



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

GEF-6 PROJECT IDENTIFICATION FORM (PIF)

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- PART I: PROJECT INFORMATION

Project Title:	Impact Investment and Capacity Building in Support of Sustainable Waste Management to reduce emissions of unintentional POPs (UPOPs) and mercury in West Africa		
Country(ies):	Benin, Burkina Faso, Mali, Niger, Senegal and Togo	GEF Project ID: ¹	
GEF Agency(ies):	BOAD	GEF Agency Project ID:	
Other Executing Partner(s):	TBD	Submission Date:	January 11 th , 2016
GEF Focal Area(s):	Chemicals and Wastes	Project Duration (Months)	60
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>	Corporate Program: SGP <input type="checkbox"/>	
Name of parent program:	[if applicable]	Agency Fee (\$)	1,433,229

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) CW-1 Program 1 (select)	GEFTF	5,800,000	57,500,000
(select) CW-2 Program 3 (select)	GEFTF	4,730,771	1,500,000
(select) CW-2 Program 4 (select)	GEFTF	2,400,000	1,000,000
(select) CW-2 Program 6 (select)	GEFTF	2,994,000	2,000,000
(select) CCM 2 Program 3 (select)	GEFTF		15,000,000
Total Project Cost		15,924,771	77,000,000

B. INDICATIVE PROJECT DESCRIPTION SUMMARY

Project Objective: To scale up investments in SMEs operating municipal solid waste (MSW) and healthcare waste (HCW) and strengthen national, institutional, technical and legal infrastructure and capacity for POPs phase out, mercury reduction and sustainable waste management in the Least Developed Countries of WAEMU.							
Project Components	Type ³ of financing	Project Outcomes	Project Outputs	Trust Fund	(in \$)		
					GEF Project Financing	Co-financing	

¹ Project ID number will be assigned by GEFSEC and 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 Type of financing can be either investment or technical assistance.

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Project Components	Type ³ of financing	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
1. Establishment of regional capacity to promote sustainable waste management and share experience among partner countries	TA	<p>Outcome 1.1: Decision-making tools are in place to promote sustainable waste management at regional level and reduce pollutant releases</p> <p>Outcome 1.2: Capacity for sharing experiences and expertise on sustainable waste management in place and strengthened</p>	<p>Output 1.1.1: A regional secretariat for project coordination</p> <p>Output 1.1.2: An operational regional platform of public and private waste management experts and practitioners</p> <p>Output 1.1.3: A common regional strategy for the development of waste treatment sub-sectors, including approaches to reduce releases of UPOPs and mercury, as well as framework directives on waste adopted</p> <p>Output 1.1.4: Regional study on technico-economic comparison of waste treatment and recycling options in the WAEMU region (materials and energy)</p> <p>Output 1.2.1: Annual regional conference (forum) on public-private partnership development for sustainable waste management in the WAEMU region</p> <p>Output 1.2.2: Three working groups on priority topics established</p>	GEFTF	3,000,000	4,500,000
2. Development of national and local capacities for the promotion of best available techniques and best environmental practices (BAT/BEP) in waste management sectors for reducing emissions of UPOPs and mercury	TA	<p>Outcome 2.1: Strengthening the Institutional, administrative, legal, technical and regulatory framework for reducing UPOPs and mercury emissions</p> <p>Outcome 2.2: Institutional, regulatory and</p>	<p>2.1.1 Reviewed and adjusted regulatory framework for controlling the generation of UPOPs and the handling of mercury containing equipment.</p> <p>2.1.2 Education and training program for environmental authorities on the negative impacts of UPOPs and measures to prevent their generation established.</p> <p>2.1.3 Education and training programme to environmental and health authorities in place to promote the reduction of use and releases of Mercury in the sectors covered by the project.</p> <p>2.1.4 Increased capacity of the country for the development of monitoring programs to control the generation of UPOPs and other POPs.</p> <p>Output 2.2.1: Strengthened capacity and knowledge of municipalities and other communal and national units in</p>	GEFTF	5,000,000	7,500,000

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Project Components	Type ³ of financing	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
		<p>technical capacities of public and private companies reinforced and made operational for sustainable waste management based on BAT/BEP</p> <p>Outcome 2.3. Stakeholders operating in waste production, collection and treatment are sensitized on pollutants emissions and use best practices in the area</p>	<p>charge of waste management to coordinate the project at national level and communicate the acquired knowledge to all levels</p> <p>Output 2.2.2: Updated/strengthened regulatory texts and emission standards for sustainable waste management and disposal (including POPs, UPOPs, mercury and other hazardous chemical waste)</p> <p>Output 2.2.3: Efficient waste collection and sorting, and promotion of BAT and BEP approaches for Hazardous Chemicals and Wastes Management aimed at reducing UPOPs and mercury releases are organized</p> <p>Output 2.3.1. : Effective information and communication programme meant for the municipalities, the national authorities, households and schools to promote best waste minimization and treatment practices conducive to reducing releases of UPOPs; mercury and other chemical pollutants</p> <p>Output 2.3.2: A pedagogical ENVIRO-Mobile (itinerant learning approach) operationalized in each partner country</p> <p>Output 2.3.3. : At least 50 demonstration programs for reducing at source/introducing best available techniques (BAT) and best environmental technologies (BEP) in managing certain categories of waste including POPs and mercury or having potentials to generate UPOPs emissions implemented</p>			
3. Organizational, technical and financial support to micro-operational enterprises in waste sector	Inv	Outcome 3.1. Organizational and technical capacities of micro-businesses are strengthened for the promotion of innovative practices in waste sector	<p>Output 3.1.1: Six (6) national single "green" windows for organizational support to the informal sector are installed and at least 15 micro-businesses for waste management and recycling are created in the beneficiary countries</p> <p>Output 3.1.2: Technical capacity-building and improvement of the practices of waste sector SMEs</p>	GEFTF	3,000,000	10,000,000

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Project Components	Type ³ of financing	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Co-financing
		with due consideration of BAT and BEP Outcome 3.2. Sustainable financing of waste sector	Output 3.1.3: A mechanism for certification and granting of approvals to micro-enterprises with technical and operational capacities for waste collection, treatment and recycling is developed Output 3.2.1: Assistance for microfinance institutions in promoting financial support mechanisms tailored to EIG and micro-enterprises for equipment financing, waste collection, treatment and recycling Output 3.2.2. 50-100 micro-loans adapted to the needs of micro-enterprises for waste treatment and recycling operationalized in each country Output 3.2.3: Sustainable financing mechanism for the waste sector established			
4. Support for the construction of efficient solid waste treatment and recycling facilities and validation of their effectiveness	Inv	Outcome 4.1. Waste collection and treatment infrastructure and facilities available in the countries Outcome 4.2. Waste sorted are recycled as part of a public-private partnership	Output 4.1.1: At least 300 small waste dumps in neighborhoods closed and rehabilitated in the selected cities Output 4.1.2: Waste landfill centre, pilot waste treatment and sorting facilities constructed in Niamey Output 4.1.3: Waste landfill centre, pilot waste treatment and sorting facilities constructed in Thiès Output 4.1.4: The landfill centre in Bamako is strengthened and treatment and sorting facilities constructed Output 4.1.5: A landfill centre and sorting facilities realized in a secondary city (TBD) Output 4.1.6. Waste treatment and sorting facilities constructed in Lomé and Cotonou Output 4.2.1. Support to plastic waste recycling, collection companies (Cotonou, Lomé, Thiès, Ouagadougou, Bamako, Niamey) Output 4.2.2. Support to pilot companies for electrical waste and electronic equipment collection (Lomé, Thiès, Cotonou)	GEFTF	4,166,449	55,000,000

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Project Components	Type ³ of financing	Project Outcomes	Project Outputs	Trust Fund	(in \$)		
					GEF Project Financing	Co-financing	
		Outcome 4.3: effectiveness of the constructed facilities is evaluated and lesson learned disseminated	<p>Output 4.2.3. Support to hospitals or pilot companies for medical waste treatment (Thiès, Lomé, Bamako, Cotonou)</p> <p>Output 4.2.4. Support to pilot composting companies for the development of peri-urban agriculture (Cotonou, Lomé, Ouagadougou and secondary cities)</p> <p>Output 4.2.5. Recovery of biogas produced at the landfill site as electric power or flaring to reduce methane contribution to global warming (Cotonou, Lomé, Thiès, Ouagadougou, Bamako, Niamey)</p> <p>Output 4.2.6. Demonstration waste recycling project (materials and/or energy) in a secondary city per country</p> <p>Output 4.3.1 report on the effectiveness of the reduction in the generation of UPOPs as well as other hazardous and toxic releases such as Mercury as a result of the application of BAT and BEP for sound waste management.</p> <p>Output 4.3.2 Lessons learned from the demonstration projects documented and disseminated for replication purposes.</p>				
Sub-total						15,166,449	77,000,000
Project Management Cost (PMC) ⁴				GEFTF		758,322	
Total Project Cost						15,924,771	77,000,000

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: ()

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

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
Recipient Government	Benin	In-Kind	2,000,000
Recipient Government	Burkina Faso	In-Kind	2,000,000
Recipient Government	Mali	In-Kind	2,000,000
Recipient Government	Niger	In-Kind	2,000,000
Recipient Government	Togo	In-Kind	2,000,000
Recipient Government	Senegal	In-Kind	2,000,000
GEF Agency	BOAD	Loans	35,000,000
Donor Agency	European Union, Agence Française de Développement, WAEMU Commission, ECA/SRO-WA (TBC), and others (TBD)	Grants	30,000,000
Total Co-financing			77,000,000

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
BOAD	GEFTF	Benin, Burkina Faso, Mali, Niger, Senegal and Togo	Chemicals and Wastes	POPs and Mercury	15,924,771	1,433,229	17,358,000
Total GEF Resources					15,924,771	1,433,229	17,358,000

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: \$275,230					PPG Agency Fee: 24,770		
GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					PPG (a)	Agency Fee ⁶ (b)	Total c = a + b
BOAD	GEFTF	Regional (Africa)	Chemicals and Wastes	POPs and Mercury	275,230	24,770	300,000
Total PPG Amount					275,230	24,770	300,000

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.

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

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>NA Hectares</i>
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>NA 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>NA Number of freshwater basins</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	<i>NA 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>2,000,000 metric tons (TBC)</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>200 metric tons (TBC)</i> A comprehensive assessment to the amount of UPOPs which will be avoided from being released will be undertaken during the PPG phase
	Reduction of 1000 tons of Mercury	<i>15 metric tons (TBC)</i> A comprehensive assessment to the amount of mercury which will be avoided from being released by the project will be undertaken during the PPG phase
	Phase-out of 303.44 tons of ODP (HCFC)	<i>N.A ODP tons (TBC)</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: 6</i>
	Functional environmental information systems are established to support decision-making in at least 10 countries	<i>Number of Countries: 6</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, 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.

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

Wastes are considered as normal and inevitable output of production and consumption processes, but when they are poorly managed, they are potentially harmful to the environment, health and socio-economic development. Indeed, the elimination of waste, including solid waste by traditional methods such as uncontrolled landfill and open air burning, can possibly lead to health, ecological, economic and social disasters.

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.

The waste issue is common to almost all countries but it is a major issue in the WAEMU countries (with 6 Least Developed Countries which are the beneficiaries of the current project) due to various factors that include: high population growth, rapid urbanization, increasing economic activity, increasing need for consumer goods, bad waste management practices, lack of education and information on waste management, etc. The combination of these factors creates significant amounts of waste whose management represents a major challenge for clean development of the cities in the WAEMU countries. Indeed, these cities concentrate more and more human activities of all kind that generate large quantities of plastic, electrical and electronic, medical waste, garbage, etc. resulting in significant alteration of the city landscape. According to a study conducted by the WAEMU Commission (West African Economic and Monetary Union) in 2013⁸, and the basic assumptions set at the level of each country, the production of solid waste was estimated at 19,798,622 tons for the year 2010⁹ in the WAEMU.

Proliferation of these types of waste coupled with the difficulties of collecting them after use leads to insalubrity, deterioration of the living environment, the disfigurement of the landscape and endangering of human health. Uncontrolled landfills increase infiltration of toxic substances and infectious germs through runoff (heavy metals, bacteria...) in surface and ground waters. Open-air burning of solid wastes containing organic materials and plastic materials, produce pollutants including persistent organic pollutants (dioxins and furans) and carcinogenic substances.

