



# REQUEST FOR MEDIUM-SIZED PROJECT APPROVAL (1-STEP PROCEDURE)

TYPE OF TRUST FUND: GEF Trust Fund

## PART I: PROJECT IDENTIFICATION

Project Title:	Improving Mobility in Parakou		
Country(ies):	Benin	GEF Project ID: <sup>1</sup>	
GEF Agency(ies):	AfDB (select) (select)	GEF Agency Project ID:	P-BJ-D00-006
Other Executing Partner(s):		Submission Date:	2014-08-22
GEF Focal Area(s):	Climate Change	Project Duration (Months)	48
Integrated Approach Pilot	IAP-Cities <input type="checkbox"/> IAP-Commodities <input type="checkbox"/> IAP-Food Security <input type="checkbox"/>		
Name of parent program:	[if applicable]	Agency Fee (\$)	173,516

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

Focal Area Objectives/programs	Focal Area Outcomes	Trust Fund	(in \$)	
			GEF Project Financing	Co-financing
(select) CCM-1 Program 2 (select)	Develop and demonstrate innovative policy packages and market incentives to foster new range of mitigation actions	GEFTF	601,484	11,928,904
(select) CCM-2 Program 3 (select)	Promote integrated low-emission urban systems	GEFTF	1,225,000	95,262,796
(select) (select) (select)		(select)		
(select) (select) (select)		(select)		
(select) (select) (select)		(select)		
(select) (select) (select)		(select)		
(select) (select) (select)		(select)		
(select) (select) (select)		(select)		
<b>Total project costs</b>			1,826,484	107,191,700

## B. PROJECT FRAMEWORK

<b>Project Objective: Promote more efficient systems for vehicle maintenance to mitigate GHG emissions and improve air quality while establishing a policy framework leading to more sustainable urban and transport planning and management in Parakou</b>						
Project Components	Financing Type <sup>3</sup>	Project Outcomes	Project Outputs	Trust Fund	(in \$)	
					GEF Project Financing	Confirmed Co-financing
1. Technical assistance for the design and implementation of sustainable urban planning in Parakou	TA	Mainstreaming of urban development strategies to support more sustainable transport and urban policy and planning initiatives based on strategy integrating land-use considerations, transportation planning, and environmental sustainability to address mobility and air pollution	1.1 Capacity of Parakou Council and other local stakeholders sustainable urban management principles and strategies increased to support the formulation of green transport policy framework  1.2 Urban Master Plan updated to include comprehensive integrated sustainable urban management principles	GEFTF	226,484	9,601,313

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

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

<sup>3</sup> Financing type can be either investment or technical assistance.

			<p>and strategies</p> <p>1.3 Identification of policy incentives to encourage shift to less polluting motorbikes and cleaner fuels; workshops for key officials in local and municipal authorities on benefits of less polluting engines to encourage shift</p> <p>1.4 Formulation of financing strategy to support inspection &amp; maintenance programs of for less-polluting motorbikes and emissions monitoring</p> <p>1.5 Study to determine appropriate sustainable freight and logistics strategies</p> <p>1.6 Guidelines and input generated for eventual formulation of vehicle and emissions standards</p> <p>1.7 Facilitation of knowledge management and dissemination</p>			
2. Organization of Transport Infrastructure	Inv	Increased mobility in targeted areas through the implementation of comprehensive integrated Intelligent Transport System (ITS) program and ancillary measures to promote road safety and the utilization of non-motorized transport along corridor	<p>2.1 Design and Implementation of traffic signal priority and other ITS measures to more effectively manage traffic demand</p> <p>2.2 Design and construction of segregated two-way bikeways and pedestrian walkways along corridor where possible</p> <p>2.3 Creation of segregated lanes for slow-moving traffic, high occupancy vehicles, two-wheelers, and heavy duty vehicles</p> <p>2.4 Infrastructure built to clearly indicate deceleration and acceleration lanes</p>	GEFTF	650,000	68,972,082

3. Two-wheeler maintenance and service optimization program	TA	Pilot program to support the capacity building to optimize motorbike service chain in Parakou to test local feasibility to reduce air pollution and GHG emissions	<p>3.1 Diagnostic and feasibility study to identify most cost-effective and environmentally sustainable long term policies to address two-wheelers with targeted and quantifiable justification</p> <p>3.2 Strategies for recycling used tires, batteries, and waste oils designed and implemented</p> <p>3.3 Local policymakers, practitioners, and labor unions provided with vocational training on maintenance and upkeep related to less polluting engines</p> <p>3.4 Small-scale pilot Program implemented centered around improving maintenance services and fuel quality by introducing a certification program</p> <p>3.5 Emissions and air quality monitoring systems installed; MRV framework and methodologies to collect baseline data and monitor emissions from transport sector introduced</p> <p>3.6 Capacity of local agencies to monitor and evaluate GHG emissions and other types of air pollution from transport increased through training</p> <p>3.7 Outreach program to raise awareness of benefits of less polluting engines, cleaner fuel, as well as information on relevant maintenance, upkeep, and financial incentives</p>	GEFTF	859,500	26,290,714
	Inv			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
	(select)			(select)		
Subtotal					1,735,984	104,864,109

Project Management Cost (PMC) <sup>4</sup>	GEFTF	90,500	2,327,591
<b>Total project costs</b>		1,826,484	107,191,700

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

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

### C. SOURCES OF CO-FINANCING FOR THE PROJECT BY NAME AND BY TYPE

Please include confirmed co-financing letters for the project with this form.

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Amount (\$)
GEF Agency	African Development Bank	Loans	55,127,160
Others	West African Development Bank (BOAD)	Loans	52,064,540
(select)		In-kind	
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
(select)		(select)	
<b>Total Co-financing</b>			107,191,700

### D. GEF/LDCF/SCCF RESOURCES REQUESTED BY AGENCY(IES), COUNTRY(IES) AND PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country/ Regional/Global	Focal Area	Programming of Funds	(in \$)		
					GEF Project Financing (a)	Agency Fee <sup>a)</sup> (b)	Total (c)=a+b
AfDB	GEF TF	Benin	Climate Change	Climate Change	1,826,484	173,516	2,000,000
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
(select)	(select)		(select)	(select as applicable)			0
<b>Total Grant Resources</b>					1,826,484	173,516	18,438,358,000,000

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

## E. PROJECT'S TARGET CONTRIBUTIONS TO GLOBAL ENVIRONMENTAL BENEFITS<sup>5</sup>

Provide the expected project targets as appropriate.

