to the collection of reliable data on motorization, GHG baseline data and GHG emissions factors, and to technical know-how on international best practices for approaching urban planning and management in an integrated way by taking into consideration environmental issues while also tackling challenges of spatial development, infrastructure (transport, waste facilities, etc.), and social development (sanitation, etc.). Other barriers include unclear and overlapping responsibilities, with planning agencies often constrained in their implementation authority; inefficiencies in the transport system that are considered normal; lack of political will to implement change; and a lack of appropriate regional examples of best practice. Urban planners and local institutions in Cameroon are constrained in their capacity to design, plan and implement effective and integrated sustainable transportation programs and policy. Furthermore, they are limited by scarce financial resources, an inadequate regulatory framework, a lack of coordination in policy development and in planning, and inadequate learning and scaling up from other projects in the region.

2) The baseline scenario or any associated baseline projects

GHG emissions in Cameroon have increased by 50.5% during the period 1995-2008. CO₂ emissions from the transport sector, an important contributor to overall GHG emissions, have been increasing steadily over the past years. Moreover, Cameroon's biggest cities produce an average of 4,200 tons of municipal waste per day and an additional 500 tons of industrial waste. Douala and Yaoundé together produce almost 60% of that. For this reason, only these two cities have a service for household and industrial waste collection and treatment. On average, almost 70% of household waste is composed by easily biodegradable materials; however, due to lack of resources, poor coordination, and low technical capacity an opportunity to deploy environmentally sustainable waste management practices has not yet been fully explored. Currently, all municipal solid waste collected in Cameroon is sent to landfills and the only existing recycling industry deals with products such as iron and bottles, which are recovered by waste pickers prior to waste collection. Most often waste is incinerated in dumpsites and landfills leading to the release of pollutants and contaminants in the air and ground. A holistic approach based on the reduction of the amount of waste generated, proper segregation of waste, reuse and recycle whenever possible, and adoption of proper treatment technologies is needed. Establishing widespread recycling processes is problematic due to the composition of waste, which has a low recyclable component, except for biodegradable material (60% of total volume), which can be used to produce compost. The market is dominated by competition from chemical fertilizers. The main items that are recycled include soft and hard plastics, glass, steel, paper, cardboard, aluminum, alloys, etc. Cameroon is facing regulatory, financial and social problems related to solid waste management. Municipalities and the government face difficulties in extending and formulating environmental legislation. Public awareness and public participation are major needs in the effective implementation of a sound waste management system, with cooperation from citizens being a vital aspect in managing the solid wastes of a city. The social aspect cannot be separated from the overall waste management system. Therefore, environmental education in schools and other learning avenues to develop awareness in the general public is critical.

Current disposal of waste in Douala



Photo 1 : Quartier de Bependa, Douala, octobre 2014



Photo 2 : Décharge sauvage, Limbe, novembre 2014

The Baseline Project:

The African Development Bank is financing an infrastructure investment project in Cameroon with a loan of \$168 million, with the aim of improving urban infrastructure and services to support strong and continued economic growth in the country. The baseline project aims to support economic and social development. Its main objective is: “To contribute to the economic growth in Cameroon by strengthening urban infrastructure and improving urban governance through the provision of basic urban services.”

The specific sector objectives of the program are to foster within Cameroonian towns and cities: (i) a healthy and productive space for work and play; (ii) a competitive and bankable environment with real potential for development, and (iii) urban entities which are well managed and under strong administrative control. The project also aims to strengthen institutional and technical capacities of relevant ministries involved in local/urban planning and development in order to support the strategic and sustainable management of future urban development. This will be achieved by:

- Providing financing for urban infrastructure that supports good urban planning practices;
- Promoting good urban governance through consolidated decentralization; and
- Supporting the private sector to provide high-quality essential urban service.

The main areas of integrated urban development that will be addressed through the baseline project include: waste management, land use planning, transportation, and policy development/governance. The project is organized into two broad components (one focused on an integrated urban development program in six target cities, and the second focused on the establishment of urban planning and management tools in four mid-sized cities, including new road work and land use plans).

Co-financing by the government will mainly fund the gap analysis of the legal framework needed to support the administrative and regulation aspects of the project intervention related to municipal and hazardous waste management. This co-financing will be used to improve the sound management of municipal and hazardous waste as well as mitigate socio-economic impacts of the project activities on waste pickers and informal recycling sectors. Finally, co-financing will also be used to support awareness raising and education for those working at dumpsites to improve recycling knowledge and activities.

Baseline Project Description

Baseline Component A: National urban development program targeting 6 cities including Yaounde, Douala, Garoua, Maroua, and 2 others (TBC)

Under this component, the main output is the formulation of a national urban development program. This will include the identification of policy gaps and measures and plans, feasibility studies, and the institutional and financial arrangements of the following activities:

- Providing national level institutional and technical support to central administration structures, including MINHDU (Ministry in charge of urban planning and housing) and MINDAT (Ministry in charge of decentralization). The support will consist mainly of:
 - o Institutional and organizational audits
 - o Establishment of an evaluation framework for legislative and regulatory urban development and decentralization (policy statement, policies, strategies, action plans, projects, results, perspectives)
 - o Building institutional and technical capacities
- Supporting the development of local institutions of Yaoundé and Douala through:
 - o Institutional and organizational audits
 - o Assessment of urban planning documents (city development strategy, SDAU, PDU, etc.)
 - o Development of a priority investment program in the short term on the implementation of urban infrastructure (roads, sanitation, water, energy)
 - o Improving urban governance (offices, equipment, financial management, mobilization of own resources)
 - o The delivery and management of urban services (transport and mobility, energy, ICT, waste)
 - o Improving informal housing settlements, promotion of the urban economy and exploring development opportunities for public-private partnerships.
- Supporting urban development in Garoua, Maroua, and 2 other medium-sized cities through:
 - o Institutional and organizational audits
 - o Assessment of urban planning documents (city development strategy, SDAU, PDU, etc.)
 - o Development of a program on short term urban infrastructure investment priorities (roads, sanitation, water, energy)
 - o Improving institutional governance for urban development
 - o Improving cross sectoral management of urban services
 - o Improving informal housing conditions
 - o Promoting urban economies and exploring opportunities for public-private partnerships.