The Second regional Report for Africa of the Global Monitoring Plan for Persistent Organic Pollutants under Stockholm Convention Article 16 concludes that PCDD/PCDF are widely detected in air in this region, which could be attributed to releases from uncontrolled combustion of wastes including municipal wastes, medical wastes incineration, biomass burning of agricultural fields, industrial power generation activities and related thermal processes. Waste incineration also contributes to the unintentional releases of mercury into the atmosphere. Most of the mercury from wastes that are incinerated is thermally released during the combustion process and emitted directly into the atmosphere, with most of it returning to the earth through rain or dry deposition. Normally, the mercury content in the medical, hazardous, sewage sludge and municipal solid waste streams originates from discarded products and chemicals that contain or are contaminated with mercury such as paint residues, discarded electrical equipment, thermometers, pharmaceuticals, fluorescent lamps, dental amalgam waste, batteries, and laboratory chemicals among others.

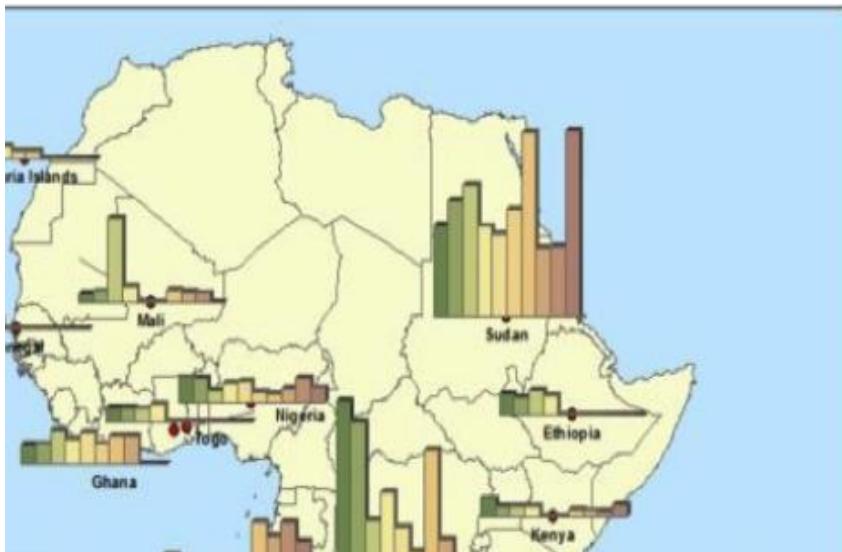


Figure 1-a PCDDs/Fs WHO TEQ 2005 in ambient air (PAS, pg sample-1) in Africa, 2010-2012
Source: <http://chm.pops.int/Implementation/GlobalMonitoringPlan/MonitoringReports/tabid/525/Default.aspx>

An observation of piles of garbage in the out-skirts of West African cities such as Lomé suggests that the solutions previously developed by the public authorities were to evacuate the waste produced by households from city centres and business districts, without consideration for the potentials of waste recycling for clean development or taking into account the environmental impact of this policy on the peri-urban areas. This shows that public authorities consider the waste issue in terms of visual pollution. Water, soil and air pollution with serious implications for human and animal health, food chain and others, are viewed as last priorities.

⁸ Study on the management of plastic waste in the UEMOA, Final Report, February 2013.

⁹ The waste data are not always available or at least updated in UEMOA.



Figure 1-b : Illustration of the garbage dumps with recyclers in the city of Lomé
 Source : <https://www.google.tg/search?q=les+d%C3%A9chets+%C3%A0+lom>



Figure 2.a : Animals On a wild dump in Niamey (study on plastic waste management in the WAEMU, 2013)
 Source : Study on plastic waste management in the WAEMU, final report, February 2013.



Figure 2 b : Surgery at the veterinary clinic in Bamako (study on plastic waste management in the WAEMU, 2013)

Production and poor management of waste in the countries covered by the project

The most produced wastes in the project countries are: plastics waste (PW), waste of electrical and electronic equipment (WEEE), Household waste (HW), Medical waste (MW).

Plastic waste (PW): Plastic waste produced in the countries concerned are largely made up of rigid pipe, food packaging, dishes, buckets and basins, chairs, tables, table clothes, dustbins, piping ducts, cable sheaths, cosmetic products, etc. According to a study conducted by the WAEMU Commission in 2013¹⁰, and based on each country's basic assumptions, plastic waste production was estimated at 802,713 tons for 2010 in the partner countries. Plastic waste collection rate is around 60% in Cotonou, 67% in Ouagadougou, 54% in Bamako, 40% in Niamey, 80% in Dakar and 34% in Lomé. Proliferation of such plastic waste and the difficulty of their after use collection raise concerns of insalubrity, deteriorating living conditions, landscape and animal health (acute and chronic indigestion of ruminants). Furthermore, the current elimination modes, based on incineration, generate hazardous pollutants. The current plastic waste management practices are not at all advisable regardless of the recipient country. The figure below describes the situation.

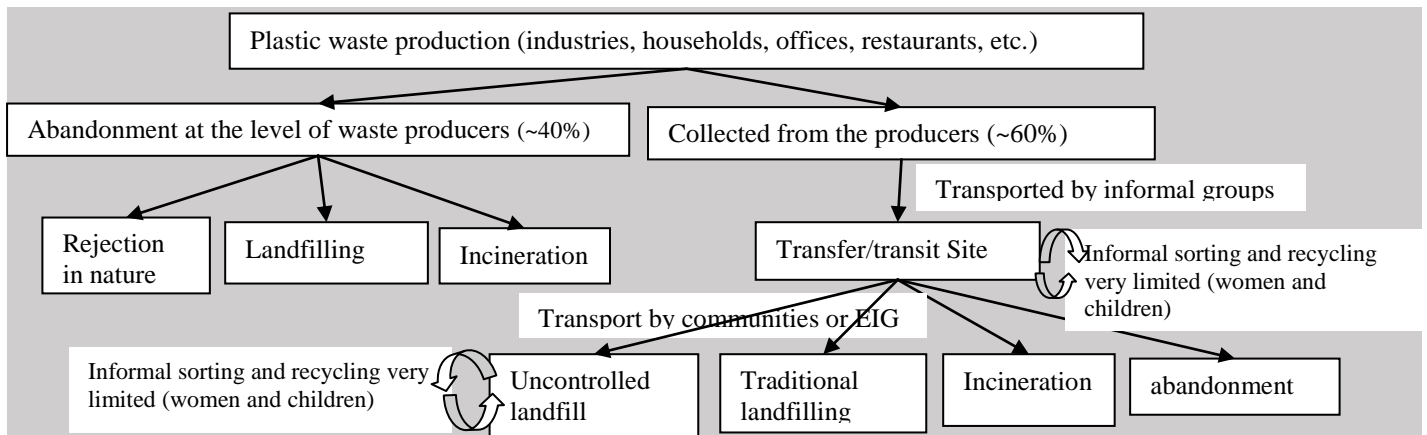


Figure 3: Current waste management in the project recipient countries

¹⁰ Study on plastic waste management in the WAEMU, Final Report, February 2013.

Electrical and electronic equipment waste: Electrical and electronic equipment are important factors of productivity and competitiveness of national economies. There are three categories of electrical and electronic equipment in the countries concerned: (i) household electrical and electronic equipment (TV sets, refrigerators, stoves, microwaves, telephone (mobile and land line), shavers, electric mixers, light bulbs, batteries, etc.); (ii) electrical and electronic professional equipments (computers, printers, scanners, copiers, air conditioners, telephone (mobile and land line), telecommunication accessories (router, modem, fax machines, etc.), cameras, drills, hair clippers, batteries, etc.); and (iii) electrical and electronic entertainment equipment (VCRs, walkmans, radios, video players, Hi-fi appliances, Ipads, MP3 and MP4, floppy disks, USB keys, etc.). The current consumption of the electrical and electronic equipment is very important and generates large amounts of waste. Given the standard of living of the populations, the electrical and electronic equipment are, most often, used equipment imported from developed countries. A study conducted in five West African countries (Benin, Côte d'Ivoire, Ghana, Liberia and Nigeria) concluded that 70% of imports of EEE are used, leaving 30% deemed non-functional¹¹. 70% of the above-mentioned equipment are also often close to their end of life and thus constitute another important source of electrical and electronic equipment waste within a relatively short period. Although a further informal recycling system exists for a number of electrical and electronic equipment wastes, their management is inadequate. Such wastes contain toxic and/or carcinogenic heavy metals lead, cadmium, nickel, beryllium, mercury, etc.). The figure below shows electrical and electronic equipment waste management as is currently in the beneficiary countries.

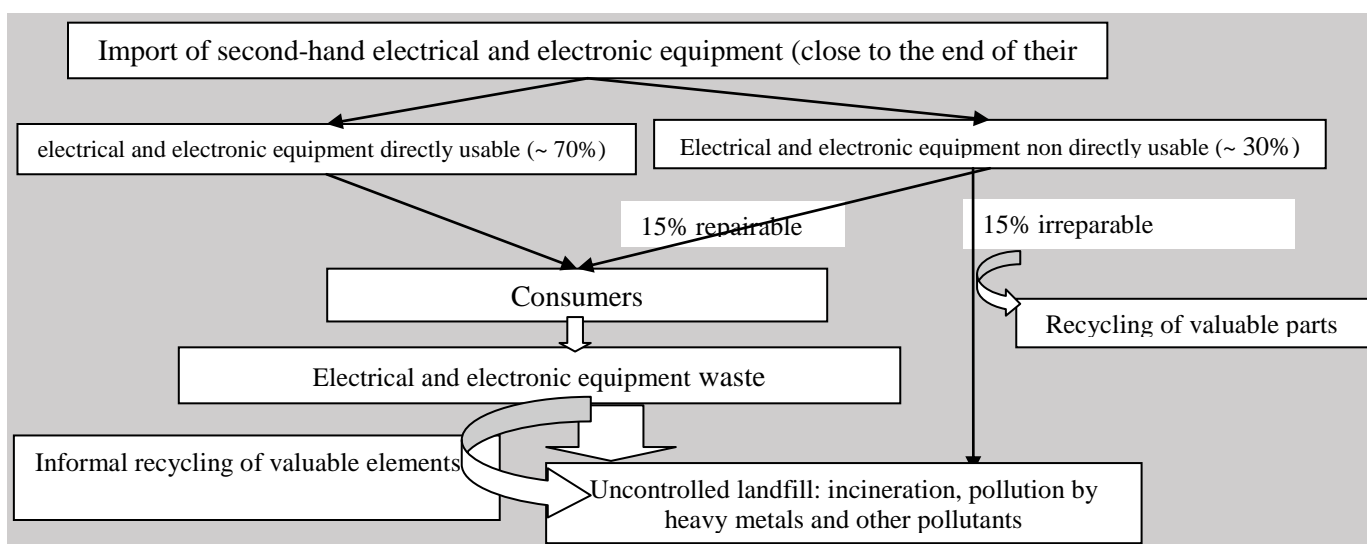


Figure 4: EEEW Management in the beneficiary countries

Household waste (HW) : Waste production increased with urbanization, nutrition habits and lifestyles. These waste, apart from plastic packaging mentioned under PW, include kitchen remnants, textile waste, leather, wicks, tins, scrap metal, bottles, etc. Such wastes, once produced, are partly stored in dustbins and then collected door to door by associations or EIG. Waste collection is however still inadequate and poorly organized. For example, in Ouagadougou where waste management is better organized in a beneficiary country with a Waste Treatment and Recycling Centre (CTVD), 39.9% households have private waste collection services to evacuate their garbage, while 28% throw garbage on rubbish dumps. Households that discharge their waste into the street represent 10.4% and those who throw theirs into gutters and storm drains represent 7.9% and 7.8% respectively. Household do not usually engage in sorting. In the project countries, some form of recovery and informal recycling of scrap metals, bottles, cans, plastics, etc. is performed by men women and children who collects these empty containers from door to door. However, such recovery and recycling activities are very limited compared to volume of waste produced. The collection scheme is similar to that of plastic waste.