<b>Corporate Results</b>	<b>Replenishment Targets</b>	<b>Project Targets</b>
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 ha</i>
2. Sustainable land management in production systems (agriculture, rangelands, and forest landscapes)	120 million hectares under sustainable land management	<i>NA ha</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;	Number of freshwater basins <i>NA</i>
	20% of globally over-exploited fisheries (by volume) moved to more sustainable levels	Percent of fisheries, by volume <i>NA</i>
4. Support to transformational shifts towards a low-emission and resilient development path	750 million tons of CO <sub>2e</sub> mitigated (include both direct and indirect)	<i>136,130 metric tons</i>
5. Increase in phase-out, disposal and reduction of releases of POPs, ODS, mercury and other chemicals of global concern	Disposal of 80,000 tons of POPs (PCB, obsolete pesticides)	<i>NA metric tons</i>
	Reduction of 1000 tons of Mercury	<i>NA metric tons</i>
	Phase-out of 303.44 tons of ODP (HCFC)	<i>NA ODP tons</i>
6. Enhance capacity of countries to implement MEAs (multilateral environmental agreements) and mainstream into national and sub-national policy, planning financial and legal frameworks	Development and sectoral planning frameworks integrate measurable targets drawn from the MEAs in at least 10 countries	Number of Countries: <i>NA</i>
	Functional environmental information systems are established to support decision-making in at least 10 countries	Number of Countries: <i>NA</i>

## F. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? **No**

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

<sup>5</sup> 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.

## **PART II: PROJECT JUSTIFICATION**

### **A. PROJECT OVERVIEW**

A.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 cost reasoning and expected contributions from the baseline, the GEFTF, LDCF/SCCF and co-financing; 5) global environmental benefits (GEFTF), and adaptation benefits (LDCF/SCCF); and 6) innovativeness, sustainability and potential for scaling up.

A.1. The global environmental problems, root causes and barriers that need to be addressed: Benin's population is growing at approximately 3.5% per annum and the urbanization rate is rapidly increasing. Nearly 45% of the population is living in urban areas, with half of the population residing in the major municipal centers of Cotonou, Porto Novo, and Parakou. UN-HABITAT projects that by 2030, nearly 60% of Beninese will live in cities, and nearly 70% by 2050. Parakou is a medium-sized city, and the largest city in Eastern Benin, but the smallest municipal council in the Borgou Department, covering an area of 441 square kilometers with a population density of 340 kilometers and a total population exceeding 200,000, which is growing at an average annual rate of 3.76%. Three quarters of this population live in urbanized areas. Parakou is situated at the end of a railway leading to Cotonou on the main national north-south highway, RNIE 2, and another national highway, the RNIE 6, also passes through the city. Its physical location makes it an important market town and distribution point for the movement of goods into Sahelian countries and throughout West Africa. It is hub of the Beninese cotton trade, and hosts several international markets.

Two-wheelers constitute a very important aspect of urban mobility in West African cities, as well as Beninese cities, including Parakou, by addressing the shortfall in transportation supply resulting from inadequate public transport system. Motorbikes are estimated to cover 80% of transportation needs in West African cities, particularly in Mali, Benin, and Togo. Fuel consumption data is largely believed to be underestimated in West African countries where two-wheelers are the most commonly used vehicles, with estimations of the ratio of total emissions from two-wheelers in Benin compared to total vehicle emissions to amount to between 298% and 665%.

Urban transport in Benin is marked by a lack of a cohesive vision for urban planning and management, which has resulted in the absence of an organized transport system in Parakou, leaving inhabitants to find other options to fulfill transport needs. Parakou is seeing a rapid growth in population accompanied by urban sprawl, and growing prevalence and usage of private vehicles – particularly motorbikes, which has resulted in increased greenhouse gas (GHG) emissions, severe air pollution, growing congestion, compromised pedestrian safety, environmental degradation, and accidents.

Motorbikes are utilized by individuals, but also informally as taxis, with drivers providing transportation for profit. The number of Zemidjans (as two-wheeled taxis are called in Benin), or Zem, which constitute a robust informal transport system in Parakou, is estimated at 3,223, with over 200,000 in Benin. The Zem play a significant role in facilitating urban mobility in the absence of formal service providers, carrying people to their jobs and to school, the large majority of which are women and youth. This phenomenon is a social response to the economical and socio-political crisis in the 80s in most west African countries, which resulted in unemployment and underemployment unemployment of young graduates, poverty, and low purchasing power, particularly in Benin. Since then the number of motorcycles taxis has continued to grow. A motorbike costs roughly USD \$1,000-\$1,500 each, and while there is no formal public transport system, constitutes the most convenient and affordable form of mobility for the majority of Beninese people. Two-wheelers have been recognized within Benin's National Strategy on Climate Change as a key contributor to GHG emissions in Benin, along

with poor maintenance and the use of poor quality gasoline. All three are highlighted as key component of solutions identified to mitigate emissions from energy consumption in the transport sector.

The widespread usage of two-wheelers has been identified by several studies, including one conducted by the Ministry of the Environment and Protection of Nature (MEPN) for the Clean Air Initiative in Sub Saharan African Cities, as the single greatest contributor to air pollution and CO<sub>2</sub> emissions. Two wheelers emit high amounts of GHG and PM direct emissions from combustion engines, as well as suspended particles from travel on dirt roads, damaging the quality of air and putting the population at risk for serious health problems. Air pollution (especially from benzene) from two-stroke engine motorcycles cause an estimated 164 cases of cancer each year, according to the MEPN. This is exacerbated by the usage of poor quality, often illegally smuggled petrol to fuel these bikes. The petrol used contains high levels of lead which is emitted into the air. Two-wheelers are responsible for 59% of daily emission of Carbon Monoxide and 90% of daily emission of HC in Cotonou. City cyclists and motorcycle riders are the most exposed and are 10 times more likely to suffer from respiratory illnesses than those living in rural areas. It is estimated that the Beninese economy suffers losses in excess of 1.2% of its GDP annually (20 billion CFS francs) due to costs associated with air pollution. It is estimated that situation is similar in other Beninese cities.