Baseline Component B: Establishment of urban planning and management tools in project cities

Under this component, road work will be undertaken as part of a larger program of the Ministry of Housing and Urban Development (MINHDU) in urban planning and land use planning to reflect priority needs in the cities of Batchenga, Ntui, Yoko and Tibati. This project component will include the following activities:

- Development and/or updating of urban planning documents, including land use plans in accordance with national regulations. These documents will be accompanied by technical operational tools required for a successful municipal management, in this case the Priority Investment Plan (PIP) and priority maintenance plan (PEP).
- Formulation of studies on: urban diagnosis, sustainable development strategy, details of urban planning for the modernization of central areas and planning of short- and medium-term extension areas, multiannual investment program (5 years), implementation mechanism and monitoring and evaluation, and the establishment of a technical management unit.

3) The proposed alternative scenario, GEF focal area⁹ strategies, with a brief description of expected outcomes and components of the project

The AfDB's baseline project investment will be used to provide financing for urban infrastructure projects, support a consolidated decentralization process to ensure effective urban governance, and offer support to the private sector to provide essential urban services of high quality. It will also put in place urban planning and management tools in

⁹ For biodiversity projects, in addition to explaining the project's consistency with the biodiversity focal area strategy, objectives and programs, please also describe which [Aichi Target\(s\)](#) the project will directly contribute to achieving.

target cities and assist the elaboration and realization of ~~national~~ urban development programs in Cameroon's two largest cities, Douala and Yaoundé, and four other mid-size cities in Cameroon (Batchenga, Ntui, Yoko, and Tibati), focused on road work and land use planning.

The GEF financing will complement the infrastructure and services developed in the baseline project by putting in place the requisite policy and regulatory framework to ensure that they are developed, used, and maintained sustainably. The GEF financing, which will be primarily directed to Douala and Yaoundé, will help support cohesive, integrated long-term urban planning practices, and will also promote sharing of best practices between cities across Cameroon. In the spirit of GEF-6's movement toward more integrated approaches to addressing environmental problems at the systemic level, the project will focus on decoupling environmental degradation from urban development through the identification and implementation of appropriate sustainable urban development and management practices across multiple sectors, including integrated land use planning, transportation planning, and waste management (municipal waste, e-waste, hazardous waste, and healthcare waste). Transportation is an integral part of sustainable urban development and must therefore also be considered in a project centered on improving integrated, low-emission, sustainable urban planning mechanisms.

The first component of the proposed GEF project ("Sustainable and integrated urban planning and management") aims to promote an inclusive urban development model in Cameroon that takes into account the interactions between various facets of urban development, rather than addressing them as independent ventures (for example, transportation planning, land use planning, development of waste management services, renewable energy development, etc.). By developing and implementing new, integrated approaches to urban planning and governance, designed with sustainability in mind, the project will help address the urban development challenges currently plaguing Cameroonian cities.

The second component of the project ("Environmentally sound waste management technologies") delves more deeply into the complex challenge of waste management in cities. This will be achieved through a combined approach including updated data collection, data analysis, and business plan development; pilot demonstrations to showcase improved waste disposal, recycling, and value-capture programs; and sharing of best practices through improved communication, trainings, research and program development between implicated government agencies and other stakeholders. Project activities will aim to discourage open waste burning practices, promote waste separation, improve disposal of dangerous materials, and reduce unnecessary consumption at its source (especially for healthcare waste). This project component also frames waste as a resource whose value may be captured through strategic planning and technology transfer (through practices such as composting, trapping biogas, and separating and recycling plastics and metals).

The third component of the project ("Knowledge management and dissemination") aims to promote project transparency and ensure that activities are being carried out properly. Effective knowledge management and information dissemination will assist project partners in determining ways to capitalize on lessons learned during future integrated urban development ventures.

Overall, the project aims to promote economic growth while protecting urban environmental assets and preserving quality of life in the target cities. The effective implementation of project activities is expected to result in direct and indirect mitigation of GHG emissions and the reduction and/or elimination of hazardous chemicals and waste reduction of unintentionally produced persistent organic pollutants (uPOPs).

The GEF financed activities will be structured around three components:

Component 1: Sustainable and integrated urban planning and management

Component 1 focuses on identifying methods for ensuring sustainable, low-emission urban development in Yaoundé and Douala. This will be achieved through the identification and introduction of new integrated urban planning practices in the target cities. Particular attention will be dedicated to increasing awareness about using comprehensive land use plans as a tool for protecting against environmental degradation and uncontrolled

urbanization. Other activities under this component will aim to increase the capacity of relevant authorities to use integrated urban planning tools in their respective jurisdictions in order to promote sustainable urban development. Additional activities will be dedicated to updating important legal texts and legislation related to waste management policies and low-carbon development practices. Transportation is included as an element in this component given it is an integral part of sustainable, low emission urban planning and development, along with land use and waste management.

The principal aim of this component is to create the requisite foundation to facilitate the transfer of more sustainable integrated urban management practices which will decrease or eliminate the proliferation of hazardous waste and chemicals, and decrease GHG emissions in Cameroonian cities. Appropriate policy and planning measures will be identified with the aim of mitigating GHG emissions directly, while also creating the policy framework which will indirectly assist the mitigation of carbon dioxide emissions within the urban context. Given that AfDB is involved in the Sustainable Cities IAP with a project in Abidjan, knowledge and lessons from this project can be used to inform component 1, laying a stronger basis for sustainable urban planning and development.