Medical Waste (MW) : Medical waste is produced by hospitals and health centres, and is a growing concern as health institutions improve and expand their services. In the countries concerned, medical waste is poorly managed and there are significant risks. Such waste consist, among other things: of (i) used health care devices, such as pads, syringes, needles, scalpels; (ii) human waste, such as fluids and biological substances including urine, blood, vomit, pus, anatomical parts from surgery activity, placentas, etc.; (iii) usually inert materials and containers contaminated with infectious or radioactive agent; (iv) therapeutic products such as cytotoxic chemotherapy products, iodinated derivatives, antiseptics, serums, vaccines and medicinal products; (v) laboratory reagents containing formaldehyde, benzene derivatives, etc.; (vi) heavy metals such as lead, reagents for the development of radiographic films; (vii) the mercury of used thermometers.

¹¹ These 30% of non-functional used EEE should therefore have been defined in exporting countries such as electrical and electronic waste. the first half of this waste could be repaired on site and sold to consumers, while the second would be irreparable.

The management of medical waste, as performed in the beneficiary countries is still problematic. Selective sorting of infectious waste is rare. When sorting is done sorted items can be ultimately put in the same containers as other initially unsorted waste due to lack of sufficient number of bins as well as lack of awareness. The collection and disposal is generally operated by employees of EIG contracted by various agencies. They often do not wear protective gear, even when such equipment is available. Transport of the waste from health facilities is done by the EIG or the local authority. These waste are found on garbage dumps where adults (men and women) and children scavenge for materials. Inside health facilities, incineration, burning, burial and even the indiscriminate disposal of medical waste are some of the ways by which waste is treated with co-incineration generating additional risks.

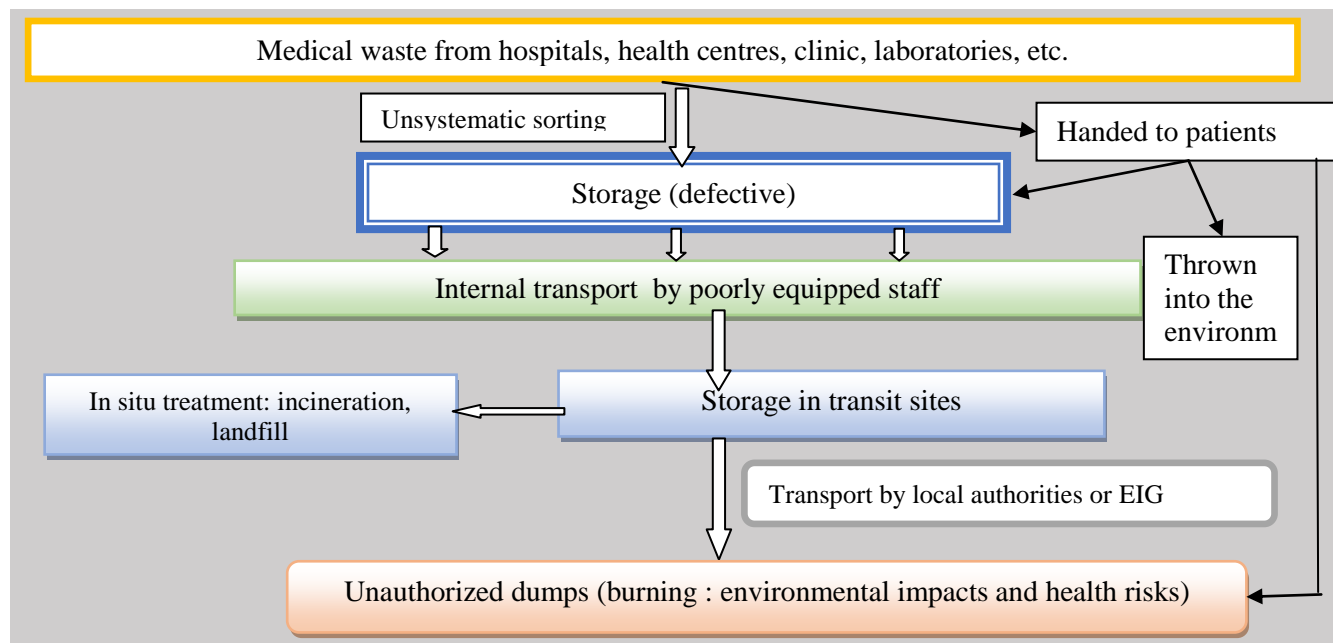


Figure 5 : Management of biomedical waste in the beneficiary countries

Impacts of mismanagement of waste

The lack of sorting, the ineffective collection, the open-air burning, as well as the uncontrolled disposal of waste are common practices in the countries concerned. This mismanagement of waste currently observed in these cities has negative impacts on the human health, the livestock, the agriculture, the economy of the household, the quality of life, the air, the soil, the water resources, the global environment.

- *Impacts on human health:* The growing practice of burning waste at landfill sites and in homes is a source of toxic emissions that cause cardiovascular, lung diseases and cancers, and contaminate the entire food chain with bioaccumulative substances, and in the end humans either directly or indirectly. Substances emitted from waste burning or infiltration of the items they contain are often: hydrochloric acid (HCl), ammonia, carbon monoxide, carbon dioxide, sulphur dioxide, nitrogen oxides, hydrogen sulphides, dioxins, furan, mercury, lead, cadmium, beryllium, infectious human remains, syringes and used needles. All these are sources of serious diseases...

- *Impacts on livestock:* Wandering animals are attracted by food residues contained in the bags that are thrown on rubbish dumps. They most often ingest these foods with plastic bags, which once swallowed, stays in the rumen and interferes with digestion. This therefore causes loss of productivity in milk and meat of the animal. Deaths of animals due to the ingestion of these types of waste are frequent as well as contamination of animal products with heavy metals (lead, mercury...) which are transmitted to humans through accumulation in their bodies.

- *Impacts on agriculture:* Compost from the dump sites in cities is often used as green manures for peri-urban vegetable crops and gardens of homes with fruit trees. This compost containing heavy metals such as lead, cadmium, mercury have negative effects on food production. The food chain is thus contaminated with serious implications for human and animal health.

- *Impacts on the economy of the household:* In countries where farming is the main source of income, economic losses due to the loss in animal production are huge. In addition, health expenditures incurred by affected households and the reduction of the work force due to poor waste management have decreased the purchasing power of these households.

- *Impacts on the quality of life:* Waste degrades the beauty of the living environment of cities with the proliferation of plastic bags in the environment. They also choke gutters, which facilitates the proliferation of mosquitos and unpleasent smell and contributes to flooding in cities and the degradation of public health.

- *Impacts on air, soil and water resources:* In the absence of an efficient collection system, waste litter the floor. Dangerous elements (biological and chemical) contained in such waste make the air unclean for breathing. Soil and water resources become unsuitable for use in homes.

- *Impact on the global environment:* Poor waste management causes the production of mercury, UPOPs, greenhouse gases including methane, carbon oxides, nitrogen oxides, etc. with negative impacts on the global environment.

Barriers to sustainable waste management

Waste management in the project beneficiary countries (Least Developed Countries) has had several challenges in terms of policy and regulatory framework, technical and financial support as well as educational and social challenges.

Barriers related to policy and strategic choices in waste management: There is a general lack of waste management strategies at both national and local levels in the project countries. Indeed, the national plans or guiding principles of cities and technical assistance to local authorities are limited to waste collection and disposal. Recycling of such waste is not adequately provided for. Countries that have advanced in waste management have stopped at the creation of landfill sites, as is the case of Burkina Faso. The strategies have not internalized waste management as a strategic response to environmental degradation through pollutant release reduction nor do they see it as an economic sector, source of employment and income, clean development and human health. The lack of specification of waste management means that all waste (plastics, electronics and appliances, etc.) are generated in the same way (collected and dumped in landfills) despite the varying degrees of danger these might pose. Project Components 1 and 2 will help in addressing these obstacles.

Low level of decentralization: In most countries, the management of waste in cities is the responsibility of the municipalities (collection and disposal of waste at landfill sites). They must therefore have sufficient funds and clearly defined powers as well as qualified personnel. They must be well organized to handle and properly carry out this mission. This is not the case in countries involved in this project. Decentralization has not always resulted in a real delegation of authority (economic and financial policy) to local authorities. Decentralization is limited while it must be accompanied with the necessary powers and capacities. Indeed, the municipalities are assigned the responsibility to provide this service without having access to the necessary funding, while they have at the same time major challenges particularly with street lighting, public transport, city management, etc. sound waste management is hence often relegated to the fringes. Components 2 and 3 will help in addressing these challenges.

Regulatory barriers: In the beneficiary countries (Least Developed Countries), there are several laws on the waste sector, but with very limited impact on sustainable management of the sector. These laws deal with waste in their entirety without any specification. At best, the existing laws are only punitive and not often does not show the ways for the treatment, disposal and recycling of waste. For example, in Mali, law No. 1-394/P-RM of 6 September 2001, outlines the procedures for solid waste management, which is the most relevant and which is closer to its concerns does not cover electronic and computer waste; for hazardous waste users are required to report them without indication of how and through what agency such reporting should be done. This situation is the same for all beneficiary countries despite countries' commitment under Conventions (Stockholm Convention requires Parties to take administrative and legal measures to manage wastes). Of the three project countries (Mali, Senegal and Togo) that have submitted National Reports under Stockholm Convention, only Togo reports having undertaken an evaluation of the efficacy of the laws and policies adopted to manage releases of unintentionally produced POPs and only Mali reports having adopted any legislative and/or administrative measures to manage wastes, including products and articles upon becoming wastes, as requested in Article 6 of Stockholm Convention. Efforts are very limited when it comes to the specific rules for the management of the different categories of waste altogether. There are deficiencies and lack of enforcement of sustainable waste management approaches in the countries concerned. An analysis table of the effectiveness of some legal and regulatory texts regarding waste management is attached as annex 1. Component 2 will help in addressing these challenges.

Technical barriers: Cities in the project countries are far from achieving clean development. While waste collection has begun to take shape in some cities such as Dakar and Ouagadougou, the treatment and disposal of waste generated in the countries do not yet meet environmental standards. The indiscriminate disposal of waste does neither guarantee the protection of the environment or public health, nor promote economic and financial benefits that can be drawn from waste. Other negative factors influencing the sector include: (i) lack of systematic control; (ii) lack of impact studies on the management of waste in cities; (iii)

lack of monitoring and evaluation systems of waste management policies; (iv) lack of periodic updates of reliable and official statistics, apart from a few general information available to municipalities; (v) lack of or inadequacy of waste collection and treatment schemes; (vi) inadequate training of waste management personnel. The lack of trained personnel able to participate in the design and implementation of waste management plans impedes efficiency in the sector and requires the development of suitable skills and the adoption of technical solutions. Components 2, 3 and 4 will help address these challenges.

Financial barriers: There are financial constraints for the development of the waste sector. It is becoming increasingly difficult for the beneficiaries States, which are all Least Developed Countries (LDC), to increase the financing necessary to cover the cost of solid waste management, which are rapidly increasing. Municipalities are often forced to focus on the urgent needs that are at the cost of treating or recycling and collection. In these circumstances, the sustainable management of waste cannot be envisaged in the project countries. The private sector, including SMEs, is facing huge challenges in obtaining financing, given that the projects are always considered a financial risk, while many operators are in the informal sector. The concept of an integrated sector, including all the players involved in a global vision of waste chain, is not yet sufficiently developed. At the same time, the regulatory environment is not robust enough to reassure investors. Components 3 and 4 will help in addressing these challenges.

Educational and social barriers: Education could be an asset in improving practices of waste production and management at the grassroots. However this component suffers from a number of constraints that include: (i) the lack of specific and ongoing public education¹² programmes; (ii) the lack of communication between the citizens and the municipality for two reasons: on the one hand, citizens are often not organized themselves (neighbourhood committees for example) and on the other hand, the municipality reserves very little or sometimes no resources towards information and education; (iii) the existence of conflicting information between the municipalities and private operators (iii) the lack of participation of the population in improving the quality of collection and maintenance of a clean environment although some actions are conducted by Governments. Components 1 and 2 will help address these challenges.