The value chain which has developed around two wheelers including fuel, service, and maintenance providers are largely unregulated, although some initiatives have attempted to regulate these service chains in Cotonou. Adulterated fuel illegally smuggled fuel from Nigeria, called *kpayo* (dirty petrol) is used as fuel, causing high levels of pollution. Benin's agency for environmental protection estimates that 83 tons of carbon dioxide and 36 tons of volatile hydrocarbons are emitted each day, 59% of which is attributable to motorbikes. The annual cost of respiratory illnesses in Cotonou was estimated at \$1.3 million and that of lead poisoning at \$42 million. The informal sector handled 245 million liters of fuel in 2004, the large majority of which was used on two-wheelers.

Although Benin's contribution to global GHG emissions is minimal, emissions from the transport sector are a major contributor to national emissions, and have steadily increased from 40% of emissions contributed by the energy sector in 1995 to 48.3% in 2000, and only expected to increase. The problem of growing two-wheeler usage and ownership has been highlighted numerous times in the city of Cotonou, the capital of Benin, where Zems are estimated at more than 100,000 and emit severe exhaust fumes which constitute a serious health hazard.

A growing population, accompanied by growing private vehicle ownership rates (in this case, the private vehicles are motorbikes), driven by the relative affordability of such bikes and increasing incomes, will lead to increased vehicle activity and, subsequently, higher GHG emissions. To combat increased GHG emissions from the transport sector, the standard low-carbon transportation path should be pursued through the adoption of an integrated policy framework which corresponds to the "Avoid-Shift-Improve" (A-S-I) paradigm. This integrated and comprehensive approach seeks to avoid or reduce vehicle kilometers traveled, shift passenger and freight cargo movements to efficient and less carbon-intensive modes, and improve vehicle and fuel technologies to reduce GHG emissions.

#### Barriers

The primary contributing factors to growing emissions, air pollution, and growing congestion include: the absence of national fuel and vehicle standards, the absence of a policy incentives to switch to less polluting vehicles; a lack of local knowledge on proper maintenance and service practices; the absence of a comprehensive urban management and planning policies, particularly transport policy, the lack of an agency to oversee public transport, the lack of an efficient and well-planned public transport infrastructure, lack of proper infrastructure



separating different kinds of vehicle traffic (as well as non-motorized traffic), and a lack of awareness of the environmental and socio-economic impacts of dirty fuel, poor vehicle maintenance, and congestion.

There are five main barriers impeding the development of a comprehensive sustainable mobility plan in Parakou. These barriers prevent Beninese cities from effectively addressing environmental and climate change concerns (particularly GHG emissions) from the transport sector:

- 1) Absence of transport data – including estimations of basic transport-related indicators that would support proper frameworks for the estimations of GHG emissions baselines and potential reductions.
- 2) Lack of urban mobility plans featuring suitable transport policies and projects that can integrate the existing transport stock with other modes of transport.
- 3) Land-use planning is not integrated with transport planning and policies in Parakou. Integrated land-use and transport planning is crucial to maximize long-term emissions reduction potential. Land use policies should promote higher density development, following a transit-oriented development pattern, so as to minimize travel and reduce demand for transport.
- 4) The absence of standards, regulations, incentives, and technical capacity to import and distribute cleaner fuels and maintain and operate cleaner vehicles in Parakou. Benin is not able to control the entry of dirty fuel from Nigeria through its borders, which is a larger problem than the scope of this project is able to address. This lack of regulation and lack of capacity to enforce its laws is a very significant barrier which prevents the country from improving fuel quality, which limits emissions reduction potential, leaving improving vehicle technology as the key entry point for reducing GHG emissions. The eventual shift from two-stroke motorbikes to more fuel efficient four-stroke motorbikes would have a positive impact on the environment and enable Benin to drastically cut GHG emissions.
- 5) Complete lack of coherent and enforceable travel demand management TDM policies and traffic management infrastructure, including parking. This element is missing mainly due to lack of technical knowledge and capacity to implement suitable measures within governmental bodies.

#### A.1.2 The baseline scenario and any associated baseline projects:

The baseline project aims to rehabilitate and widen two main urban roads in Parakou - the 12.5 km-long Parakou urban crossing and the 5.05 km Parakou West bypass. The two main roads are currently comprised of two lanes, of 3.5 meters wide each. Both roads have low national and international carrying capacity, which increases the time required to make cross-town trips, which restrict mobility at both the urban and regional levels. The rehabilitation and widening of these two roads are expected to reduce transport costs, relieve congestion, facilitate the development urban economic activities, and reduce the instance of traffic accidents.

The project's specific objectives are to: (i) improve quality of life and traffic conditions in Parakou; (ii) improve urban management at the national and local levels; (iii) promote local trade; (iv) contribute to building interior access roads in Benin; and (v) improve transport conditions on the Contonou-Parakou-Malanville-Niamey road corridor.

The baseline project plans to offset emissions attributed to rehabilitated urban roads through the implementation of a number of standard mitigation measures: (i) improvements of road surfaces; (ii) restoration of borrow areas through systematic tree planting and plant regrowth; (iii) planting of trees on both sides of the upgraded roads; (iv) enrichment planting of 96 hectares of forest; and (v) embellishment of the Hubert MAGA and COTEB Squares with greenery.

However, these measures are not enough because they are cosmetic and do not address the root

drivers of emissions or facilitate the creation of a paradigm shift toward a less polluting model for urban development. Building additional roads actually increases demand for transport, subsequently increase The baseline project estimates that a total of 4,476 tons of CO<sub>2</sub> will be emitted on the upgraded road. While some of these emissions will be mitigated by facilitating traffic optimization and the subsequent reduction of travel times, which simultaneously reduces fuel consumption and emissions from idling in traffic.

A.1.3 The proposed alternative scenario, with a brief description of expected outcomes and components of the project

The general objective of the project is to support the incremental cost of activities that will have a transformative impact in helping Benin move towards a low-carbon development path, by mainstreaming more sustainable practices in the transport sector in Parakou.

This project will focus on reducing GHG emissions, air pollution, and environmental degradation, by completing activities that will mitigate harmful emissions leading to climate change from transport sector and promote more sustainable and inclusive urban planning and development.

This GEF project has three main components that address the barriers identified earlier in this proposal and complement the baseline project. The project can be seen as pictured below, where road rehabilitation is complemented by avoid, shift and improve components while surrounded by an MRV framework.

The specific objectives of this project are aligned with the avoid-shift-improve paradigm to produce studies and other knowledge creation materials to support three main components:

Component 1: Technical Assistance to support the design and implementation of a policy framework for more sustainable urban planning in Parakou (Avoid).