Additionally, as part of the work undertaken in this component, a formal coordination mechanism between local governments, particularly the Urban Councils of respective participating cities, will be established to ensure that there is strong coordination between national planning and local action. A thorough stakeholder analysis will be undertaken in the PPG phase to identify all stakeholders at the local level and to create a comprehensive engagement plan that extends across different levels of government. Since urban development processes are often fragmented and characterized by the involvement of multiple stakeholders, overlapping responsibilities and jurisdictions can make coordinating joint action challenging, particularly when there are disconnects between national and local priorities and policies. The aforementioned coordination mechanism was conceived as a solution for surmounting these obstacles and will help ensure that there is strong coordination between local and national policymaking throughout the lifecycle of this project, and beyond.

The component will assist in putting in place a regulatory framework for the development of renewable energy and identify strategies for lifting up barriers related to its investment. In summary, under Component 1, a policy and legislative framework to encourage sustainable municipal and hazardous waste management will be established. A number of legislation/regulation/standards and interventions to improve human resources capacity in implementing BAT/BEP will be developed with the aim of curbing open burning and establishing healthcare waste and e-waste management practices based on risk assessment. New tools and regulatory measures will be identified along with economic approaches to manage harmful chemicals and waste in a sound manner.

Outputs for outcome 1.1 include:

- Municipal coordination mechanisms established to enhance integrated and participatory urban planning (for transport, waste management, land use, etc.)
- Creation of sustainability units within urban planning authorities of Yaoundé and Douala cities
- Workshops on integrated land use planning, sound waste management, and transport, to improve technical capacity of ministry staff in urban planning and decentralization
- Trainings conducted at municipal level to increase awareness of the environmental and social benefits of integrating infrastructure development with sustainable land use planning

Outputs for outcome 1.2 include:

- Legal framework gap analysis conducted at national and city scales
- New national legislation addressing the sound management of municipal and hazardous waste, specifically targeting the reduction of uPOPs emissions, e-waste, and waste production at the source.
- Local-level material use policies designed to reduce avoidable waste production and limit the burden of excessive materials entering waste streams.
- Urban planning strategies for low-carbon, low-emission, low-chemical, and low-chlorine city development assessed and identified for Douala and Yaoundé, for eventual replication in four other cities
- City-level action plans for the phasing out unsound waste (including biomass residue), open burning,

healthcare waste and e-waste reviewed and strengthened, with regulatory measures formulated to discourage unsustainable practices

- Identification and assessment of potential waste-to-energy policies and implementation strategies for Cameroonian cities

Outputs for outcome 1.3 include:

- An awareness raising program implemented on the adverse effects of toxic chemicals and wastes to which formal and informal sector workers are exposed
- Capacity building program to enhance local knowledge on effective municipal and hazardous waste management, including measures to reduce health care waste generated at source
- Identification of diversified financing options for solid waste management
- Development and execution of a plan to promote private sector involvement in waste management and valorization

Component 2: Environmentally sound waste management technologies

Component 2 aims to address waste management challenges and concerns in Yaoundé and Douala. Under this component, important baseline information on various waste streams (electronic, healthcare, hazardous, and municipal solid waste) and a data inventory will be established. This data will be used to inform actions for improving waste collection processes and establishing controlled dumpsites and landfills in order to reduce the proliferation of hazardous waste and reduce uPOPs emissions.

Under this component, most of the GEF resources will be devoted to promoting Best Available Techniques (BAT) and Best Environmental Practices (BEP) for the sound management of the waste streams mentioned above. Particular attention will be paid to selected dumpsites in Yaoundé and Douala, which will be identified during the PPG phase. Options for waste valorization will be explored, including composting, recycling, and biogas capture at dumpsites/landfills. Initiatives to encourage waste sorting will be supported. Also during the PPG, feasibility assessments will be made on waste separation and re-use opportunities and clean alternative technologies, such as the installation of landfill gas systems at select sites. Such assessments will inform the type of investments that can and will be pursued during project implementation.

Biodegradable material comprises an estimated 60% of the total volume of the municipal waste stream, so value-capture from composting initiatives is a viable option in Cameroon. However, the current market is dominated by competition from chemical fertilizers. This reality could be addressed with taxation and limits on the usage of pesticides combined with awareness raising on the damaging effects on soil in order to spur growth in the compost sector. The activities under component 2 will address this need.

Although recyclable materials form a relatively small percentage of the municipal waste stream volume in Cameroon's cities, they currently pose a real threat to the environment in the form of uPOPs, due to widespread waste burning. Moreover, the presence of plastics in the waste stream is likely to rise in the future. Therefore, as part of this component's activities, particular attention will be dedicated to identifying and developing safe disposal options for plastics and for outlining strategies for reducing their presence in the municipal waste stream.

In its INDC document submitted prior to COP21, the government of Cameroon expressed its intention to dedicate 25% of its electricity portfolio to renewable energy sources by 2035. This is expected to be comprised of the following sources: 11% micro-hydro sources, 7% biomass, 6% solar photovoltaic, and 1% wind. Therefore, the alternative biomass waste processing proposed under this component offer an important contribution to the government's wider development objectives.