2) The baseline scenario

The current management of waste is very inappropriate and the impacts on the human environment and biosphere are negative with the open dumps, incinerations, traditional landfilling, etc. There is marked lack of sustainable management system of harmful chemicals and waste coupled with the lack of efficient, harmonized and consistent policies, regulation, standards, technics, technologies, funding mechanisms, the precariousness of garbage collection, inadequacy of equipment as well as a relatively low coverage rate (on average, waste collection coverage is about 30% in cities such as Parakou in Benin and Lome in Togo). This is coupled with the important quantities of waste produced in the cities and the proliferation of rubbish dumps in all corners of cities and indiscriminate dumping. Waste not collected are released into the environment, causing pollution of water, soil, atmosphere and effects on human health and the global environment. According to the Mayor of Bamako, the average amount of waste produced is estimated at 2,300 m³/day, of which only 40-60% are evacuated to final discharge, fields and open fields, due to the lack of landfill sites in the capital. The collection begins from the household, where the garbage is put in bins that are then picked up by economic interest groups (EIG) or cooperatives to transit dump sites, using carts drawn by donkeys in general, tractors or rarely with motor vehicles. Then comes the roads administration which collects them to the final destination. If about 90-95% of the waste are pre-collected from households and sent to the transit dump sites, it is estimated that only 40 to 60% of the waste are removed by public authorities. A large part of the waste remains on-site, with all the hazardous effects it can have on human health.

The baseline scenario is also marked by a lack of coordinated action between the municipality and private operators in order to control all stages of the management of household waste, from pre collection to the final controlled landfill site through the treatment, recovery and recycling. The public-private partnership (municipality - pre collection and collectors) is often poorly prepared. Indeed, coordination requires cooperation between the two players (municipalities and private operators) to engage in the transaction. However relations between the municipality and private operators are tainted by contractual flaws, problems related to the specificity of the assets involved in the operation and information asymmetry, such as adverse selection. This situation is a major handicap to the results expected from the delegation of pre-collection services and waste collection to private operators.

With regard to infrastructure, the majority of the country's cities do not currently have a landfill site to deal with the sustainable waste management.

¹²The different approaches of some associations or NGOs or states remain limited. They are mostly isolated actions that sometimes accompany eradication activities anarchic dumps. Environmental education is still very insufficient

Overall, no city in the project countries have comprehensive and sustainable harmful chemicals and waste management system in place. Despite the work done under the Stockholm Convention and the recent Minamata Convention, the best available techniques and best environmental practices aiming at reducing the release of pollutants from open burning are generally ignored. PCDD/PCDF are widely detected in air in this region which could be attributed to releases from uncontrolled combustion of wastes including municipal wastes, medical wastes incineration, biomass burning of agricultural fields, industrial power generation activities and related thermal processes.

In Burkina Faso, only the city of Ouagadougou has a technical landfill Centre. Apart from the landfill storage centre and plastics sorting organized by some women, the other forms of waste management are not sufficiently applied by the Town and are left to certain associations whose management capacity is very limited. The Town has received financial support from the African Development Bank for the creation of new lockers at the landfill centre. However, the overall management of the waste stream is always overlooked. The city of Ouagadougou has the will to transform the landfill Center in waste treatment and recovery Centre (CVTD) and is seeking financing to profoundly improve the waste management. Thus, the demand for comprehensive and sustainable management of harmful chemicals and waste was strongly expressed by the Ouagadougou City in the framework of the present project.

In Togo, the Lomé City has obtained a loan from the BOAD and donations from the AFD and the European Union for the construction of a landfill centre. Unfortunately, the project doesn't sufficiently integrate the sound management of harmful chemicals and waste. The activities designed under the present project will strengthen the initiative in developing a coordinated and efficient system of sustainable waste management in the city of Lomé.

In Mali, a landfill centre is built in Bamako. However, this centre is not operational for several technical reasons¹³. The sustainable management of harmful chemicals and waste is not yet addressed.

Niamey (Niger), Thiès (Senegal), Cotonou (Benin) and the secondary cities planned in this project, have no landfill centre and harmful chemicals and waste management is not undertaken by the municipality and the State.

However, some informal waste recycling is ongoing in few rare cities.

A beginning of informal waste recycling

Some waste recovery initiatives are operational in some capitals although they are often not well structured or properly supervised by a regulatory agency or even included in integrated strategies for waste recovery and recycling. These recovery and waste recycling initiatives are very limited. They do not help in reducing the amount of waste, nor use the valuable parts. Indeed, the presence of many recyclable materials and precious metals in waste suggests that waste can be exploited for economic and social gains, generating both income and jobs creation.

Indeed, waste recycling in the project countries is not yet widespread and is left to the informal sector. Although an important source of income for those who are interested, the continuing limitation of waste recycling is the result of a weak legal and regulatory framework, a lack of technical expertise and institutional and organizational capacity, inadequate funding, as well as low awareness of the environmental issues on the part of public authorities.

Itinerant plastic waste or scrap metal collectors or those stationed at waste recovery points are however active and often connected to informal networks engaged in waste recovery and export. For example, two platforms adjacent to the Ouagadougou landfill site are managed by associations. One operates in the recovery and grinding of plastic packaging, while the other is a composting unit operated by a group of women. Even though these units are properly installed and operational, much remains to be done for structuring their activities and the institutionalization of their profession. Composting is done with basic and rudimentary techniques (rake, watering Can ...) and the marketing of the product is facing several obstacles.

¹³ In the Bamako landfill centre: (i) the unloading ramp (road to access the lockers) is very steep to accommodate gear transport and operating at lockers level; (ii) the system (traps or valves) separation of rains water and water percolation (leachate) at the level of the trap does not exist. This situation causes the pollution of the water and the rapid filling of the basin of the leachate collection; (iii) leachate collection basin is poorly built and finds itself flooded by runoff water; (iv) the access to the landfill centre roads is not well-appointed making the access difficult.



Figure 6 : Composting unit - (CTVD) of Ouagadougou



Figure 7 : Plastic recovery unit - (CTVD) of Ouagadougou



Figure 8 : Plastic collector in Niamey



Figure 9 : Scrap metals collector in Niamey

Economic flows from the sale of plastic materials for example, show that the said trade has had an impact on trade balance deficit in the project countries. While imports reached XOF 83,689 billion between 2002 and 2005, exports stood at XOF 45,023 billion resulting in a deficit of XOF 38,666 billion (see table in annex 2). Considering that 207,457.5 tonnes of plastics imported in four years (2002-2005), or approximately 50,000 tonnes per year, may be used and end up in landfills, a recycling of about 25% of these plastic waste without a real added value, would generate between XOF 1.75 and XOF 5 billion per year¹⁴ in the sub-region with the creation of long term jobs. A major effort is therefore required on the part of the various stakeholders to place value on waste, and manage it sustainably.

3) Proposed alternative scenario (with component outline):

This regional project aims to build capacity of recipient countries in environmentally sound management of waste and demonstrate best available techniques and best environmental practices with the view to reduce emissions of UPOPs (dioxins and furans) in accordance with the Stockholm Convention, mercury emissions in accordance with the Minamata Convention as well as other nuisance coming from various waste streams. It will establish integrated waste management strategy and framework to address the key barriers and gaps associated with the increasing waste generation by a growing population and the weak knowledge and infrastructure in project countries. The project will therefore contribute to the improvement of the environment through the introduction of practices and innovative programmes for the sustainable management of solid waste including POPs and other chemicals at the national and regional levels. Waste minimization and recovery including appropriate management of POPs and mercury containing waste will be particularly targeted as uncontrolled burning of wastes has been identified as one of the most important sources of UPOPs.

With the GEF support, the six (6) participating WAEMU countries would be able to enhance the institutional capacity and technical capability of public and private stakeholders, by reviewing and updating the current regulation and policies, with due consideration of the requirements of existing Conventions and/or Agreements. They will be capacitated to undertake the

¹⁴ These calculations were made on the basis of market data of the regional study on plastic waste of UEMOA, 2013. The study states that in Mali, for example the sales price of recovered plastic bags is 150 F to 300 CFA per kilo while the granules in Benin sale price is between 140 F and 400 CFA francs per kilo.

development of an overall integrated waste management strategy based on BAT/BEP guidance of both Stockholm and Minamata Conventions (the latter is under development) that will produce global benefits in terms of chemicals and specifically POPs release associated with uncontrolled incineration. Through collaboration with other programmes such as the Stockholm Convention Global Monitoring Programme and use of the Toolkit, project countries' capacity for the development of monitoring programs to control the generation of UPOPs and other POPs as well as mercury emissions will be strengthened. This support will also include training programmes both for institutional and technical stakeholders to enhance their knowledge of the negative impacts of UPOPS; mercury and other hazardous materials and the measures to prevent their generation.

The approach will consist of providing a regional planning on the institutional aspects of waste management policy, the mechanisms of recovery of new waste stocks, including handling processes for chemical waste and those containing POPs and mercury and avoiding practices that lead to emission of hazardous pollutants such as dioxins and furans thus contributing to the effectiveness of Stockholm convention. The development of programmes and projects, and implementation of recovery and treatment of waste streams will be conducted at the regional and national level. Regional coordination using a network of national and regional experts will be consolidated to capitalize the achievements and good practices in the.

National coordinators and through them the one-stop 'green' windows will serve as a national secretariat for the conduct of the project nationwide. A green fund window will provide support to micro-enterprises and the active economic interest groupings in the area of waste management. The project thus seeks to promote job creation and provide social security for this fragile population, active in the sector of waste often made up of women.

A basic principle in the conduct of the project will be to build on the characteristics and achievements of each project country. This project will thus strengthen the existing mechanism and develop national programming with a regional outlook but within a pragmatic approach that would take into consideration and consolidate the actions already undertaken by countries. The project is structured around four components: (i) establishment of a regional capacity to support and share experiences in the waste sector in the partner countries; (ii) development of national and local capacities for the promotion of best available techniques and best environmental practices in waste management for reducing emissions of UPOPs and mercury; (iii) organizational, technical and financial support to micro-enterprises operating in the waste sector, (iv) support for the construction of infrastructure of treatment and recycling of solid waste.

To sustainably manage their waste, the country will need to implement mechanisms to raise funds, including from the private sector and SMEs to improve waste management practices. Strengthening the regulatory and institutional frameworks, technical capacities and strategic framework of the active informal sector in waste management as well as the facilitation of access to microcredits by small groups and the private sector will be contribute to finding a lasting solution to the management of waste, which will increase in volume in the coming years, due to the effects of increasing urbanization and consumption patterns. With a larger number of SMEs benefiting from the funding and working actively in the sector, more jobs can be created to make the waste sector a profitable area to attractive investors.

Component 1: Establishment of a regional capacity to promote sustainable waste management and share experiences among project countries

Outcome 1.1: Decision-making tools to promote sustainable waste management at the regional level and reduce pollutants release in place... To achieve this outcome, the following activities have been scheduled: (i) *Output 1.1.1*: Establishment of a regional secretariat for project coordination: A regional secretariat based in one of the partner countries of the project will be set up and will be responsible for implementation of the project components, administration of the shared platform, development of comparative reports on the sector and development and monitoring of the common strategies for the development of wastes management sectors in beneficiary countries. This secretariat will be managed by a Committee of National Coordinators who will meet once a year and provide guidelines for the coordination of activities and the smooth running of the project components at the regional level. The approach for this network will be to "act at the local, national and regional levels». (ii) *Output 1.1.2*: Establishment and operationalization of a regional platform of public and private sector experts and practitioners in the area of waste management.. This platform that will be hosted by the regional secretariat will be a place of exchange, sharing of knowledge for sustainable waste management in the beneficiary countries as well as in Cote d'Ivoire in connection with the waste management project being developed in that country; (iii) *Output 1.1.3*: Regionally adopted strategies for the waste treatment and recovery including approaches to handle POPs and mercury wastes and reduce UPOPs and mercury emissions. For sound management and a sustainable disposal of waste, a common strategy for in the WAEMU region will be adopted. To strengthen these strategy and guidelines, a study on updating waste production data will be recommended during the preparation of the Full project, (characterization, projection of the annual quantities expected, private and public actors that can be strengthened for sustainable management of waste, important issues requiring a regional reflection, etc.) in each of the countries concerned. In this regard, the quantity of mercury, POPs or even OPD that can be mobilized and treated as part of the project as well as quantities of UPOPs that can be avoided will be well analysed, documented and quantified. *Output 1.1.4*: Regional study

of techno-economic comparison of treatment and recycling of waste (matter and energy) in WAEMU to determine the options of waste treatment technology through an analysis of international experiences in countries with similar conditions and a comparison of alternatives including a SWOT model. Several treatment technologies will be analyzed such as mechanical biological treatment, heat treatment and valorization by composting, digestion, etc. options for producing RDF for thermal use in cement factories will be also explored with due consideration of the context and waste characteristics in project countries.