Component 1 will support Parakou in updating its Urban Master Plan. Creating the appropriate framework which supports the development of standards and policies which incentivize cleaner fuels and vehicles is critical to shifting from business as usual to the A-S-I paradigm. These frameworks are expected identify and put in place incentives which will eventually lead to a large-scale shift from two-stroke to four-stroke motorbikes in Parakou. The technical support provided will encourage a paradigm shift toward a more sustainable urban development model by supporting the local government in identifying appropriate urban planning measures to formulate a comprehensive Urban Master Plan update based off of an alternatives scenario, through which the most appropriate sustainable transport solutions will be chosen by the Parakou Council. The plan will ensure the integration of land-use considerations, establish holistic sustainable transport measures to include ITS and fuel standards. The integration of urban land and transportation policies are solidified in the approach of Transit-Oriented Development, where a transportation system is developed in clear relation to the guidelines of a land development plan, and is very effective in in terms of trip length and frequency reduction. Parakou is a smaller, less dense city, and as such, it is unlikely that a consolidated public transport system will emerge in the short-term. However, a number of measures can be taken to improve urban planning and management, as well as simultaneously identifying and introducing measures aimed at optimizing transportation infrastructure, improving fuel efficiency of the existing vehicle fleet, and measures to encourage non-motorized modes. These sustainable transport strategies will be developed with the aim of one day integrating them into an organized public transport system.

It is estimated that motorbikes with four-stroke engines emit nearly 90% less GHGs than those with two-stroke engines, and consume 10-15% less fuel. Two-stroke engines also require more maintenance – they need to be overhauled every 30,000 km and decarbonized every 6,000 km. Two-stroke engines emit more volatile organic compounds (VOCs), hydrocarbons (HCs) and particulate matter (PM) compared to four-stroke engines. A mixture of exhaust gases, unburned

fuel and burned lubricating oil - combusted together with the fuel - cause high levels of harmful emissions. Creating the adequate policy and regulatory framework to encourage a shift from the current stock motorbikes, which are predominantly older models with two-stroke engines, to newer models with four-stroke engines could have a significant impact on GHG emissions.

The component will include the following subcomponents:

- This GEF project will lay the foundation to update Parakou's Urban Master Plan, which will include a Sustainable Urban Mobility Plan. A workshop will be organized to train local planning officials on principles of Transit Oriented Development (TOD) and how they can be applied in medium sized cities to integrate land use considerations with transport planning to positively influence the way a city develops. A long-term strategy for implementation of land use policies in the medium and long term will be formulated for Parakou, emphasizing integrated land use and TOD as a core strategy to achieve sustainable land development in the city.
- Included in the Urban Mobility Plan, will be a strategy with guidelines to integrate the proposed land use policies with a host of policy incentives identified to encourage motorists to shift to four-stroke motorbikes and an institutional arrangement to sustain the Program developed in Component 3 past project closure.
- A study will be conducted to identify different possible land uses along around other main corridors, and the identification of an appropriate public transport solution, if any. The study will allow planning official to create appropriate policies to most effectively allocate land surrounding main arterial roads, while at the same time identifying economic mechanisms that promote densification and diversification of land uses, provide alternatives to promote the development of decentralized service centers along the corridors, which will effectively decrease the need for trips within Parakou itself.
- A third study on more sustainable freight and logistics solutions will be conducted to determine the most appropriate measure to most efficiently manage through traffic, particularly heavy-duty vehicles and freight.

#### Component 2: Organization of Transport System (Shift)

The objective of Component 2 is to complement the baseline road rehabilitation project with the implementation of comprehensive integrated Intelligent Transport System (ITS) program and ancillary measures to promote road safety and the utilization of non-motorized transport infrastructure along corridor. The specific output will be the design of pedestrian facilities to improve pedestrian access throughout the rehabilitate roads, infrastructure built into the road design to separate types of traffic, traffic signals and signal prioritization, and other traffic management infrastructure.

Such ITS measures have proven impacts on GHG emissions but are conspicuously absent in African cities, and can be considered low hanging fruit due to the relative low cost and high probability of achievement. By increasing average speeds and reducing travel times nu reducing unnecessary stops along busy urban corridors, and eliminating vehicle acceleration, deceleration, and idling; all of which have been identified as the leading causes in GHG emissions, the reduction and/or elimination of which can have a significant and lasting impact on GHG emissions, and is generally accepted to contribute emissions reductions of roughly 15%.

The component will ensure:

- Optimization of usage of existing road space through the reallocation of space for non-motorized transport modes, particularly pedestrian walkways, along the rehabilitated corridors;
- Regulation of high volume traffic crossings in urban areas;

- Traffic signal synchronization to optimize traffic flow;
- Organization of different types of traffic along road corridors by providing separate lanes for acceleration, deceleration, heavy duty, light duty, and two wheeler traffic.

Activities financed under this component will generate a number of co-benefits, including improved road safety and reduction of congestion. These types of activities can be replicated in medium and larger cities through Benin, and eventually throughout West Africa.

### Component 3: Two-Wheeler Maintenance and Services Optimization Pilot Program (Improve)

Component Three will focus on optimizing the existing transport supply, which is dominated by different types of two-wheelers. Activities in this component will support the implementation of a pilot project to optimize two wheeler operations on Parakou. As mentioned earlier in the project document, two-wheelers constitute a large proportion of emission of GHGs in Benin. In addition to a quickly growing fleet, poor maintenance and poor quality fuel exacerbate this problem. In a country like Benin, which lacks robust public transportation infrastructure, and particularly in smaller cities, such as Parakou, where it is unlikely that such infrastructure will developed in the short-run, vehicle improvements are an important cornerstone of any climate change mitigation strategy.

Poor fuel quality is a major contributing factor to emissions and pollution in Benin. Petrol used by the majority of two-wheelers contains a large amount of lead that is emitted into the air later by the motors. Due to a weak legal framework in Benin, the country has difficulty enforcing laws and unable to crack down on a booming illegal trade of petrol. The percentage of oil in used in smuggled fuel sold in the informal sector is much higher than regular fuel, at a ratio of up to and exceeding 20%, as compared to fuel sold in the regulated market, which has a standard of an average of 4%-8%, which is already considered high compared with international standards. Tackling fuel quality and standards is outside of the scope of this project, and would be an enormous feat requiring cooperation and commitment from both the government of Benin as well as the Nigerian government to crack down on the informal petrol trade. It is estimated by the Internal Trade Promotion Unit of the Department of Trade that the informal sector accounts for 70-80% of Benin's total fuel imports of more than 300 million litres per year. The informal sector thrives for three main reasons: the formal sector lacks distribution points; the price of legal fuel is simply too high for most consumers, and the informal sector is a major source of employment. Because targeting these types of reforms in order to support the introduction of fuel standards is not feasible within the duration of the implementation phase of this project, project activities will focus on vehicle side – by optimizing the engines of the existing fleet while at the same time facilitating policy measures which encourage a shift toward more efficient motorbikes.