Outputs for outcome 2.1 include:

- Information on open burning hotspots, healthcare waste and e-waste dumping collected, mapped and monitored at the institutional level (to assist planning and new urban management approaches)

- National comprehensive inventory of uPOPs emissions (including PBDEs) from open burning practices of municipal, healthcare and e-waste reviewed and updated
- Specific e-waste products and plastics containing PBDEs are assessed for waste valorization, with a recycling business plan developed

Outputs for outcome 2.2 include:

- Demonstrating BAT/BEP for municipal and hazardous waste management by establishing controlled dumpsites/landfills at select sites
- Promote recycling practices and increase local skills in dumpsite/landfill management, and involve stakeholders that can share and replicate lessons learned in other Cameroonian cities

Outputs for outcome 2.3 include:

- BAT/BEP plans developed and implemented in select major dumpsites/landfills and at e-waste hotspots in Douala and Yaoundé, using PPP models in cooperation with Original Equipment Manufacturers (OEMs)
- Harmonized methodology developed at national level to set up release reduction targets for open burning, healthcare waste and e-waste streams
- Socio-economic impacts of project intervention on private and informal sectors assessed
- Improved e-waste handling trainings targeting informal sector workers, leading to a significant reduction of unsound dismantling practices

Component 3: Knowledge management and dissemination

This component will oversee the creation of knowledge products which relay information and data generated by the project, M&E documentation, and a dissemination mechanism for such knowledge products, including an online platform dedicated to project results which will serve as a portal for urban planning officials and practitioners across Cameroon to coordinate on current interventions and share experiences and best practices.

Outputs for outcome 3.1 include:

- Proper project M&E mechanism and methodology established
- Project experiences documented and presented in periodic M&E reports

Outputs for outcome 3.2 include:

- Knowledge products created and shared on formal website, following a strategy for KM
- Relevant stakeholders engaged through a knowledge sharing platform

4) Incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing

The contribution of the baseline to this project comes from activities and investments Cameroon has identified within the framework of national priorities identified within the AfDB Country Strategy Paper (CSP), which focuses on infrastructure development, particularly the urban road network and related transportation infrastructure. The activities which have resulted from these national strategies will form a strong baseline upon which this GEF project can build. Without GEF financing, cities in Cameroon will continue to develop in an uncoordinated and non-integrated manner resulting in unsustainable urban planning practices. Important considerations and opportunities to reduce GHG emissions, prevent and/or reduce other forms of environmental degradation, and valorize waste will not be maximized. The reason for this is that a holistic integrated urban planning approach (combining considerations for waste, transport, and energy) is new in the African context and has not been regularly implemented in West African cities.

Additionally, while the baseline investment will develop and rehabilitate some waste management infrastructure, no capacity building will be undertaken and environmentally sound management strategies are absent. The waste

management activities financed by the GEF will ensure that baseline infrastructure is utilized in the most sustainable way while ensuring that international best practices are transmitted to Cameroon, while also being integrated into the existing body of policy and legal framework.

Cameroonian cities were not planned to accommodate the recent population explosion and have been driven by the proliferation of informal settlements which lack organization and which are not covered by many public services. From a technological standpoint, the identification of potential waste to energy activities is a good entry point to link climate change mitigation to the reduction of harmful POPs and hazardous chemicals and waste. Policy and financial incentives must be put in place to encourage the uptake of more integrated approaches which take into consideration GHG mitigation while introducing comprehensive strategies to create a more sustainable model for urban development which takes into consideration multiple sectors and holistic environmental concerns. Studies will be undertaken to identify the most appropriate measures for accomplishing this. An inquiry into feasible waste to energy and waste reduction methods will be conducted, prioritizing those which have the highest carbon impact and most relevant local implications.

Mitigation strategies must be integrated with urban planning and land use planning so as to promote healthy and mixed land use cities in Cameroon. Furthermore, an open data inventory with GIS tools must be created which can better guide planning processes. While the baseline will finance the construction and rehabilitation of the urban road network, GEF activities will focus on ensuring that urban planning is coordinated and integrated; promoting the most sustainable movement of people, services, and goods; and introducing programs for GHG emission reductions and for waste reductions from households, hospitals, and municipalities in general, with subsequent sound management and valorization. These endeavors will be financed with GEF funding.

Lessons learned from other GEF interventions in Africa

The project will build on results and experiences from African countries that have benefitted from GEF funding and other projects on municipal waste management and reduced uPOPs emissions. An important aspect of this project is to avoid open burning of waste by establishing new landfills (including a special area for healthcare waste) with a proper collection and elimination system. Practical activities include: (i) Training of waste workers on solid and hazardous waste management, (ii) Raise awareness on the proper disposal of hazardous waste, (iii) Set up a valorization chain systems for used pesticide containers, (iii) Set up a pilot program to collect and eliminate Pesticide Stockpiles in Yaoundé and Douala, (iv) training of public and private health care facilities employees in proper healthcare waste management.

5) Global Environmental Benefits (GEBs)

CO2 emissions reductions:

The project baseline with GEF cofinancing will have significant global environmental benefit in terms of CO2 emissions reduction resulting from low carbon transport and sound waste management. Interventions under the baseline project are expected to replicate low carbon urban development models. With the various interventions that will be carried out under this proposed project and the expected outputs, it is estimated that the proposed project will result in 2.5million tCO2e direct emission reductions in Douala and Yaoundé over a period of 10 years (project life). Of this amount, it is conservatively estimated that 30-50% is directly attributable to the GEF incremental activities. This estimate will be validated and expanded upon during the PPG phase, during which reliable baseline data will be collected from clear mitigation activities and measures.