Outcome 1.2: Capacity of sharing experiences and expertise on sustainable waste management in place and strengthened. To achieve this outcome, the following activities have been planned (i) *Output 1.2.1* : Annual organization of a regional conference in the form of a forum for the development of public-private partnerships for sustainable waste management in the project countries; (iii) *Output 1.2.2* : Constitution of three working groups on priority topics: (a) development of regulatory and institutional frameworks as well as approaches to domesticate requirements of international agreements, (b) development of a programme to recover and recycle plastics waste, Electrical and electronic equipment waste, household wastebioogas; (c) development of effective and sustainable mechanisms to finance the sector (eco-organizations, local taxation, public-private partnership...).

Component 2: Development of national and local capacities for the promotion of best available techniques and best environmental practices (BAT/BEP) in waste management for reducing emissions of UPOPs and mercury

Outcome 2.1: Strengthening the institutional, administrative, legal, technical and regulatory framework for reducing UPOPs and mercury emissions will be achieved through the deployment of 4 outputs. Output 2.1.1 will ensure that regulatory frameworks for controlling the generation of UPOPs and the handling of mercury containing equipment are in place. Project countries will undertake an evaluation of the efficacy of the laws and policies to manage releases of unintentionally produced POPs. This will be followed by the adoption of legislative and/or administrative measures to manage wastes, including products and articles upon becoming wastes, as described in paragraph (d) of Article 6 of Stockholm Convention and the introduction of requirements for use of Best Available Techniques (BAT) /and/or Best Environmental Practices (BEP). For Output 2.1.2 and output 2.1.3 Education and training programs will be organized for environmental authorities on the negative impacts of UPOPs and measures to prevent their generation established as well as training programme directed to environmental and health authorities to promote the reduction of use and releases of Mercury in the sectors covered by the project. Finally Output 2.1.4 will provide an increased capacity of the country for the development of monitoring programs to control the generation of UPOPs and other POPs. Through close cooperation with Stockholm Convention Global Monitoring Plan.

Outcome 2.2: Institutional, regulatory and technical capacities of public and private companies have been strengthened and operational for the development of sustainable waste management sectors. To achieve this outcome the following activities have been proposed: (i) *Output 2.2.1*: Strengthening of municipalities and other communal and national waste management units for project co-ordination. To ensure sustainable management of waste and sustain the actions at the national level, the capacity of municipalities and other structures in charge of urban waste management will be strengthened through national workshops. A Waste management department will be created or strengthened in the relevant municipalities to coordinate waste management efforts. Laws regulating these waste control and management services including the environmental police or health services will be reviewed or developed with the aim of promoting the actions of these structures; (ii) *Output 2.2.2*: Updating and/or enhancing regulatory texts and pollutants emission standards (UPOPs, mercury and hazardous chemical waste) to guide and monitor the improvement of waste management practices. Using existing material such as the Guidelines on best available techniques and provisional guidance on best environmental practices relevant to Article 5 and Annex C of the Stockholm Convention on Persistent Organic Pollutants tailored information will be developed to manage wastes in a sound manner and to minimize the releases of UPOPs and mercury. The strategies that will be developed in this project will be supplemented by framework directives and standards for the management of certain types of waste including: (a) a framework directive on the treatment and recycling of plastic waste; (b) a framework directive on the recovery and recycling of electrical and electronic equipment waste; and (c) a framework directive on the disposal of medical waste (d) a framework directive on the treatment and disposal of POPs; (e) a framework directive on the treatment and disposal of mercury and other heavy metals. (iii) *Output 2.2.3* : Organization, sorting and collection of waste. Through information and communication activities under output 2.1.1 households will receive information and techniques necessary to carry out preliminary sorting. To encourage pre-sorting by households coloured bins will be provided. Recyclable waste will be quantified by enterprises or micro-businesses responsible for the collection of household waste and valued monetarily for households that are interested in sorting. Worksheets for quantification of recoverable sorted waste will be available and a summary sheet will be signed by the waste collectors for each waste removal in order to determine the amounts to be refunded to. Earnings will be deducted from the royalties that households will have to pay for collection services. Waste collected will be sorted by categories and transported to the sorting centres where recycling companies will be able to obtain secondary raw materials. Non-recyclable waste will be conveyed to the technical landfill centers. Given that POPs and mercury are governed by international agreements and require high-tech solutions for their treatment and elimination, the project will identify businesses/companies who have demonstrated their abilities in these areas. A specification and a code of good conduct will be developed and made available to collectors. To achieve this output, the trainers will be trained.

Outcome 2.3: Populations and stakeholders operating in waste production, collection and treatment are sensitized and use best practices in the area: (i) *Output 2.3.1.* : Implementation of an information and communication programme targeted to the municipalities, the national authorities, households and schools to promote good practices of source reduction and waste treatment. The aim is to adequately inform and engage all actors from the production chain to the disposal of waste of good practices for sound production and sustainable management of waste. The goals will be to raise awareness on the problems connected to poor waste management; to build knowledge on approaches and practices for sound management; to communicate the benefits of sound management and wastes valuation through sorting. The scope of the communications program will stretch to the different types of wastes streams as well as specificities related to the practices when faced with harmful chemicals and waste; the target populations are schools, health centres, municipalities and government offices. Various type of support will be considered in national and local languages including television, radio, journals and advertising posters and pamphlets. Audio-visual information includes emission Messages to broadcast will focus on the consequences of poor management of harmful chemicals and waste, good practices of management and recovery of waste, as well as their importance in the preservation of the environment, the preservation of human health and in job creation. Thematic comic as well as toys made from the recovery of the waste will be developed and made available to school; this will help sensitization of children at an early age. Other educational programmes on the sound management of wastes and harmful substances will be introduced into the curricula. Dedicated leaflets on good practices of biomedical waste management will be developed for health centers.

(ii) *Output 2.3.2:* Establishment and operationalization of an ENVIRO-Mobile learning in each partner country. As communication is important in the area of waste, a road programme involving 5 to 10 buses (depending on the country) designated by "ENVIRO-Mobile" will be implemented as part of an educational tour in each of the partner countries of the project. The enviro-mobile is an environmental education but also awareness tool for the local populations on the various risks and impacts of the mismanagement of harmful chemicals and waste. It will serve to accelerate the adoption of good waste management practices in secondary cities and villages. This tool will be implemented in villages or secondary cities by a team of an environmentalist and an audiovisual in 2 steps: (a) the realization and the screening of a film about the process of waste management and recovery; participatory identification of the causes and consequences of poor management of waste; lessons learned and participatory planning of the priority actions of the waste at the local level; (b) the projection of a reference film on sustainable waste management system, the dissemination of posters and flyers in secondary cities and villages, schools and health centres. This will raise awareness of at least 50 secondary cities and 2 500 villages, or about 1 300 000 people in each country on risks and impacts of poor waste management and simple and good practices to encourage sound management of harmful chemicals and waste; (iii) *Output 2.2.3.* : Implementation of at least 10 demonstration programmes for reduction at source/introduction of new technologies for the management of certain categories of waste including POPs.

Component 3: Organizational, technical and financial support to micro-enterprises operating in the waste sector.

Outcome 3.1: Organizational, and technical capacities of micro-businesses strengthened for the promotion of innovative practices in the waste sector. The proposed activities include: (i) *Output 3.1.1:* Installation of 6 unique national "green" windows to support capacity development of the informal sector and the creation of at least 50 micro companies to manage and recycle waste in each beneficiary country. This will lead to strengthening organizational and technical capacity of the informal sector, and ultimately to its evolution into a certified formal sector. During the preparation of the Full project, a country-by-country assessment mission will be initiated with the organization of a workshop in each partner country with the aim of seeking for investment and support for active micro-companies and operators in the waste sector. A unique 'green' window will be set up in each of the countries to accompany these activities. (ii) *Output 3.1.2:* Technical capacity-building and improvement of the practices of SMEs, associations, etc. of the waste sector: This activity will strengthen SMEs' technical capacities. The project should thus complement policies or strategies for the improvement of waste management practices through the promotion of public-private cooperation. Several associations of active women in the cleaning, collection and treatment of waste are operational. These operators and SMEs will be particularly targeted by the project for technical capacity building to improve their field operations; (iii) *Output 3.1.3:* Development of a mechanism for certification and granting of approvals to micro-enterprises with technical and operational capacities for collection, treatment and recycling of waste. Given the fact that waste collection remained hitherto in the informal sector, stakeholders will be registered and certified with a view to giving them an exclusive right to operate in the area of waste management.

Outcome 3.2: Sustainable financing of the waste sector strengthened and developed. The planned activities include: (i) *Output 3.2.1:* Support to micro-finance institutions and banking institutions in promoting financial support mechanisms tailored to the EIG and micro-companies for equipment procurement, as well as waste collection, treatment and recycling. A financial support mechanism for EIGs and micro-companies for the financing of equipment and collection and treatment of waste will be implemented with the aim of granting micro-loans to micro-companies and EIGs actively involved in the waste management sector including POPs. Initiatives carried out in Togo could serve as examples for exploring financing opportunities for micro-enterprises in the other project countries. (ii) *Output 3.2.2:* Operationalization of 50-100 micro-loans PER country adapted to the needs of micro-companies for the treatment and recovery of waste; (iii) *Output 3.2.3* : Establishment of sustainable financing

mechanism for the waste sector: to ensure a continuous and secure funding beyond the project period, levies will be introduced on electricity, water, of telephone, etc. and eco-taxes on items such as tools, household equipment, mercury containing bulbs, lead and cadmium batteries, torches, medicines, household packaging, etc. in order to provide funds for the sustainability of the actions of the project. The National Environment Fund will provide the interface between the public services responsible for collecting environmental taxes (tax, customs, etc.) and the municipalities, to ensure budgeting and rational utilization of eco-taxes. Producers and distributors of consumer goods generating targeted waste will be engaged. To do so, during project preparation, discussions will be initiated with the production industries, importers, distributors, services of taxes, customs, communications, water services, electricity, jobs, etc. Fees and taxes collected will be budgeted at the level of municipalities, the environmental Police and health officers for the expenses related to waste management in order to strengthen their capacity for intervention and support operations. The boards of directors of the national funds of the environment and/or the ad hoc committees will take care of the control and management of these fees and charges.

Component 4: Support for the construction of solid waste treatment and recycling infrastructure and validation of their effectiveness

Outcome 4.1: Improved infrastructure and waste recycling and treatment facilities in the country: the project will support involved countries in planning their waste treatment infrastructure to respond to the mounting global waste in capitals but also in secondary cities that will be selected (one secondary city per country). (i) *Output 4.1.1*: will implement closure and rehabilitation of at least 300 small dump sites of neighborhoods which are sources of emission of dioxins and furans as well as mercury within the selected cities; (ii) *Output 4.1.2*: The construction of a landfill, treatment and demonstration sorting facility in Niamey; (iii) *Output 4.1.3*: the construction of landfill and treatment and demonstration sorting facility in Thiès ; (iv) *Output 4.1.4* : the strengthening of the landfill and infrastructure for treatment and sorting in Bamako; (v) *Output 4.1.5* : the construction of the landfill and sorting infrastructure in a secondary city in each country ; (vi) *Output 4.1.6* the construction of a waste treatment and sorting facility in Lomé and Cotonou.

Outcome 4.2: The sorted waste recycled by sectors. With regard to the scourge of plastic waste in the capitals and country's commitment to fight their proliferation, the recycling of such waste will be carried out in all the cities concerned as pilot actions. On the other hand, pilot cities were selected for other waste streams taking into account activities developed or efforts deployed in such cities. Planned activities include: (i) *Output 4.2.1*. Support to enterprises for plastic waste recycling (Cotonou, Lomé, Thiès Ouagadougou, Bamako, Niamey and a city of average importance by countries). The project will support companies selected for the implementation of new technologies of plastic waste pellets and other objects of value. Prospective companies using pellets will be identified, and agreement will be signed with them towards recycling granules; (ii) *Output 4.2.2*. Support to pilot electrical and electronic equipment waste recycling companies (Lomé, Thiès, Cotonou). Two projects for electrical and electronic equipment waste recycling will be conducted in the cities of Lomé and Thiès; (iii) *Output 4.2.3*. Support to hospitals or pilot companies for the treatment of medical waste (Thiès, Lomé, Bamako, Cotonou); (iv) *Output 4.2.4*. Support for pilot companies of composting for the development of peri-urban agriculture (Cotonou, Lomé, Ouagadougou, and a town of average importance by countries); (v) *Output 4.2.5*. Valorization of the biogas produced in the landfills in electrical energy or flaring to reduce the contribution of methane emissions to global warming (Cotonou, Lomé, Thiès, Ouagadougou, Bamako, Niamey). The energy produced could replace mineral coal used in clinker mills (in Togo for example); (iv) *Output 4.2.6*. Demonstrative waste recycling unit (energy or matter) in secondary cities. This unit will be installed in a secondary town to be selected and will take into account the results of the study.