It has been determined by numerous studies that proper maintenance can increase fuel efficiency by 20%, which in turn will have a substantial impact on GHG emissions both directly as a result of project activities, and indirectly in terms of replication potential. These activities include: improving lubricant use, installing/replacing two-stroke catalytic converters (which may be cost-prohibitive for this project); and cleaning/adjusting the carburetor and exchanging air filters, all of which will be explored as part of the training program in this component.

This component will include the following activities:

- a) Establishment of standards for two-wheeler maintenance;
- b) Establishment of a program to certify and recognize garages and service centers to optimize the service and value chain around maintenance for motorbikes and two-wheelers at the Parakou Council level;
- c) Creation of a training program introducing regular checks and maintenance controls on

emissions, including manuals and guidelines for practitioners;

d) Knowledge dissemination for best practices in two-wheeler maintenance and services for practitioners in Parakou, including garages and other service centers, which will also serve as collection points for baseline data;

e) Strategies for recycling used tires, batteries, and waste oils designed and implemented at the Council level;

f) Identification of policy incentives to encourage shift to less polluting motorbikes, encourage proper maintenance practices, and recommendations made to inform forthcoming national policies and standards;

g) Outreach and engagement with Zemidjan labor unions, practitioners, and users of two wheelers.

h) Compilation of data on travel, demand and transport indicators: data collection for the establishment of baseline and methodology for monitoring GHG emissions and SLCFs from transport in Parakou.

#### A.1.4. Incremental cost reasoning and expected contributions from the baseline, the GEFTF, LDCCF/SCCF and co-financing

The GEF financial contribution will support the reduction of over 5,542 tons of CO<sub>2</sub> emissions in a 4 year period at a price of \$360 per ton reduced. The potential for mitigating GHG emissions from this sector is very large, considering that the eventual replacement of bikes with two-stroke engines with those with four stroke engines can decrease GHG emissions by 90%.

#### A.1.5. Global environmental benefits (GEFTF), and adaptation benefits (LDCCF/SCCF)

This project will be implemented in Parakou, but will have replication potential throughout the country and in West Africa because of its relatively low cost and targeted activities. The project activities are relevant to neighboring countries in which the use of two wheelers is growing rapidly, including Togo and Mali. Its impacts, in terms of GHG emissions reduction will be properly assessed during implementation so as to provide a clear understanding of the improvement of the sector and its impact in a global level. The road rehabilitation project alone does not have significant GHG reduction potential – in fact, the development of roads increases the demand for transport and will effectively exacerbate climate change. It is now clear from many experiences throughout the world that transport improvements alone are insufficient in easing congestion and providing equitable access. Complementary measures are needed to provide the maximum benefit to society as a whole. Eventual introduction of less polluting engines to Beninese Zem drivers will not realize its full potential if no incentives and price signals are implemented for drivers to make the change and if the service and supply chain are not address as well.

Through project implementation, it is assumed that all mechanics servicing motorbikes in Parakou will be provided with the necessary training to undertake appropriate maintenance works on all the 2 stroke motorbikes. The aim of the improved maintenance and service practices is to improve the overall fuel efficiency of the engines.

It is understood that an increase in efficiency of 20% can be achieved through proper maintenance implying less fuel will be used to travel the same distance. This reduction in amount of fuel use will result in an overall decrease in the quantity of GHG emitted in the atmosphere. Below is an estimation of the impact of the proposed project on future GHG emissions. It shows that the proposed project will generate direct emissions reductions from the selected low-carbon transportation policies and measures. Emissions reduction will occur during the life of the project and beyond.

It is estimated that the emission of 5,445 tons of CO<sub>2</sub> will be avoided directly through the

project over the 4 years of its implementation.

Given the lack of specific qualitative and quantitative data on the use of motorbikes in Parakou, the following assumptions were used to achieve the above estimate:

- An average of 20,000 motorbikes are used in Parkou daily;
- The average daily distance travelled per motorcycle in the Parakou area is 20 km;
- Average fuel consumption per day is roughly .4 litres of kerosene;

GEF resources are expected to contribute to the optimization of vehicle maintenance and fueling methods, which will result in an estimated 20% increase in efficiency, causing daily fuel consumption per vehicle to decrease from an average of .4 litres to .32 litres of kerosene.

Based on the above assumptions, the amount of fuel saved on a yearly basis is:

$$20\ 000 \times 365 \times (0.4 - 0.32) = 584,000 \text{ litres}$$

Over a period of 4 years, this amounts to 2,336,000 litres.

According to the Carbon Trust each the combustion of each litre of kerosene emits 2.331 kg de CO<sub>2</sub> in the atmosphere. Therefore, with savings of 2,336,000 tons over the duration of the project, a total of 5,445 tons will be saved directly with the project resources.

here is an estimated 200,000 - 2- stroke motorbikes in the whole of Benin. The project can indirectly lead to further reduction in GHG emission through replication of the GEF funded activities after the effective completion of the project.

Assuming that the maintenance practices are adopted countrywide, the total yearly savings in GHG is estimated at:

$$(200\ 000 \times 365 \times (0.4 - 0.32)) \times 2.331 = 13,613 \text{ tons of CO}_2.$$

Over a 10 year period, this will amount to 136,130 tons of CO<sub>2</sub> (assuming number of motorbikes remain constant).

Further benefit will be measured during the early stages of implementation, because the proposed policy measures have enormous potential for further reduction through replication, but some project activities must be completed in order to collect necessary data to make the follow up estimations. The measures implemented in this project can also be extended further to be applied to cars and heavy duty vehicles, resulting in even larger impact. The primary impact of this pilot program will be not only the direct beneficiaries of the training and capacity building activities completed in this project, but that the knowledge generated from these activities will be applied nationwide and lead to further policy reform.

#### A.1.6. Innovativeness, sustainability and potential for scaling up

This project is innovative in Africa because these mobility instruments are not mainstreamed in African cities, which generally completely lack traffic management strategy, simple ITS infrastructure, and a cohesive urban planning vision. Some larger African cities are starting to implement traffic management strategies, but small and medium sized cities like Parakou have taken a reactive, not proactive, approach to urban planning, which has resulted in disorganized and incoherent cities with large informal settlements served by informal service providers.