The TEEMP model's Bottom-up approach for calculating indirect GHG reductions was utilized which generally provides the lower extent in the range of possible indirect impacts from a project. It starts with the direct impacts of the investments under a project, and multiples that number by a factor representing the number of times the project is likely to be replicated in other places/markets. For example, policy improvements and sustainable transport and urban planning measures developed through this GEF project, which include pedestrian improvements and which, according to existing literature, can save 15-20% of CO2 over the lifetime of the infrastructure. Judging from the local conditions, one could assume that within 10 years after the project ends, five more cities in the country will adopt at least 5 additional cities will have similar urban planning and development models in place which will

achieve the same CO₂ reductions as those described in this PIF. The direct GHG emissions reductions are then multiplied by the assumed factor of replication (five) to find the Bottom-up indirect reduction.

uPOPs, healthcare waste, e-waste and mercury reductions:

This project will help to reduce uPOPs emissions from open burning at dump sites and therefore assist Cameroon to meet the mandates of the Stockholm Convention. The uPOPs emissions in Cameroon in 2013 have been estimated at 596 g-TEQ/Y, with six sources identified as needing urgent action: savannah and forest fires (54% of emissions), medical waste incineration (18.3% of emissions), burning of municipal waste (15.2% of emissions) and the uncontrolled burning of household waste, agricultural residues (11% of emissions). The project will promote the BAT and BEP for sound management of municipal and hazardous waste. It will support the recycling sector (both formal and informal) and people working at the dump sites by providing proper safety training and mitigation measures of the socio-economic impacts.

Additionally, as open burning is also a significant contributor to GHG emissions such as carbon dioxide and methane, project activities will not only result in the reduction of uPOPs but will also have a positive contribution on Climate Change mitigation. Therefore, the impact of the project activities will be monitored and correlated with this relevant issue.

The project is expected to achieve effective management of POPs-PBDE from e-waste. These targets are essential to minimize or even eliminate exposure to POPs of people directly involved in the disposal, dismantling, and recycling of e-waste, as well as those who may be exposed due to lack of awareness on risks and close proximity to contaminated sites. Successful implementation of the project will thus also contribute significantly to reducing risks to human health and to the environment. Improper disposal of e-waste at landfill sites, as well as mismanagement of healthcare waste, will be eliminated or reduced through the project, thereby avoiding pollution of groundwater and surface water, as well as release of toxic fumes to the atmosphere. Consequently, ecosystems and the landscape will be better protected.

During project implementation, women and children who are often involved in e-waste management will be the recipients of IEC and trainings on health impact of improper e-waste handling. Children will be discouraged from participating in e-waste processing.

Successful implementation of the project will have a significant positive effect on the environment, with reduced degradation and reduced risks to human health through the adoption of improved HCW management and instituting a strengthened stewardship role for Government in regulating, monitoring and enforcing effective HCWM policies and practices.

Furthermore, successful models for sound management of health care waste that reduce POPs emission at local level will be extended to other health care facilities. Public-Private Partnership models will also be assessed and extended, thus reducing public expenditures on health care waste and improving effectiveness of public investment as well.

The project will support the informal recycling sectors and people working at the dump sites by providing proper safety training as well as mitigation measures of the socio-economic impacts such as vocational training for those who are required to shift income source. Exposures to toxic fumes at the dump sites will be reduced and lead recovery processed enhanced at the e-waste recycling facilities.

The overall socioeconomic benefit of the project is ultimately derived from the increased capability of the country to capture, contain and eliminate POPs that would otherwise be released into the general environment with impact that has on environmental and human health. The associated risk reduction at both local and global level will positively impact the productivity of populations and reduce the financial burden imposed by potentially degraded public health, as well as contributing to general wellness and quality of life. This is particularly true for vulnerable parts of the population and for maternal health.

The specific GEBs of the project will consist of the following:

- 20 g-TEQ/year reduction in releases of dioxins and furans (uPOPs) resulting from the improved management of municipal solid waste, healthcare waste and e-waste. The project's reduction figures will be elaborated and calculated in detail during the project's PPG phase. However at this stage of the PIF, the following estimations are provided;
- Reduction of 2.5 tonnes of mercury release from sound management of healthcare waste including used mercury-contained devices (thermometers, blood pressure meters, etc). The project's reduction target and activities will be better calculated during PPG phase.

With GEF support, both cities of Douala and Yaoundé will be able to set up a comprehensive and holistic enabling framework for more integrated urban planning, more sustainable urban waste management, and more awareness of chemicals and waste safety practices. The ultimate aim is to help Cameroon to meet obligations under the Stockholm Convention and the Minamata Convention.

6) Innovation, sustainability and potential for scaling up

Integrated urban planning approaches (combining considerations for waste, transport and energy) are new in the African context and have not been regularly implemented in West African cities. This project is innovative in nature because it combines cross sectoral strategies to combat environmental degradation. Sustainability will be ensured through the provision of training and capacity building, which is a strong element in each of the three components. Activities for data collection following open data principles, which will ensure that data collected under this project is shared and accessible to planning officials as well as subsequent project implementers. The availability of data will increase the likelihood of sustainability, as other cities in Cameroon with similar development patterns can follow the strategies utilized in this project. Additionally, support will be given for urban planning and policies at the national level, which will remain as a guideline for future planning in additional cities. Lastly, the online Web portal will remain after project closure and will be accessible to relevant stakeholders and the public so project results and knowledge can be accessed to guide following initiatives.

In terms of project sustainability, it is proposed to have the Ministry of Environment and City municipalities (Yaoundé, Douala, Limbe) take over and continue funding the activities, beyond the GEF funding.

It is also expected that some activities be implemented by the Cameroon Development Corporation (CDC), a public owned agro-industrial company operating in tropical crop plantations (banana, oil palm, rubber). Since CDC's activities produce important wastes including hazardous waste and pesticide, it is proposed to have some co-financing from the CDC to cover activities under this project and beyond, to ensure sustainability.

In addition, the involvement of private sector entities will be assessed during project preparation (CEO endorsement). This involvement may include development of Public-Private Partnerships (PPP) for implementation of a waste to energy unit, the valorization of waste fertilizers, etc.

Currently, there is only one company in charge of waste collection, HYSACAM, which has signed a contract with municipalities. The feasibility of setting up a PPP between municipalities and private companies for the valorization of waste will be assessed.

As shown in the table below, waste management in Cameroon involves different entities with different objectives. The project aim is to reduce the open burning of wastes by setting up a comprehensive management system involving all relevant stakeholders, including private sector entities.