Outcome 4.3: The effectiveness of the constructed facilities is evaluated and lesson learned disseminated. In order to document the contribution of the project to the global goals of Stockholm and Minamata Conventions; the reduction in the generation of UPOPs as well as other hazardous and toxic releases such as Mercury as a result of the application of BAT and BEP for sound waste management will be assessed in *Output 4.3.1* and a report generated. In *Output 4.3.2* Lessons learned from the demonstration projects will be documented and disseminated for replication purposes.

Areas of intervention of the project and target population

The project covers 6 WAEMU countries: Benin, Burkina Faso, Mali, Niger, Senegal and Togo. Although the issue of waste is a general problem faced by every city (capital cities, secondary cities) and even rural areas, this is a pilot project which will target the capital cities and one of the secondary cities of medium importance of each of the recipient countries. The choice of the capital city (except Dakar)¹⁵ is justified because primary efforts of governments in waste management started in these cities and the project seeks to reinforce these actions in order to address the challenges related to waste management in these cities considered to be representative of the country's image. In addition, a secondary city among many others will be selected by country to test the ability of such cities to supervise sustainable waste management. Criteria will be set for the selection of these

¹⁵ In Dakar, similar activities are ongoing. . The project will focus on Thiès town and other secondary town in Senegal.

secondary cities. In total 14 cities will be directly affected by the project. All segments of the populations of the countries are target groups of the project but the physical implementation will take place in selected cities. All the players in waste management are concerned.

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

The analysis of the waste management in the countries covered by the project reveals that sector met several particular financial difficulties. The problems posed by proliferation and waste management in the countries covered by the project will become even more pressing, given that the populations of these countries grow and that consumer needs will increase accordingly. The government officers, the municipalities, the SMEs and local groups and population who are involved in managing these wastes are nowadays constrained by the lack of policies, regulation and organization, technical, material and technological deficiencies, as well as financial difficulties in order to play fully their roles. With no external funding, the concerned countries could not have efficient and sustainable waste management system. Thus, the stakeholders will be more and more unable to face the predicament of increasing amounts of wastes that contains mixtures of household waste and of harmful chemicals leading to the development of severe diseases, the deterioration of the living conditions of the populations and the degradation of the global environment. Without additional funding this situation will not be reverted.

The implementation of best available techniques and best environmental practices proposed under Stockholm Convention as well as those under development for Minamata Conventions have been hindered by lack of knowledge and resources as reported by Mali and Senegal in their National Reports. The GEF Funding will be used for technical assistance to support the development and the setting up of the harmful chemicals and waste comprehensive and sustainable management system to reduce the POPs, the UPOPs, the Mercury, the GHG. This will provide guidance to the investment on the best available technologies and practices and help to guide the decision of the investment on the costs and benefits of the selected technologies and practices in order to contribute to the sustainable management of the global environment and to improve the living environment and the health of populations and their living conditions through the promotion of green jobs in the beneficiaries' countries. Thus, the GEF funding will help for : (i) the establishment and implementation of policies, regulations and efficient, consistent and harmonised standards and tools to promote the removal of barriers preventing the sound management of waste (outputs 1.1.3, 1.1.4, 2.1.2, 3.1.3, outcome 1.2.); (ii) the support of regional approaches to eliminate and reduce harmful chemicals and waste (outcome 1.1. and 1.2.); (iii) the building of organizational and institutional capacity at the level of municipalities, public administration and the private sector (outputs 2.1.1., 2.1.3, 3.1.1., 3.1.2) ; (iv) the introducing of innovative practices and development of tools and alternative technologies for elimination, reducing, recycling and valorization of the Mercury, the POPs, the UPOPs in the waste (outcome 4.2.); (v) the Establishment and operationalization of sustainable financing mechanism, appropriate tools and economic approaches for the waste sector to ensure a continuous and secure waste management beyond the project period (outputs 3.1.1., 3.1.2., 3.2.2., 3.2.3.) ; (vi) the development and operationalization of a communication and awareness system for the adoption of good behaviours and practices by stakeholders for a sound waste management (outcomes 2.2.) ; (vii) the strengthening and the improvement of the technical capacities and skills in project administration (output 2.1.1).

The co-financing of the BOAD, the Member States and others will be more focused on investments including : (i) the establishment of infrastructure such as the landfill installation and the rehabilitation of small waste dumps (outcome 4.1.); (ii) the support to the strengthening of the capacity of the micro-finance institutions for the promotion of financial mechanisms tailored to the micro-companies for financing waste collection and recycling equipment (Output 3.2.1); (iii) support to pilot companies (EIGs, SMEs and CSOs) for collection, treatment, recycling and valorization of harmful chemicals and waste and methane flaring (outcome 4.2.) (iv) the support of the information and communication programme (outcome 2.2.); (v) support of the project coordination (Output 1.1.1) in selected cities.

5) Global environmental benefits:

According to the Second regional monitoring report for Africa developed under the Global Monitoring Plan of Stockholm Convention; PCDD/PCDF are widely detected in air in this region which could be attributed to releases from uncontrolled combustion of wastes including municipal wastes, medical wastes incineration, biomass burning of agricultural fields, industrial power generation activities and related thermal processes. Addressing the releases of UPOPs from anthropogenic sources is one of the key elements for the effectiveness of Stockholm Convention. The Convention therefore requires that Parties; among others; undertake an evaluation of the efficacy of the laws and policies adopted to manage releases of unintentionally produced POPs; developed strategies for identifying products and articles in use and wastes consisting of, containing or contaminated with chemicals listed in Annex A, B or C; introduced requirements for use of Best Available Techniques (BAT) /and/or Best Environmental Practices (BEP) for new and existing source. Of the project countries Mali Senegal and Togo reported the state of advancement of these obligations and all three reports that they could not implement action plans due to lack of adequate funding insufficient information and or lack of necessary technologies. Mali and Senegal report not having introduced BAT/BEP; The

other project countries provide no data showing the crucial need for support in sound waste management as proposed in the project. Also the management of mercury and mercury-containing waste is the last step in the product life-cycle. The elimination of mercury in products and processes may be the most efficient way to avoid the presence of any form of mercury in waste. While mercury is being phased down from products and processes, there is still a need to manage mercury from this end of the product life-cycle.

The project is therefore key in addressing the needs of the Stockholm Convention on Persistent Organic Pollutants where it is a requirement “that each party shall adopt the measures as deemed necessary to reduce the total releases derived from anthropogenic sources belonging to each and all of the chemical products included in Annex C to protect the health of the population and environment globally”. Through the promotion of waste sorting it will also establish approaches that will facilitate the identification of harmful chemicals and their containers in the urban waste stream and ensure that such wastes will be channelled to appropriate disposal centers.

Under its component 1, the project will develop strategic, legal, technical, financial, tools etc. to reduce significantly POPs, UPOPs, GHGS, heavy metals and other pollutants produced by waste management; this is governed by international conventions and treaties to which the countries are Parties. It provides under its component 2, the implementation of a programme information and communication for the benefit of households and schools to promote best waste management practices for reduced pollution. Its component 3 will organize and financially strengthen the micro-enterprises, which will be involved in the fight against pollution set. Component 4 will develop the construction of technical landfill centers, implementing sorting systems and waste treatment and will significantly contribute to waste recycling in order to reduce such pollution. The project will thus provide technologies and the alternative options for the environmentally sound disposal of plastic, medical, electrical and electronic waste, etc.

In addition to ensure the effectiveness of Stockholm; Minamata and Basel Conventions; the project will have additional global benefit reaching out to Climate Change control through reduction of GHG emissions. Although some cities like Ouagadougou have landfill sites, ducts were implemented to retrieve the methane and release it into air. The project implements biogas retrieval facilities to produce energy intended for the genset supplying in power the landfill facilities and the population. The energy produced will help replace part of the fossil fuels used in some factories, thereby contributing to reduced GHG emissions. In cases where the captured biogas would not be significant for power generation, it will be flared to reduce its impact on global warming. The project will reduce annually: (i) 200 metric tons of POPs and UPOPs. (ii) 15 metric tons of mercury; (iii) 200 000 tons of CO₂e-. A comprehensive assessment to the amount of UPOS and mercury to be reduced by the project will be undertaken during the PPG phase.

6) Innovation, sustainability and potential for scaling up:

The project clearly indicates the innovative character of the approach in terms of capitalization of the achievements, research practices and introduction of new facilities and techniques for waste treatment and recycling in the WAEMU region. The project develops a technical approach and practices for handling various types of waste including plastics, electrical and electronic, biomedical, kitchen leftovers, etc. throughout their value chain. The project seeks to support the valorisation and the organization of the sector, transforming the waste sector, so far handled by people and the practitioners themselves, in an economic sector, job creation, improved living and socio-economic conditions of the country, attractive to investors to boost national and regional economy. Thus, an induced development comes from ecological waste management. The project will involve academics and research institutes amongst all other stakeholders mobilized in the context of the regional platform for exchange of experiences or expertise, or in monitoring studies committees. Techno-economic comparison of technologies will be a good example in terms of innovation and replication technologies for the region's options. The intensification of the project will therefore be sought by linking the project activities to business opportunities related to waste management. The project seeks the strong involvement of the private sector in the search for sustainable waste management solutions in order to ensure sustainability of the proposed initiatives. Awareness-raising of the population and especially children, young people and women will consist of promoting healthy and sustainable waste management.

A project component will consist of maintaining and strengthening at institutional level the regional secretariat so that it may continue to play a role of coordination in the area of waste management beyond the project. This network will need to establish synergies with African networks such as (www.sweep-net.org) or international networks such as (www.iswa.org). The network will monitor the project outcome and impact during its implementation and after completion.

In addition to strengthening the technical capacity of municipalities, support to the implementation of management strategies as well as the operationalization of a constraining cooperation framework, will help ensure sustainability of waste management actions in the countries.

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

The project will engage both public sector and private sector stakeholders. So many parties will be involved in the preparation and implementation of the project. These include: (i) Government represented by the ministries in charge of environmental management and land-use development, university laboratories and agricultural research laboratories, municipalities; (ii) the private sector consists of companies in different activities along the waste disposal chain, and which represents a set of key players in waste management development; (iii) the civil society and informal sector groups, comprising several associations, acting as promoters of initiatives in the field of waste collection and recycling; (iv) active NGOs in the areas of waste management and environmental protection; (v) households that are main waste producers; (vi) microfinance institutions and banks concerned for the granting of small loans to SMEs in the context of waste management; (vii) communication services (mobile and fixed telephony), electricity, water services; (viii) customs and tax services; (ix) the West African Development Bank (BOAD) and the West African Economic and Monetary Union Commission; (x) the Global Environment Facility (GEF) fund; (xi) the international development partners such as European Union, Agence Française de Développement and others which operate in the field or interested in waste management.

During the project preparation, a series of consultations will be undertaken with stakeholders. Interviews will be conducted with all the players in each country. Investigations will be carried out with training actors including SMEs, associations, and informal sector groups in order to collect information on the opportunities and constraints facing each of these actors to take them into account in the preparation of the full project document. NGOs will also be very involved in the project preparation given that their actions on the ground in raising awareness are not negligible. The project will mobilize several actors from both public and private sectors through knowledge sharing platform.

3. *Gender Equality and Women's Empowerment.* Are issues on gender equality and women's empowerment taken into account? (yes /no). If yes, briefly describe how it will be mainstreamed into project preparation (e.g. gender analysis), taking into account the differences, needs, roles and priorities of women and men.

The gender element will be very significant in the project since several associations, strategy and other micro-enterprises in the field often include women (for example: in Ouagadougou, a green brigade comprising hundreds of women mobilizes three times a week to clean the entire capital city). For the preparation phase, women's groups and associations will be consulted in order to gather their opinions and take into account their concerns in the preparation of the full proposal. During the implementation, programmes to strengthen capacities and mechanisms for support to micro-enterprises will particularly target women. Housewives are also important targets in any programme for communication and information to improve waste management practices. Men on the ground will be more involved in waste collection activities. Production and recycling and reclamation, strongly involve women and will be generating revenue for these activities, which will certainly improve their living conditions and their financial autonomy. Women will therefore play a very important role in the implementation of the project.