This project is innovative because it is creating the framework for a paradigm shift toward more proactive planning, incorporating sustainable land-use, transport, and urban planning principles into policy frameworks and building the capacity of local planning officials and practitioners to most efficiently maintain their vehicles. Additionally, with steadily growing cities, adequate planning and management of urban resources, including road space, will allow cities like Parakou to absorb national and regional migration that was meant for larger cities. This project is also innovative because it pulls together a number of small, relatively low-cost

measures to collectively tackle GHG emissions in a growing medium sized African city. More often than not, GEF transport projects are in large cities with severe traffic problems and mobility constraints, and smaller cities are often overlooked as “urban.” The AfDB and development partners acknowledge that sustainable cities cannot be truly sustainable without integrating sustainability concepts into regional and peri-urban and rural planning and development.

The project includes measures that have been applied throughout the world separately, but rarely together, and never in Benin. There was a similar project undertaken in Cotonou, implemented by the Agence Francaise de Developpement (AFD), which was larger in scope, and tackled physical upgrading of Zem engines, but did not address related services, nor the policy framework for fuel and future planning. Even with the most advance engine technology, GHG emissions and air pollution simply cannot be mitigated without the introduction of fuel efficiency standards and/or proper standards for maintenance and emissions. This project lays the groundwork for future work to be done in these areas and the studies carried out by this project can be used to replicate and scale up this kind of projects in Benin and across the region. If the pilot projects supported by this project are replicated effectively, can serve as the base for mobility policy and project implementation in other cities in the region. The components that have been described above have not been directly proposed by government, but have been a result of many dialogues between government agencies and the AfDB project team – air pollution and traffic congestion are major problems in Beninese cities. This provides a strong foundation which will ensure sustainability and long-term impact.

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

The key institutions and entities which will be involved include national and local government authorities, labor unions, international agencies and organizations, and civil society.

National Government Agencies: The Beninese Agency for the Environment, the Department of Climate Change; the Ministry of Public Works and Transport; Department of New Works, under the General Directorate of Public Works; the Ministry for Gender Promotion; the General Directorate of Environment and the General Directorate of Water and Forestry; and the Ministry of Economy and Finance.

Local Government Agencies: Municipality of Parakou: the Parakou Council; the Borgou-Alibori Inspectorate of Forestry;

Labor Unions: Informal and formal taxi drivers are self organized into unions (UNACOB and UCTIB), which will be important in executing activities targeting Zemidjan drivers; labor unions and associations related to maintenance and services providers; the automobile industry.

International agencies and organizations: Participation and input from international agencies that have worked on urban transport initiatives in the region, including the World Bank and the Agence Francaise de Developpement, would be productive.

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

This project will enhance the well-being of women by:

- Providing improved access to social services;
- Improving mobility for women who ride two wheelers, which constitute the large majority of Zem and motorbike riders;

- Including women in training and knowledge sharing related to improving the two wheel service and value chains, allowing them to diversify income sources.

A.4. *Benefits.* Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF).

Sustainable transport supports increased mobility and contributes to raising the standard of living for all inhabitants. Activities financed under this project will generate a number of co-benefits, both socio-economic and environmental, including improved air quality, by improving engine and vehicle maintenance methods, and socio-economic, through the provision of opportunities for local mechanics to obtain additional skills.

Positive examples can be drawn from sustainable transport initiatives implemented around the world and the benefits include the following:

- a) Reduction of GHG Emissions;
- b) Decrease in air pollution, which ultimately leads to improved health;
- c) Alleviation of congestion and traffic, which subsequently leads to time savings and improved travel conditions in general;
- d) Increased access to job markets and social services;
- e) Improved road safety and decrease of traffic-related accidents, injuries, and fatalities;

In Parakou, the baseline and GEF projects together is expected to provide a wide range of socio-economic benefits, including:

- a) The creation of at least 150 temporary jobs;
- b) Improved goods and passenger transport conditions for inhabitants of Parakou, the larger Borgou region and transporters with business from or two Sahelian countries;
- c) Increased access to social and health facilities, including schools and hospitals; and
- d) Improved health and sanitation due i) the mitigation of GHG emissions, which will lead to improved air quality; and ii) improved rainwater disposal which will decrease the likelihood of water born disease; and iii) reduced number of road accidents.

A.5 *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:

- 1) Lack of baseline data on fleet composition and characteristics and emission factors - this is a medium level risk and will be mitigated production of studies in the early stages of implementation. Transport data and fleet composition data are still readily unavailable, but air quality and emissions reductions have been identified as a priority area for Benin as a whole and its major cities – particularly Parakou and Cotonou.
- 2) Low social acceptance of measures to decrease emissions from transport and other measures to encourage a shift toward more sustainable transport - This risk is considered medium to high, and will be mitigated through an organized outreach and public education effort.
- 3) Transparent and accepted method of choosing recipients of vocational training - This is a medium risk and will be addressed by implementing the training program at the City Council level. Government officials employed by the city will be trained and a program will be established through which all mechanics and service centers will be offered the opportunity to apply and/or participate.
- 4) Poor coordination and lack of alignment among government and municipal agencies - This is a present but low risk. The main risk arising from coordination is lack of technical capacity and this will be mitigated through the provision of technical assistance provided in the first two components of this project. The government agencies are well aware of the need for more sustainable transportation solutions throughout Beninese cities, and Parakou is no exception. The



government has expressed strong interest in the project, which indicates that there will be strong local ownership.

A.6. *Cost Effectiveness.* Explain how cost-effectiveness is reflected in the project design: Project activities are cost-effective because they are the lowest cost activities with the maximum feasibility and potential for success considering the local context and other conditions.

A range of alternative paths to achieve a stated objective are considered and evaluated, with the most effective and least-cost approach being selected. Originally the creation of a revolving fund was considered to support the scrapping of two-stroke bikes and provide a rebate to be used toward the procurement of a four-stroke bike. Considering the grant amount is under \$2 million dollars total, under this scenario, only a very small number of bikes (under 100) could be replaced under this scheme. This type of intervention was done in Cotonou with a grant from the Agence Francaise de Development of USD \$11 million to replace around 10% of the total two wheeler fleet in the city. Devising a fair and transparent way of choosing participants would pose a significant and costly problem which has been faced by many similar GEF projects, including one implemented in Bangladesh by the Asian Development Bank, which aimed to replace two wheelers with electric tricycles.