DOMAINE D'INTERVENTION	ACTEURS INTERVENANT DANS LA GESTION DES DECHETS														
	MINEE	MINDUH	MINATD	MINDAF	MINSANTE	MINEP	Partenaires Internationaux	MINFI	MINIMDT	COMMUNES	MAGZI	ENTREPRISE	Autorités administratives	Acteurs Non Gouvernementaux	Ménages
Coordination des interventions et définition des responsabilités en matière de gestion des déchets	X	X	X		X	X		X	X						
Définitions des objectifs	X	X			X		X	X							
Capitalisation des informations	X	X													
Elaboration de la réglementation et des normes	X	X			X	X	X								
Conception des dispositifs	X				X		X								
Implantation des sites de traitement		X			X						X				
Contrôle technique du projet	X	X			X		X			X					
Financement des investissements						X	X	X							
Recyclage et valorisation des déchets														X	
Réalisation des travaux				X								X			
Contrôle des chantiers et des équipements	X	X				X	X			X			X		
Réception et transfert éventuel des équipements	X									X					
Sensibilisation des populations	X	X			X	X	X								
Contrôle et surveillance de la pollution	X				X	X									
pré collecte et Collecte															X

Source: Cameroon National Strategy for Waste management (2007 – 2015)

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

Various stakeholders involved in the project will as follows: (i) Public sector: Ministry of the Environment, the Protection of Nature and Sustainable Development (to oversee project implementation within the NCC); Ministry of Agriculture (to facilitate the replication of technologies for the disposal of large empty containers of pesticides in cooperation with the private sector); Ministry of Health (to facilitate the adaptation and replication of sound technologies for healthcare waste disposal); Ministry of Industry (to facilitate participation of selected industrial companies in waste recycling/disposal); Ministry of Planning (to facilitate the establishment of PPPs); municipalities of Yaoundé and Douala (to lead the local steering committees, coordinate the project activities at the selected municipal levels, and replicate the project's approach to other cities of the country;); the Universities of Yaoundé and Douala (to facilitate learning and lectures on waste and contaminated sites management for undergraduate and post-graduate levels). (ii) Private sector: Companies (to facilitate PPP in e-waste management, to participate in the PPP for the recycling of ULABs, to participate in the PPP for waste plastic recycling). These companies will provide technical expertise on recycling processes of lead, e-waste, and plastics. Such technical expertise is needed when informal sectors are reorganized to develop more formal recycling sectors. (iii) Civil Society and NGOs (to anchor the project activities sustainably within communities, to further replicate the approach to other cities of the country, to participate in surveys on best methods for the sound disposal of small empty pesticides containers, to contribute to the development and implementation of a program on environmental training, education and communication on POPs and chemical safety). The final identification of other relevant stakeholders, especially for co-financing, will be one of the activities during the project preparation phase (PPG).

National Level:

-Sector coordination will be the responsibility of the Ministry of Urban Development and Housing (MINDUH),

which will be in charge of designing, preparing, and applying the national policy; and coordinating and monitoring operations on urban development.

-The Ministry of Planning, Development and Territorial Planning. in its capacity as the structure in charge of coordinating sectoral policies, will take part in the definition of public investment expenditure guidelines.

-Ministry of the Environment, the Protection of Nature, and Sustainable Development will oversee the implementation of national policy on environmental protection and sustainable development.

Local Level:

Urban Commune(s)/Council of Douala

Urban Communes(s)/Council of Yaoundé

Urban planning practitioners from relevant private companies

Mayors of each city

Municipal urban planning authorities

Municipal transportation authorities

Municipal housing authorities

NGOs and CSOs:

-Cities Alliance: a global partnership for urban poverty reduction and the promotion of the role of cities in sustainable development. The organization is working in Cameroon and has recently implemented an Urban Development and Poverty Reduction project in Douala in partnership with the World Bank.

-ICLEI Cameroon: a network of over 1,000 cities, towns, and metropolies focused on sustainable development. Several Cameroonian urban councils are active members of ICLEI.

Development Partners:

-A number of bilateral and multilateral donors are involved in urban projects in Cameroon, including: the Japanese Government, the French Development Agency (AFD), the Islamic Development Bank (IDB), Belgian Technical Cooperation, KfW, the European Union, German Cooperation (GTZ), the Canadian International Development Agency (CIDA) and United Nations agencies like the UNDP, UN-Habitat and UNICEF.

Private Sector:

-The Societe Hygiene et Salubrite du Cameroun (HYSACAM) is a private company specialized in the disposal of solid waste. In Yaoundé, HYSACAM collects and transports about 800 tons of garbage per day, processes household refuse, sweeps streets, public places and the city's markets.

-SOCATUR: the only certified transport company in Douala. Despite considerable challenges, Socatur has continued to slowly expand the bus network in Douala.

-TIC le Bus: The Bus is a public private partnership between a private investor and the city of Yaoundé. The Mayor of Yaoundé is the president of the Board of the company. Parker Transnational Industries LLC owns 66% of the company, with the remaining 34% owned by the State of Cameroon.

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

According to the results of Cameroon's third population and housing census, women constitute 50.6% of the Cameroonian population and are increasing in number at a rate of 10.1%, compared to 9.9% for men. Women headed households are 25% in Cameroon (COMIFAC 2012). Women constitute a large part of the workforce, particularly in the agricultural sector, and depend largely on natural resources, which are increasingly under threat from a rapidly changing climate, contamination of soils and aquifers by hazardous chemicals and waste, and habitat loss. Small scale businesses, particularly in the non-timber forest and fisheries sectors, are largely carried out by women with a focus on specific species for food and medicine (Lorena Aguilar, 2010 IUCN Report).