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).

A major challenge will be to launch a common dynamics mobilizing all countries to support improved waste management practices in the WAEMU region. This implies a common analysis of the challenges and restructuring options through a dynamics that requires a lot of efforts in terms of harmonisation of the courts and the policies. In addition, this project will involve several players from both the public and private sectors through knowledge sharing platform. This approach involves several organizational and intergovernmental coordination and inter-stakeholder challenges. In order to move to a country of the region, the secretariat will thus ensure coordination of this program in conjunction with national partners within the departments in charge of the waste sector. Another challenge will consist of conducting steadily approaches and studies to reduce disorderly dumps and construction of waste processing and sorting infrastructure. The constraints are not just related to land and financing but also to the participation of civil society and the acceptance of new infrastructure following the phenomenon "NIMBY: Not In My BackYard". The waste sector involves at the same time several speakers and several departments and the implementation of policies therefore require extensive processes of consultation and coordination. All these aspects are so important and the project secretariat will thus provide facilitation measures for the smooth running of the project. Other risks associated with the project are summarized in the following table as well as mitigation measures.

Risks	Level	Mitigation measures
Low participation of stakeholders in waste management	weak	A participatory approach will be developed under the project. In its implementation, the project includes information, exchange and communication activities between the players in the field. Thus, through sensitization, radio and television stations, workshops, posters in local governments (city halls, departments, chiefdoms, etc), press releases and public places, populations and all the players will be widely informed of sustainable waste management sought by the project as well as the creation of job opportunities.
Emergence of constraints linked to land ownership for the installation of landfill	weak	Sites are already identified by countries on the basis of the development master plan of the cities. However, the project will ensure that the sites are not subject to any problem regarding land tenure
Weak powers of SMEs to cover expenses related to waste management	weak	The financial capacities of SMEs will be strengthened through the national “green window” that will be established under the project. A public-private partnership will also be promoted. The microfinance companies will also be involved in the implementation of the project to provide small loans to producers’ groups or associations in waste management.
Interference by political authorities in the project management	weak	The project foresees the strengthening of municipalities and other units in communal and national waste management with a view to the coordination of the project. These players will benefit from the support of the regional secretariat for project coordination at regional level.
Low participation of women	weak	The program encourages strong involvement of women through sensitization and building their capacity. Waste pathways involve more women and young people
Failure in coordination of activities due to conflicts of interest between stakeholders	weak	Establishment of a consultative platform, exchanges concerning information and sharing of know-how between the various players on the project at a time. The secretariat to establish in a country of the region will thus carry out the coordination of this program in conjunction with national partners within the departments in charge of the waste sector.

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

The proposed project will avoid duplication and seek to find synergy with other ongoing projects and programs, particularly the initiatives listed below which are not included as baseline activities but nonetheless have strong linkages with the proposed project activities. Collaboration will be done via communications with the responsible entities mentioned below and the entities will be invited to participate in stakeholder consultation meetings and be consulted in all project phases.

It is, among others:

- UNIDO: Environmentally sound management of municipal and hazardous wastes to reduce emission of unintentional POPs in Senegal. The goal of the project is to reduce POPs releases from hazardous waste and municipal wastes by demonstrating BAT/BEP within the context of the implementation of the National Implementation Plan (NIP) under the Stockholm Convention as well as to enhance legislations and promote education and awareness pm chemical safety on POPs;
- World Bank: Technical assistance for Management of hazardous and medical waste in Benin,
- AfDB: Creation of Waste Recovery and Treatment Centre (CTVD) in Ouagadougou, Burkina Fasso
- BOAD/AFD/UE : Construction of a Landfill centre in Aképé, Togo
- OSC: the national and international waste management programmes initiated by civil society, such as Health Centre of Bethesda in Benin, which assists communities to set up waste management systems and the Africompost programme, the development of biowaste composting units in 6 cities in Africa, including Lomé in Togo
- National project for treatment and valorisation of plastics waste (PTVP) in Burkina Faso whose objective is the Organization of collection, transport, storage and secure recovery of plastic waste in the country. The project has stored on the landfill site of Ouagadougou more than 200 tons of plastics bought by the Ministry of environment. The Ministry and Municipality don’t have funding and technologies to valorize the plastic wastes. There are fears that the stock could be burned one day.
- World bank and FAO: the Africa Stockpiles Programme (ASP) launched in September 2005 with the goal to clear all obsolete pesticide stocks from Africa and establish measures to help prevent their recurrence. Projects under the program are also designed to train and strengthen institutions on important chemicals-related issues, create opportunities to address broader hazardous waste management issues, and evaluate new cleaner disposal technologies.

All the above projects are demonstration or pilot projects that have addressed some aspects of waste management. They have not been developed to establish a comprehensive system of sustainable management of harmful chemicals and waste. However, some results can be exploited in synergy and/or complementary with the present regional project. These results will be taken in account in the Full project at the Project preparation phase. The shortcomings of ongoing projects will be addressed by the activities of this project.

The project will take into account support programmes embarked upon by other partners such as the Green Help Desk initiated by ESCWA and for this, coordination with ECA/SRO-WA will be committed. This approach which aims to capitalize the previous experiences and duplicate the best practices is critical to the success of this project as it has a regional scope.

The approach of the project is to empower more municipalities in waste management. At regional level, the project will be coordinated by a regional secretariat composed of experts in the various areas relating to waste management. At national level, within each municipality of the targeted cities, a technical committee and a project steering committee will be put in place. The Steering Committee will be responsible for the administrative and financial management of the project while the Technical Committee will be responsible to provide technical support to guide the project activities. Beyond such committees, waste management directorates will be strengthened with technical assistance at municipal level.

Planning and monitoring and evaluation: The project monitoring and evaluation system will be built around the logical framework as a tool of management, planning and assistance to decision-making for all partners involved in the implementation of the project. Several guides and tools will be used to measure the performance of the program. Firstly at the national level and then at the regional level. Investigations on effects/impact during the startup, the mid-term review, the project completion and the analysis of annual technical, economic and financial performance will measure the project impact. A computerized database will be developed for each country of intervention. These national data will be centralized for analysis on the level of performance of the project. Quantitative targets will be set by country and then by region of intervention at the start of the program during the review of the logical framework, with stakeholders taking into account the intervention sites. A mid-term review and final evaluation are planned in order to assess changes in the reference situation. The monitoring and evaluation system should support decision-making for the adoption of actions or activities that can improve future initiatives. Monitoring and evaluation tools will be developed based on existing mechanisms and ongoing projects at operational level (survey records, further investigation on the effect/impact evaluation, monitoring activities, thematic studies, nominative targeting mechanism, dashboards).

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.

The project draws on international conventions to which beneficiary countries are parties. These include, among others: (i) the Stockholm Convention on persistent organic pollutants (POPs), whose main objective is to protect human health and the environment against persistent organic pollutants, by reducing or eliminating their emissions into the environment, (ii) the Minamata Convention on mercury whose objective is to protect human health and the environment from emissions and anthropogenic mercury and mercury components; (iii) the Rotterdam Convention, which is intended to encourage the sharing of responsibility and cooperation between parties in the field of international trade of certain hazardous chemicals in order to protect health and environment against possible damage; (iv) the Vienna Convention and the Montreal Protocol on substances that deplete the ozone layer, which aims to reduce and completely eliminate substances that reduce the ozone layer, (v) the Basel Convention of 22 March 1989 on the control of transboundary movements of hazardous wastes and their disposal.

The project is also consistent with the environmental management policy, the strategic document on poverty reduction and promotion of employment, the strategies and plans on climate change, and the national legal texts regulating the waste sector.

In Mali, the project is consistent with the policy (OP N° 5: Promotion of greenhouse gas emission mitigation actions by encouraging the adoption and transfer of technologies and innovative environmental practices). And waste management has been selected among the 4 sectors promoted (P.19 - 20) under the national policy on climate change. It is in line with the guiding principles of this policy including (i) the principle of decentralization, whereby local authorities are responsible for the socio-economic development management of their respective territorial constituencies...; (ii) the principle of involvement/accountability whereby all stakeholders including public institutions, citizens, civil society, economic actors, teachers, researchers are involved each, at their level, in the fight against climate change; (iii) the principle of fairness and accountability, be it common but differentiated, etc. It also fits into the legal and regulatory texts governing the environment and waste management.

In Niger, the project is consistent with the national strategy and action plan for the management of persistent organic pollutants including the first strategic area “securing human and animal health and the preservation of the environment”. It is also based on the legal texts, including: (i) the Constitution of 26 December 1992 devoted to the title and rights of the human being, the right of everyone to a healthy environment; the State is also charged with protecting the environment (article 28 paragraph 1) ; (ii) the law N° 98-56 of 29 December 1998 relating to the environment; (iii) etc.

In Burkina Faso, the project adopted texts aimed at improving the environment and the protection of human health and natural resources. These include, among others: (i) the law N° 005/97/ADP on the environment which remains the legal document of the basic environmental management code including waste management; (ii) Act No. 055-2004/AN of 21 December 2004 on the general code of territorial communities in Burkina Faso gives powers to municipalities regarding environmental, hygiene and natural resource management; (iii) Decree No. 98 - 323/PRES/PM/MEE/MATS/Julie/MS/MTT regulates the collection, storage, transport, treatment and disposal of urban waste, as provided under the Environmental Code in Burkina Faso; (iii) etc.

In Senegal, the project is in line with the priority actions (PAP) under the 2014-2018 plan including support for the creation of green job opportunities. It is also part of Act No. 2001-01 of January 15, 2001 concerning the Environmental Code which stipulates that waste must be disposed of or recycled in an environmentally sound manner in order to remove or reduce their harmful effects on human health, natural resources, fauna and flora or the quality of the environment (article L30); local communities and corporate bodies shall assume disposal of household waste possibly in conjunction with regional services and national public services, in accordance with the regulations in force (article L32); waste elimination includes collection, transportation, storage and processing operations necessary for the recycling of useful materials or energy, or any deposit or disposal at appropriate places on any other dumps under conditions designed to avoid nuisance... (article L33), etc.

In Benin, the project stems from the existing texts, inter alia: (i) the framework law on environment in the Republic of Benin, in its Article 67 which states “waste must be subject to adequate treatment in order to eliminate or reduce to a required level their harmful effects on human health, natural resources, or the quality of the environment in general.; (ii) Decree No. 2003-332 of 27 August 2003 relating to solid waste management in the Republic of Benin enacted by the Executive, in accordance with the framework law on environment and which aims essentially to: prevent or reduce waste production and its harmfulness, promote waste treatment through recycling, reclamation, use as a source of energy, organize waste elimination; restrict, monitor and control waste transfer, etc.

In Togo, the project takes root in the national environmental policy which aims to promote a comprehensive and rational environmental management to improve life conditions of the people towards sustainable development. It consists, among other things, of (i) monitoring the quality of the environment; (ii) preventing and combating pollution, nuisance, natural and technological disasters; (iii) preserving natural resources. The guidelines for this policy are focused, inter alia, on: (i) improving conditions and life quality of the populations, (ii) building national capacities in environmental and natural resource management; (iii) etc. The project falls within the hygiene and sanitation policy in Togo which aims to put in place an appropriate legal and institutional framework to promote hygiene and sanitation sub-sector and ensure its development. Specifically, it aims to: (i) build national capacity in hygiene and sanitation; (ii) develop local expertise in hygiene and sanitation and provide municipal capacity to plan and manage urban sanitation services; (iii) create in the populations a culture of hygiene and sanitation for the acquisition of sustainable and supportive behaviour for improving their life and health quality, etc. (iv) It is also in line the texts such as: (i) Law No. 2008-005, May 30, 2008 pertaining to the framework law on environment, which represents the general legislative framework for environmental management and, in particular, waste; (ii) the public health code (Law n ° 2009-007, May 13, 2009); etc.

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.

Knowledge management will be carried out through the production and dissemination of information via fact sheets, notes for policy makers, press releases, scientific publications, databases on practices and awareness raising tools (documentaries, guided tours of development stakeholders, etc.). A site dedicated to the project will be launched and will provide a platform for exchanging information and knowledge in the waste sector in the region. All experiments will be capitalized and documented for future replication, fact sheets on the status of the waste in the country and notes to the policy will be published and will be made available to all practitioners and other stakeholders in the sector. Project may further contribute to feed in from other programs relevant information on the household and hazardous waste sector. Complementary activities such as: (i) annual workshops bringing together community, departmental, regional and national stakeholders, private sector, associations, NGOs, etc. to discuss opportunities and constraints, share experiences and promote learning, incorporation of reports into the database of municipalities and statistics directorates; (ii) the dissemination of information on lessons learned and experiences shared through programs on public and private media (local, national and international televisions and radio stations).

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


A. RECORD OF ENDORSEMENT¹⁶ 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 OFF endorsement letter).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Yao Dziwonou FOLLY	GEFOFP Togo Directeur de l'Inspection des Ressources Forestières	MINISTERE DE L'ENVIRONNEMENT ET DES RESSOURCES FORESTIERES	DECEMBER, 17 TH 2015
Issa Fahiri KONE	GEFOFP Mali	MINISTERE DE L'ENVIRONNEMENT, DE L'ASSAINISSEMENT ET DU DEVELOPPEMENT DURABLE	DECEMBER, 23 TH 2015
Seydou Yayé	GEFOFP Niger General Director of Planning	MINISTERE DE L'ECONOMIE ET DES FINANCES	JANUARY, 07 TH 2016
Mariline DIARA	GEFOFP Senegal Directrice de l'Environnement et des Etablissements Classés	MINISTERE DE L'ENVIRONNEMENT ET DU DEVELOPPEMENT DURABLE	JANUARY, 08 TH 2016

B. GEF AGENCY(IES) CERTIFICATION

This request has been prepared in accordance with GEF policies¹⁷ 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
Almamy M'BEMGUE West African Development Bank		JANUARY, 11 TH 2016	Youssouf TOURE ytoure@boad.org	+228 22 21 59 06	ambengue@boad.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.

¹⁶ 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.

¹⁷ GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

ANNEX

PIF ANNEX ON GEF FINANCING CEILINGS FOR GEF PROJECT AGENCIES

Date: April 7th, 2016

To: The GEF Secretariat
Washington, DC 20433

Subject: GEF Project Agency Certification of Ceiling Information

Per requirement for newly accredited GEF Project Agency, I am pleased to inform you that

- the largest project implemented (or executed) by the Banque Ouest Africaine de Développement is US\$ 60 million¹⁸ as of the end of the last fiscal year 2015, and
- the total amount of all the projects currently under implementation is US\$ 450 million as of the end of the last fiscal year 2015.¹⁹

I certify that the value of the project "Impact Investment and Capacity Building in Support of Sustainable Waste Management to reduce emissions of unentional POPs (UPOPs) and mercury in West Africa, for Benin, Burkina Faso, Mali, Niger, Senegal, and Togo, being submitted to GEF for 17,658,000 US dollars is smaller in terms of US dollars than the largest project that the Banque Ouest Africaine de Développement has implemented (or executed) to date.

I further certify that the total US dollar value of GEF financing currently under implementation by the Banque Ouest Africaine de Développement , including the requested GEF financing for this project, does not exceed 20 percent of the US dollar value of total projects that the Banque Ouest Africaine de Développement currently has under implementation.

Sincerely,



MBENGUE Almamy
GEF Project Agency Coordinator
Banque Ouest Africaine de Développement

¹⁸ This amount excludes co-financing.

¹⁹ In support of the above statements, a copy of the (a) signed loan/grant agreement for the largest project [name of Agency] has implemented (or executed), and (b) a list of all projects (together with their amounts in US dollars) will be sent via email under a separate cover to the GEF Secretariat's account at Project_Agency@theGEF.org with the understanding that these supporting documents will be treated with utmost confidentiality and will not be shared with any parties external to the GEF Secretariat.

Annex 1 : Analysis of the legal framework for waste management

Countries	Law	Decrees	Orders	Weaknesses
BENIN	<ul style="list-style-type: none"> - Act No. 87-015 of 21 September 1987 establishing the public health code; - Act No. 97-020 June 1997 indicating the construction standards to be met by private health facilities; - Law N ° 87-015 of 21 September 1987 public health code in the Republic of Benin, articles 4; 6; 7 and 9 of this Act indicate the conditions for handling of waste on public roads or outside homes. - Law No. 97-029 of 15 January 1999 on the organisation of towns, provides the Commons, under its chapter III, skills regarding the environment, hygiene and safety. 	<ul style="list-style-type: none"> - Decree No. 97-616 of 18/12/1997; - Decree No. 2002-484 of 15 November 2002 on sound management of biomedical waste; - Decree N ° 2003-332 of 27 August 2003 on solid waste management in the Republic of Benin. This decree focuses, inter alia, on waste prevention and limitation and its harmfulness during their production and their management with a peculiar focus on the promotion of recycling... 	<ul style="list-style-type: none"> - Order No. 3667/MSP/DC/S GM/DNPS/SSHC C establishing the conditions and standards of health centres. 	<ul style="list-style-type: none"> - the Decree of law N ° 87-015 of 21 September 1987 does not however provide for further information on the penalties for offences; - the major difficulty lies in the non-default enforcement of orders and the lack of compliance with existing texts.
BURKINA FASO	<ul style="list-style-type: none"> - Law No. 005/97/ADP on the environmental code, it defines waste (chapter II, Article 5), and outlines measures to improve the living environment (chapter III, Article 58) as well as the offences and sanctions to a healthy environment; - Law No. 14/96/ADP of 23 May of 1996 on agricultural and land reform; - Law No. 2004/055-year on the General Code of territorial communities (CGCT) in Burkina Faso stated that local authorities work together with the State for natural resource management and improved living conditions. 	<ul style="list-style-type: none"> - The enforcement of Decree No. 97-054/PRES/PM/MEF of 6 February 1997 through standards of utilization of management defined in law, govern all renewable or permanent natural resources. It provides under article 33 that "the Ministry of Environment shall combat pollution and nuisances arising from activities carried out by individuals and public authorities; - Decree No. 2001-185/PRES/PM / MEE establishing standards of emission of pollutants into air, water and soil, contains a number of provisions on emissions that can be detrimental in terms of air, water and soil pollution in Burkina Faso. 		<ul style="list-style-type: none"> - The laws contain general provisions on waste; the specific management of waste is not defined, - The obsolescence of certain provisions; - Ignorance and non-application of regulations by the populations;

Countries	Law	Decrees	Orders	Weaknesses
MALI	<ul style="list-style-type: none"> - Act No. 01-020 of 30 May 2001 on pollution and nuisance. The Act allows for pre-collection of solid waste in local communities; - Act No. 91-047 23 February 1991 on environmental protection and life quality. 	<ul style="list-style-type: none"> - Decree No. 01-394/P-RM of 6 September 2001 setting out the procedures for solid waste management - Decree No. 01-395/P-RM of 6 September 2001 setting out the procedures for waste water and farmland management; - Decree No. 01-396/P-RM of 6 September 2001 setting out the procedures for noise pollution management; - Decree No. 01-397/P-RM of 6 September 2001 setting out procedures for air pollutant management; - Decree No. 98-293/P-RM of 8 September 1998 setting out the organizational and operational procedures of the national directorate of sanitation and control of pollution and nuisances; - Decree No. 95-325/P-RM of 14 September 1995 setting out detailed rules for the enforcement of the law on environmental protection and living environment; 		<ul style="list-style-type: none"> - Law N ° 01-020 dated May 30, 2001 appears not to take into account domestic liquid waste and electrical and electronic equipment waste management. In addition to this failure, plastic waste is not specifically handled. They are mixed with municipal solid waste and are evacuated to the same place and under the same conditions of handling and transportation; - Please notice that Decree No. 1-394/P-RM of 6 September 2001 establishing the procedures for solid waste management, which is the most relevant and which is closer to its concerns does not deal with electronic and computer waste, but rather with hazardous waste for which owners are especially required to report thereon. It recommends to prepare texts on electronic, electrical and household waste management, because as at now no regulations exist for this type of waste; - Act No. 01-020 May 30, 2001, besides not taking into account electronic and computer equipment waste management, plastic waste is not subject to specific management. They are mixed with municipal solid waste and are evacuated to the same place and under the same conditions of handling and transportation;
NIGER	<ul style="list-style-type: none"> - Law N ° 98-56 of 29 December 1998 on the environment; - Ordinance No. 93-13 of 2 March 1993 relating to public health code - Order No. 98-14 of 2 March 1993 establishing water regime; - Ordonnance N°98-16 of 2 Marche 1993 relating to the mining code; 			<ul style="list-style-type: none"> - Significant differences are observed between texts and realities; - the landfill rules defined under the water regime are not complied with because the landfill often performs in places that were not subject to special study; - The articles of the public health code concerning solid waste are generally not complied with by the population which dumps its waste without taking into account the regulatory constraints and get them burned including in cities and inside their homes; - It should also be noted the absence of legislation specific to plastic waste. However, it is a waste type so specific that it requires an adapted tailored text, particularly in relation to the potential offered by its valuation.

Countries	Law	Decrees	Orders	Weaknesses
SENEGAL	<ul style="list-style-type: none"> - Act No. 72-52 June 1972 setting the maximum rate and determining the modalities on garbage collection tax; - Act No. 83-71 of 5 July 1983 establishing the sanitation code; - Act No. 2001-01 of January 15, 2001, establishing the environmental code; 	<ul style="list-style-type: none"> - Decree No. 74 - 338, April 10, 1974 regulating the discharge and dumping of garbage; 		<ul style="list-style-type: none"> - Decree No. 74-338 of 10 April 1974 is null and void in light of the evolution of environmental, socio-economic and political data of the moment; - This decree does not mention solid urban waste recycling, which is now a relatively buoyant sector. In its Article 10, it lays emphasis on disposal methods such as landfilling, incineration and industrial processing. However, reclamation and recycling have become solid waste management modes, more and more promoted in the country in a sustainable development perspective. The Decree does not address either the question of transfer centres, sorting centres and centres of landfill; - Decree Law No. 83-71 of 5 July 1983 establishing the Code of hygiene of application has never been taken and hygiene service is unable to establish an effective national policy on individual and public hygiene, in particular because of scarce means of intervention and weakness of its workforce; - no inter-ministerial order has been taken and the legal framework remains incomplete and inadequate to ensure environmentally sound waste management;
TOGO	<ul style="list-style-type: none"> - Law No. 2008-005 of 30 May 2008 establishing the framework law on the environment. It is the general legislative framework for environmental management and in particular waste management. It sets in its Article 1 the general principles for environmental protection and improved living conditions; - Act No. 2010-004 of 14 June 2010 relating to water code prohibits any dumping of domestic and industrial refuse or waste modifying water flow or regime; - Law No. 2007-011 of 13 March 2007 on decentralization and local freedoms set out the competencies of local communities in waste management. 	<ul style="list-style-type: none"> - Inter-ministerial order No. 019, MERF, METPT, MS of 17 October 2006 setting the conditions of collection, transport and management of garbage removed from vessels berthed at the Lomé Port Authority; 	<ul style="list-style-type: none"> - Decree N ° 2011-003/PR of 5 January 2011 establishing rules for plastic bag and packaging management states banning of production, import, distribution, marketing, use, collection and recycling of bags and plastics packaging and authorizes the production, distribution and marketing of bags and biodegradable plastic packaging. 	<ul style="list-style-type: none"> - Ignorance from which arises the non application of the rules relating to the enforcement of occupational health and safety and the lack of regulation in the profession of urban solid waste collection are to be deplored; - the incompleteness of the process which translates into a delay or even non-adoption of applicable legislation to give effect to other basic texts; - the lack of control and the deficit in the implementation of the sanctions following breaches of the Act.

Annex 2 : Economic flows related to trade of plastics (2002-2005)

Countries	Imports		Exports		Trade balance	
	Tons	FCFA' bln	Tons	FCFA'bln	Tons	FCFA' bln
Benin	8793	4,9	70	19	-8723	14,1
Burkina Faso	3211	2,7	71	1,4	-3140	-1,3
Mali	102774	22,5	1710	1,9	-101064	-20,6
Niger	6699	4,2	272	0,223	-6427	-3,977
Senegal	75589	45,8	19344	15	-56245	-30,8
Togo	10391	3,3	8390	7,5	-2001	4,2
Total	207457	83,4	29857	45,023	-177600	-38,377

* Data from the final report of the study on plastic waste management in the WAEMU, February 2013