As outlined in the Project Description, targeting fuel efficiency is also cost prohibitive and institutionally unachievable. Every owner of a motorbike will, at one point during the lifetime of their vehicle, need service and maintenance. This provides a good entry point to achieve a significant emissions reduction while also providing skills and knowledge to local populations, accompanied by some infrastructure investments. The assumption for the optimization of service and maintenance of two wheelers and cars is to increase fuel efficiency 20% for each vehicle.

A.7. *Coordination.* Outline the coordination with other relevant GEF-financed projects and other initiatives [not mentioned in A.1]:

There are no relevant GEF financed initiatives in the transport sector in Benin.

A.8 *Institutional Arrangement.* Describe the institutional arrangement for project implementation: The implementation of the Bank project will be overseen by an existing project implementation unit established for AfDB and World Bank projects in the Ministry of Infrastructure, which will be coordinating closely with the Parakou Council.

It is expected that both the Parkou Council and the Ministry of Infrastructure will be closely involved in the implementation of the GEF component of this project but that the activities will be overseen directly by the Ministry of Environment's Department of Climate Change.

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

B.1 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, NBSAPs, ASGM NAPs, MIAs, NCs, TNAs, NCSA, NIPs, PRSPs, NPFE, BURs, etc.

Benin has not submitted a National Appropriate Mitigation Actions (NAMA), but has submitted a Memo to the United Nations Framework Convention on Climate Change (UNFCCC) outlining the main mitigation actions it will undertake, which include: 1) Development of mass transport system to reduce Greenhouse Gas (GHG) emissions in Cotonou and surrounding urban areas; and 2) Sustainable management of forests and reforestation to reinforce carbon sinks.

Benin's current PRSP (2011-2015) identifies transport as a priority intervention area in infrastructure development, and calls for "diversification and modernization of modes of transport"; as well as "consideration of gender, the environment and climate change issues in transportation strategies." The PRSP also calls for strengthening environmental governance through the development of a number of strategies, including those for adapting to and mitigating the negative impacts of climate change. While there is a strong focus on rural projects, Section 8.5.2 of Benin's PRSP encourages the promotion of integrated management of the living environment. This section states that the Beninese Government is "resolutely engaged in efforts to provide the population with a healthy living environment while at the same time creating job opportunities for young people and women and enabling them to acquire the knowledge, values, behaviors, and practical skills that are necessary in the field of environmental management...it plans to help the State's decentralized and deconcentrated agencies to do this with support in several areas, including: i) mitigating economic and health-related effects of air pollution in the populations of large urban centers; ii) promote urban forestry; iii) develop a varied communication plan addressing the main environmental problems of each department and commune.

## B.2. GEF focal area<sup>6</sup> and/or fund(s) strategies, eligibility criteria and priorities

This project is aligned with the GEF strategic program "CCM-1: Promote Innovation, Technology Transfer, and Supportive Policies and Strategies" and "CCM -2: Demonstrate systemic impacts of mitigation options" in the areas of transportation and urban planning in Parakou, Benin, where project components will include activities which will improve the transport system in Benin in three ways: by creating the suitable policy framework which will support more sustainable urban and transport planning by promoting supportive policies and strategies; by optimizing road space and, subsequently, transport options; and by improving the existing stock of motor vehicles, particularly two-wheelers. Together, these three measures will demonstrate mitigations options at the systems level.

Activities relating to CCM-1, Program 2: "Acceleration of low emission technology innovation and uptake through demonstration, 38.deployment, transfer using policies and mechanisms," include the identification of policies to encourage the shift from two-stroke to less polluting four-stroke engine two wheel bikes. In addition to identifying policy incentives to encourage shifting at the individual level, this will be done in coordination with the updating of Parakou's Urban Master Plan, which will create the proper enabling environment to address regulatory and policy barriers. Additionally, studies related to identifying a range of sustainable transport solutions in Parakou, including land use integration as well as freight and logistics, all of which together are meant to identify and demonstrate innovative policy packages for a wide range of mitigation options.

Relating to "CCM -2: Demonstrate systemic impacts of mitigation options," the project will fund activities which will have a transformative impact in facilitating Benin's transition to a low carbon development path and to promote integrated low-emission urban systems. The project will integrate a number of measures, including land use management, planning, and zoning, including the integration of land use; sustainable transport infrastructure and systems, and incentives for broader use less polluting motorbikes; initiatives to assess and reduce the impacts of SLCFs at the urban level; and initiatives to enhance broad community engagement and support for and use of emission reduction approaches and low-carbon technologies. All of these measures will be considered and promoted in this project, though the effects of some, such as those which are the subjects of studies in Components 1 and 3, including land use planning, fuel efficiency improvements of the entire fleet, and will be further developed during implementation.

B.3 The GEF Agency's program (reflected in documents such as UNDAF, CAS, etc.) and Agencies comparative advantage for implementing this project:

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<sup>6</sup> For biodiversity projects, please describe which Aichi Target(s) the project will directly contribute to and what indicators will be used to track progress towards achieving these specific Aichi target(s).

The baseline project and the GEF components correspond to Pillar 1 in the Country Strategy Paper (CSP), which was formulated by Benin in coordination with the African Development Bank, and which calls for “the development of the country’s infrastructure to enable it to profit from income generation opportunities offered by its position as the sub-region’s service corridor, on the one hand, and to contribute to developing trade in West Africa and to inclusive growth in Benin, on the other hand.”

Additionally, this project is in line with the AfDB’s long term strategy for 2013-2022, which identifies “Green Growth,” together with “Inclusive Growth” as its two main objectives. Green growth is described as “the achievement of critical development objectives while seeking to maximize efficient use of natural resources, minimize waste and pollution, and enhance the resilience of livelihoods.” Building climate resilient infrastructure and providing sustainable infrastructure are identified as priorities in reach green growth.

The AfDB has a longstanding and active portfolio in Benin, including another GEF climate change project (adaptation) in the agricultural sector, which is currently under implementation. Cooperation between the Bank and Benin goes back to 1972, and financing provided exceeds USD \$1 billion, with nearly 30% of this amount invested in the transport sector. The project team in charge of the preparation of the baseline project is familiarized with transport-related activities and investments in Benin. The AfDB’s Togo Field Office will also provide support in accordance with the Bank’s decentralization process.

**C. DESCRIBE THE BUDGETED M & E PLAN:**

**THE MONITORING AND EVALUATION BUDGET IS \$44,000 AND DUTIES WILL BE SHARED BETWEEN THE AFDB PROJECT AND COUNTRY TEAMS AND EXTERNAL CONSULTANTS.**

**THE INCEPTION AND WORKSHOP REPORT WILL BE COMPLETED WITHIN TWO MONTHS FROM THE BEGINNING OF IMPLEMENTATION (\$5,000).**

**A FINAL AND EXPANDED M&E PLAN INCLUDING THE GEF TRACKING TOOL INDICATORS WILL BE COMPLETED DURING THE SAME TIME FRAME (\$5,000).**

**WITHIN THE FIRST YEAR OF IMPLEMENTATION, A SERIES OF BASELINE STUDIES WILL BE COMPLETED (\$15,000).**

**A MID-TERM EVALUATION REPORT WILL BE COMPLETED AT THE HALFWAY POINT OF PROJECT IMPLEMENTATION (\$10,000).**

**A TERMINAL EVALUATION REPORT WILL BE COMPLETED AT PROJECT CLOSURE (\$10-\$14,000).**

**IN ADDITION TO THESE MAJOR MILESTONES, PERIOD IMPLEMENTATION STATUS REPORTS WILL BE COMPLETED AT THE END OF EACH QUARTER UNDER THE OVERSIGHT OF THE AFDB TASK MANAGER.**

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

**A. Record of Endorsement<sup>7</sup> of GEF Operational Focal Point (S) on Behalf of the Government(S):**  
 (Please attach the [\*Operational Focal Point endorsement letter\(s\)\*](#) with this template. For SGP, use this [\*SGP OFP endorsement letter\*](#)).

<b>NAME</b>	<b>POSITION</b>	<b>MINISTRY</b>	<b>DATE (MM/dd/yyyy)</b>
Delphin AIDJI	Secrétaire General Adjoint/Operational Focal Point	<b>MINISTRY OF ENVIRONMENT, HOUSING, AND URBAN PLANNING</b>	<b>07/04/2014</b>

<sup>7</sup> For regional and/or global projects in which participating countries are identified, OFP endorsement letters from these countries are required even though there may not be a STAR allocation associated with the project.


**B. GEF Agency(ies) Certification**

**This request has been prepared in accordance with GEF policies<sup>8</sup> and procedures and meets the GEF criteria for MSP approval under GEF-6.**

<b>Agency Coordinator, Agency name</b>	<b>Signature</b>	<b>DATE (MM/dd/yyyy)</b>	<b>Project Contact Person</b>	<b>Telephone</b>	<b>Email Address</b>
Mahamat ASSOUYOUTI, African Development Bank		08/22/2014	Jean-Noel ILBOUDO, Infrastructure Engineer, Transport Division	+225 57 7367 13	Jn.ilboudo@afdb.org

**C. ADDITIONAL GEF PROJECT AGENCY CERTIFICATION** (*Applicable Only to newly accredited GEF Project Agencies*)

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

<sup>8</sup> GEF policies encompass all managed trust funds, namely: GEFTF, LDCF, and SCCF

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

RESULTS FRAMEWORK				
	Intervention logic	Objectively verifiable indicators of achievement	Project Targets	Se ve
Overall objective	Promote more sustainable mobility options in Parakou to ease congestion, mitigate GHG emissions, and improve air quality	<ul style="list-style-type: none"> <li>- Tons of CO2 mitigated;</li> <li>- Number of officials and practitioners exposed to more sustainable urban planning and management principles and in possession of relevant applicable knowledge.</li> </ul>	Pedestrian walkways built where the road design allows; Segregated lanes for slow moving, heavy duty, and two-wheeler traffic; Sustainable urban planning and management reflected in policy framework	
Specific objectives	<ol style="list-style-type: none"> <li>1. Technical assistance for the design and implementation of sustainable transport plan in</li> <li>2. Optimization and organization of transport system through the implementation of complete Intelligent Transport System (ITS) program and ancillary measures to promote road safety for non-motorized transport and pedestrian infrastructure along corridor</li> <li>3. Maintenance and service upgrade program established and development of monitoring</li> </ol>			
Expected outcomes	<b>RESULT 1:</b> Mainstreaming of urban development strategies to support a shift toward more sustainable transport and urban policy and planning initiatives based on three-pronged strategy integrating land-use considerations, transportation planning, and environmental sustainability to address urban mobility.	<ul style="list-style-type: none"> <li>- Sustainable urban planning principles reflected</li> <li>- Policy incentives to encourage a shift toward four-stroke motorbikes identified</li> <li>- Increased travel by Non-motorized travel</li> </ul>	<ul style="list-style-type: none"> <li>- Transit oriented development studies and policies analyzed</li> <li>- Parakou Urban Master Plan updated reflecting</li> </ul>	

RESULTS FRAMEWORK				
	Intervention logic	Objectively verifiable indicators of achievement	Project Targets	Stakeholder involvement
	<p>RESULT 2: Increased mobility and organization and optimization of transport demand and supply with increased NMT and pedestrian infrastructure, leading to reduced congestion and increased traffic safety.</p>	-	<ul style="list-style-type: none"> <li>- 10 km of pedestrian walkways and bikelanes along rehabilitated corridors;</li> <li>- Segregated lanes for different types of traffic along entire corridor;</li> <li>- Traffic signal priority</li> </ul>	
	<p>RESULT 3: Improved knowledge of superior maintenance and service methods and practices for two-wheelers, reducing the emissions in the transport sector</p>	<ul style="list-style-type: none"> <li>- Number of civil servants equipped with</li> <li>- Number of garages with the skills and knowledge to improve fuel efficiency;</li> <li>- Number of mechanics and civil servants with applicable knowledge related to optimizing two-wheeler maintenance and upkeep;</li> <li>- Number of mobile or stationary emissions monitoring systems;</li> <li>- MRV system developed</li> </ul>	<ul style="list-style-type: none"> <li>- 1 report on MRV system for the project</li> <li>- Maintenance Program established; training curriculum and 50 participants identified, including municipal officials and local practitioners</li> <li>- Certification Program established</li> <li>- At least 80% of motorbike fleet in Parakou receiving optimized service and maintenance</li> <li>- Measures identified to shift to four-stroke bikes to inform policies identified in Component 1;</li> <li>- Detailed tracking of current and future GHG emissions from the transport sector in Parakou;</li> <li>- Forecasting of future emissions according to different scenarios and Implementation of a MRV system for the project.</li> </ul>	



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

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