Keys sectors where gender disparities can be seen have been identified as education, health, employment and the environment. Women in Cameroon are largely excluded from land and natural resource ownership: possession of

landed property is at only 1-7% and income earned is 1/3 compared to men (COMIFAC, 2012). Environmental planning and decision making processes do not fairly represent women which results in the exclusion of the priorities and needs of women. Environmental planning does not adequately benefit from the knowledge of women on conservation and the use of resources. Urban planning, projects and programs give little attention to the specific needs of women and this project will make sure gender-sensitive planning is pursued.

Improving waste management is relevant not only to environmental protection, but also to public health and sanitation. Vulnerable social groups involved in waste recycling include women and young people under poverty stress, who strongly rely on this activity to secure main or additional income. This project will upgrade waste recycling sites (dump site for municipal and hazardous wastes as well as used lead acid batteries, e-waste, plastic waste, healthcare waste). It will then enhance job opportunities both for women and men while reducing/eliminating exposure risk to uPOPs, lead, and other toxics. Training of workers (women and men) on selected project sites will lead to diversification of waste recycling concepts in the country, by then preventing much more hazardous waste from open-burning, source of uPOPs and harmful substances like lead. The interventions of the project will help alleviate social and economic degradation both for men and women in the sector of waste management. Gender analysis will be carried out to set proper indicators and goals.

4 Risks. Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design (table format acceptable).

1) Lack of baseline data on GHG emissions, emission factors, and other baseline data related to POPs. This is a medium level risk and will be mitigated by the production of studies in the early stages of project implementation. Transport data are still unavailable, but waste management, air quality, emissions reductions, and environmental protection have been identified as priority concerns in Cameroon.

2) Low social acceptance of measures to decrease emissions from transport and other measures to encourage a shift towards reducing waste in households. This risk is considered medium to high, and will be mitigated through an organized outreach, knowledge dissemination, and public education program.

3) Poor coordination and lack of collaboration between government and municipal agencies. This is considered a medium-level risk. Lack of coordination for integrated urban planning stages and technical capacity are prime targets of this project and will be mitigated through the provision of technical assistance in each project component. The government agencies are well aware of the need for more sustainable urban planning and waste management solutions in Cameroonian cities, and the project has received strong support from different levels of the Cameroonian government, which indicates that there will be strong local ownership.

4) Weak capacity for project coordination is a medium risk and will be mitigated through the pursuit of a participatory approach and the establishment of a comprehensive coordination process during the PPG stage. There are a number of climate change, environmental and waste management entities which will be engaged. Upon completion of the NIP process a coordinating mechanism was set up and has since been upgraded to a National Committee of Coordination (NCC) (within the Ministry in charge of environment) and funds are secured in the national budget to ensure its regular functioning.

5) A lack of support from the municipalities involved in the project for sound hazardous waste management is a medium level risk. From the early stages of project preparation, municipalities will be involved and associated to awareness raising and capacity building processes.

6) Weak commitment and participation from private sector and civil society organizations is a low to medium level risk. A thorough and detailed stakeholder analysis and consultation process will be undertaken during the PPG stage to assess and thereafter ensure private sector and civil society involvement. The success of this project hinges on the engagement of a broad and diverse set of stakeholders across relevant sectors - waste, transport, housing, etc.

7) An increase in methane emissions from waste management at dump sites is a medium level risk and efforts will be undertaken to mitigate this. While emission reduction of uPOPs could be achieved by avoiding spontaneous combustion at dump sites, methane in biogas produced from dump sites could increase when combustion is suppressed. The collection of biogas will be assessed as a feasible technical option and valorization alternative; the price and the benefits will be evaluated. Additional technical solutions will be assessed and implemented at dump sites following international best practice to ensure that methane leakage is monitored and reduced.

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

The AfDB currently has another urban project in Cameroon which is CEO endorsed. The project is mainly focused on building resilience to climate change in urban settings and is entitled “Enhancing the Resilience of Poor Communities to Urban Flooding in Yaoundé.” The project aims to alleviate poverty in urban communities in Yaoundé City, to improve the living conditions of the population, and build capacity among stakeholders to respond to increasing flood risks. There will be close coordination with the AfDB Field Office in Yaoundé to ensure that knowledge accumulated as a result of this project will be integrated into the forthcoming project as it evolves. Moreover, coordination of learning will be pursued with AfDB’s Sustainable Cities IAP project in Abidjan.

There have been numerous GEF-financed community-based biodiversity projects implemented in Cameroon, mainly focusing on biodiversity protection in the country’s forests and protected areas. There has not yet been a biodiversity conservation project implemented in urban areas, but this project will draw from lessons learned to find synergies that may be applicable from rural and community based experiences, and how these issues can be reflected in urban planning.

There are also two POPs projects being implemented in Cameroon with GEF-financing – one focusing on PCB reduction and the other on the disposal of POPs and obsolete pesticides. One project on enabling activities for the Stockholm Convention has closed. Hysacam, the private waste management company, is implementing a CDM project on biogas capture and processing in Central Africa’s first biogas processing plant at the waste facility in Nkolfoulou (a suburb of Yaoundé).

The World Bank has a long history of working in Cameroon, including in the first urban development project in the country and recently through an urban sector development and water supply project. KfW is preparing a water and sanitation project in Yaoundé and four secondary cities; and UN-Habitat has prepared a restructuring of squatter settlements in Yaoundé.

6. *Consistency with National Priorities.* Is the project consistent with the National strategies and plans or reports and assessments under relevant conventions? (yes /no). If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, etc.

Cameroon signed the Stockholm Convention on persistent organic pollutants (POPs) in May 2001 and ratified it in May 2005. Following that the country successfully formulated its National Implementation Plan (NIP), pursuant to Article 7 of the Convention, with the technical assistance of UNEP, and submitted it in 2013. Based on indicative data, solid municipal waste management, healthcare waste management, open burning of agricultural residue and bush fires were identified as the main activities that release uPOPs in Cameroon. The baseline of the uPOPs inventory in the country needs to be refined with the experience and knowledge gained so far through various training workshops. The NIP also points out a shortage of qualified technical personnel for the management and analysis of POPs and their related waste, in addition to very poor national technical infrastructure, weak knowledge and very low awareness on POPs.

The proposed project is in line with the GEF6 focal area of CW-2 to phase out POPs and reduce POP releases; Action plans addressing unintentionally produced POPs under development and implementation as well as sound chemicals management in general. The proposal is consistent with the priorities identified in the Cameroonian NIP: (i) strengthening of POPs management-related legal and institutional framework; (ii) performing pilot demonstration projects for the environmentally sound management of POPs. The project’s focus on open burning is also consistent with the Cameroonian NIP where poor thermal disposal (open burning and poor incineration) was identified as the main factor producing uPOPs.

The Cameroonian Ministry of Environment and Sustainable Development has incorporated the concept of sustainable development in its waste management strategy document, which structured around three priorities: 1) Prevent and reduce the production and harmfulness of waste by developing clean and more resource efficient

technologies; 2) Ensure that more waste is recovered and recycled; 3) Dispose of non-valuable waste in a sustainable way. According to Cameroon's NIP, the Ministry of the Environment, the Protection of Nature, and Sustainable Development develops and implements policy on sustainable development and environmental protection through the National Environmental Management Program, and includes an Environment Programme (EP). The EP is compiled through a participatory process and lays out priority areas for meeting Stockholm Convention obligations. Under Cameroon's latest EP, urban sanitation is highlighted as a priority area.

According to Cameroon's National Biodiversity Strategy and Action Plan (NBSAP), urban land use change, urban development, and inadequate municipal and urban waste management issues are identified as major contributors to biodiversity loss. Other key drivers include demographic patterns, migration, and urbanization; as well as lack of awareness and social practices.

Cameroon has not yet submitted a NAMA, but has submitted a Note Verbale to the UNFCCC in lieu of a NAMA. Road transport and motorization is highlighted as a major contributor to national GHG emissions in Cameroon's National Communication to the UNFCCC, which makes this project in line with key drivers and priorities.

In Cameroon's Intended Nationally Determined Contributions (INDC) document, the country indicated its long-term national objective to reduce greenhouse gas emissions by 32% in reference to currently projected figures for 2035 (71 MtCO₂-Eq. as compared to 104 MtCO₂-Eq.). Its GHG emissions for 2010 were estimated at 39 MtCO₂-Eq. It is indicated in the document that achieving this objective is dependent upon the international community's support, in the form of financing, capacity building and strengthening, and technology transfer, all needs that this GEF project aims to address. Cameroon intends to reach its stated GHG emission objectives for 2035 through a variety of attenuation strategies, including improvements in energy offerings. It aims to dedicate 25% of the electricity portfolio to renewable energy sources by 2035. 7% of the portfolio is meant to be dedicated to biomass-derived energy, an objective directly supported by this project. Finally, it is written that all of the country's large cities should have improved landfills capturing at least 70% of methane emissions by 2035. The document outlines the country's intention to capture the value of waste using a diversity of methods, including composting, purification stations, and capitalizing upon latrine waste, among others. This project will support Cameroon in achieving these national objectives as well.

7. Knowledge Management. Outline the knowledge management approach for the project, including, if any, plans for the project to learn from other relevant projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

The project's third component is devoted to knowledge management. A KM strategy will be developed and will focus on collecting project level data, results, and lessons, and collating them in accessible and open databases. Open data will be a key feature so that project results will be available to urban planners, policy officials, and development partners, who will also be able to add to the growing body of data on sustainable urban development in Cameroon.

Given the project's focus on sustainable and low-emission urban development, particularly component 1 activities on sustainable urban planning and management, strong links can be made with the Sustainable Cities Integrated Approach Pilot (IAP). As such, when and as appropriate, an effort will be made to link the learning from this project in Cameroon to other experiences in the African SC-IAP sites (Abidjan, Dakar, Johannesburg), feeding into the learning and knowledge management processes and products of the SC-IAP program.

For waste management, among the most important factors in these strategies is the recovery of hazardous wastes and their transformation into useful material. Technology application, modification and development of new clean technologies are therefore currently a central focus of hazardous waste minimization.

- (a) Integration of cleaner production approaches and hazardous waste minimization in all planning, and the adoption of specific goals;
- (b) Promotion of the use of regulatory and market mechanisms;
- (c) Establishment of an intermediate goal for the stabilization of the quantity of hazardous waste generated;
- (d) Establishment of long-term programs and policies including targets where appropriate for reducing the amount of

hazardous waste produced per unit of manufacture;

(e) Achievement of a qualitative improvement of waste streams, mainly through activities aimed at reducing their hazardous characteristics;

(f) Facilitation of the establishment of cost-effective policies and approaches to hazardous waste prevention and management, taking into consideration the state of development of each city.

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

A. RECORD OF ENDORSEMENT¹⁰ OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):

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

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Justin Nantchou Ngoko	Director	MINISTRY OF ENVIRONMENT, PROTECTION OF NATURE, AND SUSTAINABLE DEVELOPMENT	01/18/2015

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies¹¹ and procedures and meets the GEF criteria for project identification and preparation under GEF-6.

Agency Coordinator, Agency name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email
Mahamat ASSOUYOUTI, African Development Bank		07/30/2015	Jose TONATO	+225 2026 2611	j.tonato@afdb.org

C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION (APPLICABLE ONLY TO NEWLY ACCREDITED GEF PROJECT AGENCIES)

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

¹⁰ For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.

¹¹ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF