GEF-7 REQUEST FOR PROJECT ENDORSEMENT/APPROVAL

PROJECT TYPE: MEDIUM-SIZED PROJECT
TYPE OF TRUST FUND: GEFTF

PART I: PROJECT INFORMATION

Project Title: Integrated, Sustainable and Low Emissions Transport in Côte d'Ivoire			
Country:	Cote d'Ivoire	GEF Project ID:	10302
GEF Agency:	UNEP	GEF Agency Project ID:	01718
Project Executing Entity:	Ministry of Environment and Sustainable Development (MINEDD) with the support of the Ministry of Transport (MOT)	Re-Submission Date:	April 2021
GEF Focal Area:	Climate Change Mitigation	Expected Implementation Start:	01 Oct. 2021
		Expected Completion Date:	31 March 2025
Name of Parent Program	Global Programme to Support Countries with the Shift to Electric Mobility	Parent Program ID:	10114

A. FOCAL/NON-FOCAL AREA ELEMENTS

Programming Directions	Focal Area Outcomes	Trust Fund	(in US$)	
			GEF Project Financing	Confirmed Co-financing
CCM 1-2	Promote innovation and technology transfer for sustainable energy breakthroughs for electric drive technology and electric mobility	GEF TF	408,716	5,687,000
	Total project costs		**408,716**	**5,687,000**

B. PROJECT DESCRIPTION SUMMARY

Project Objective: To mitigate GHG emissions in Cote d'Ivoire by accelerating the introduction of electric mobility through revision of the policy and institutional framework; training and capacity building; demonstration of electric vehicles; development of finance schemes and business models; private sector engagement; and upscaling and replication.

Project Components/ Programs	Component Type	Project Outcomes	Project Outputs	Trust Fund	(in US$)	
					GEF Project Financing	Confirmed Co-financing
Component 1: Institutionalization of and strategy-setting for low-carbon electric mobility	TA	1. Government of Côte d'Ivoire establishes an institutional framework and endorses a gender sensitive national strategy for the promotion of electric mobility in public transport to implement the Draft Road Map for sustainable mobility	1.1. A national inter-sectoral e-mobility coordination body is established. 1.2. A joint national strategy to promote low-carbon e-mobility in urban public transport is submitted for adoption. 1.3. Governmental and private sector actors are trained on the benefits of e-mobility through the Global E-mobility Programme, outreach	GEFTF	105,956	40,000

			activities to inform decision makers throughout CI on project results.			
Component 2. Short term barrier removal through feasibility analyses, the demonstration of electric vehicles and know-how development for a wider introduction of electric mobility in Côte d'Ivoire	TA / INV	2. Demonstrations provide evidence of technical, financial and environmental sustainability of EVs and enable public and private sector stakeholders to plan for the scale-up of low-carbon electric mobility in Côte d'Ivoire	2.1. A feasibility study on technical/economic opportunities for the electrification of public transport modes serving feeder lines along the Yopougon-Bingerville BRT corridor is conducted. *[co-financed by AUMP]* 2.2 A pilot fleet of electric taxis and minibuses is introduced as part of a World Bank funded fleet renewal mechanism, including an EV bonus and a Risk Sharing Facility (RSF) to support EV investments by public transport enterprises. *[co-financed by AUMP]* 2.3. Drivers and mechanics that will operate electric vehicles and electric vehicle supply equipment (EVSE) are trained on specifics of electric mobility. *[co-financed by AUMP]*		0	5,190,000
			2.4. A system to monitor the operation of the electric pilot fleet is established, data is collected and analyzed and findings and lessons learned are disseminated to support the broader introduction of e-mobility. 2.5. An electrification investment plan for SOTRA feeder-line buses is developed and submitted for adoption. 2.6. A charging infrastructure installation plan for large-scale introduction of EVs in Abidjan's public transport is developed.	GEFTF	104,720	45,000

Component 3. Preparing for scale-up and replication of low-carbon electric mobility	TA	3. Government of Côte d'Ivoire adopts financial incentives and technical standards to promote investments in low-carbon electric mobility in public transport.	3.1. Fiscal policies and regulation are developed and submitted for adoption. 3.2. Technical regulations and standards for EVs and charging infrastructure are developed and submitted for adoption.	GEFTF	47,120	45,000
Component 4. Long-term environmental sustainability of low-carbon electric mobility	TA	4. Government of Côte d'Ivoire endorses recommendations on renewable energy integration and an amendment on e-waste regulations to support long-term environmental sustainability of low-carbon electric mobility	4.1. The interlinkage between power generation and vehicle charging is investigated to align national RE capacity targets with e-mobility projections. 4.2. Recommendations on a direct offtake tariffication scheme for the integration of RE generation and EV charging are prepared. 4.3. An amendment to existing e-waste regulation for EV batteries is prepared and submitted for adoption; business models for the re-use of batteries are promoted.	GEFTF	83,770	67,000
			Monitoring and Evaluation	GEFTF	30,000	-
			Subtotal		371,566	5,387,000
			Project Management Cost (PMC)	GEFTF	37,150	300,000
			Total project costs		**408,716**	**5,687,000**

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**: Not applicable.**

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

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

Sources of Co-financing	Name of Co-financier	Type of Cofinancing	Investment Mobilized	Amount (US$)
Recipient Country Gov.	Ministry of Environment and Sustainable Development (MINEDD)	In-kind	Recurrent expenditures	302,000
Recipient Country Gov.	Ministry of Transport (MOT)	Public Investment[1]	Investment Mobilized	5,190,000
Recipient Country Gov.	Ministry of Transport (MOT)	In-kind	Recurrent expenditures	100,000

[1] The co-financing of US$ 5,190,000 in the form of a public investment consists of two elements: 1) US$ 5 million is reserved to offer public transport enterprises an electrification bonus which does not have to be paid back (Output 2.2); 2) US$ 190,000 will be used to prepare a feasibility study on technical/economic opportunities for the electrification of public transport modes serving feeder lines (Output 2.1) and trainings for drivers/mechanics on specifics of e-mobility (Output 2.3). This co-financing is provided through the Abidjan Urban Mobility Project financed by the World Bank.

Sources of Co-financing	Name of Co-financier	Type of Cofinancing	Investment Mobilized	Amount (US$)
Recipient Country Gov.	Ministry of Petroleum, Energy and Renewable Energies (MPEER)	In-kind	Recurrent expenditures	50,000
GEF Agency	UNEP	In-kind	Recurrent expenditures	45,000
Total Co-financing				**5,687,000**

Describe how any "Investment Mobilized" was identified:

The Investment Mobilized through government was identified through consultations with the Ministry of Transport (MOT) and the World Bank (WB), which are implementing the Abidjan Urban Mobility Project (AUMP). In the AUMP, the MOT will offer co-financing to the proposed GEF project by supporting the investment into an electric pilot fleet. This investment support under the AUMP will be in the in the form of a scrapping and electrification premium which will be provided to public transport enterprises though Côte d'Ivoire's fleet renewal mechanism *Fond de Développement du Transport Routier*, or FDTR. Both these premiums will be further enhanced through the AUMP by the establishment of a first loss guarantee to cover a risk-sharing facility (RSF, amounting to USD 17,800,000, which is not accounted for as co-finance) that will be set up by the International Finance Corporation (IFC) with commercial bank partners. The RSF will reduce the risk of banks to provide financing to fleet operators who wish to modernize their fleet and invest in electric vehicles. Ultimately, the package of the premiums and availability of attractive financing will reduce total cost of ownership of electric taxis and minibuses below that of conventional vehicles in order to incentivize fleet operators to invest in electric vehicles.

D. TRUST FUND RESOURCES REQUESTED BY AGENCY, COUNTRY, FOCAL AREA AND THE PROGRAMMING OF FUNDS

GEF Agency	Trust Fund	Country Name/Global	Focal Area	Programming of Funds	(in US$)		
					GEF Project Financing (a)	Agency Fee (b)	Total (c)=(a)+(b)
UNEP	GEF TF	Côte d'Ivoire	Climate Change	CCM 1-2	408,716	36,784	445,500
Total GEF Resources					**408,716**	**36,784**	**445,500**

E. DOES THE PROJECT INCLUDE A "NON-GRANT" INSTRUMENT? ☐ YES ☒ NO

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

F. PROJECT'S TARGET CONTRIBUTIONS TO GEF 7 CORE INDICATORS

Update the relevant sub-indicator values for this project using the methodologies indicated in the Core Indicator Worksheet provided in Annex F and aggregating them in the table below. Progress in programming against these targets is updated at mid-term evaluation and at terminal evaluation. Achieved targets will be aggregated and reported any time during the replenishment period. There is no need to complete this table for climate adaptation projects financed solely through LDCF and SCCF.

Project Core Indicators		Expected at CEO Endorsement
6	**Greenhouse Gas Emissions Mitigated** (metric tons of CO_{2e})	Direct: 82,574 tCO_2 (from 2021 to 2036) Indirect: 148,944 tCO_2 (from 2021 to 2036)
11	Number of **direct beneficiaries disaggregated by gender** as co-benefit of GEF investment	Women: 75,040 Men: 112,590 Total: 187,630

Provide additional explanation on targets, other methodologies used, and other focal area specifics (i.e., Aichi targets in BD) including justification where core indicator targets are not provided.

GHG emissions:
Please refer to section "*1.b.6) Global environmental benefits*" and Annex M for further details.

Direct beneficiaries:
The estimation of direct beneficiaries is based on the following two sets of beneficiaries:
1) Participants of workshops and trainings over the duration of the project (estimated to be 127, thereof 38 women and 89 men); and
2) Users of the demonstration assets. The project anticipates the purchase of 200 e-taxis and 50 e-minibuses for use in Abidjan. Based on parameters such as load factors, number of trips per day, operational days per year and technical lifetime of the assets (supply side) as well as estimates on number per trips per beneficiary (demand side) the total amount of unique riders using the assets has been estimated to 75,000 women (40%) and 112,500 men (60%)[2].

G. PROJECT TAXONOMY

Please update the table below for the taxonomic information provided at PIF stage. Use the GEF Taxonomy Worksheet provided in Annex G to find the most relevant keywords/topics/themes that best describe the project.

Level 1	Level 2	Level 3	Level 4
Influencing models	Transform policy and regulatory environments		
	Strengthen institutional capacity and decision-making		
	Convene multi-stakeholder alliances		
	Demonstrate innovative approaches		
Stakeholders	Private Sector	Capital providers	
		Financial intermediaries and market facilitators	
		Large corporations	
		SMEs	
		Individuals/Entrepreneurs	
	Civil Society	Non-Governmental Organization	
	Type of Engagement	Information Dissemination	
		Partnership	
		Consultation	
		Participation	
	Communications	Awareness Raising	
		Education	
		Behavior Change	
Capacity, Knowledge and Research	Capacity Development		
	Knowledge Generation and Exchange		
	Innovation		
	Knowledge and Learning	Knowledge Management	
		Innovation	
		Capacity Development	
		Learning	
Gender Equality	Gender Mainstreaming	Beneficiaries	
		Sex-disaggregated indicators	
		Gender-sensitive indicators	
	Gender results areas	Participation and leadership	
		Access to benefits and services	
		Capacity development	
	Climate Change	Climate Change Mitigation	Sustainable Urban Systems and Transport
			Technology Transfer
			Renewable Energy
			Financing
		Climate Finance (Rio Markers)	Climate Change Mitigation 2

[2] This ratio is based on punctual data on mode choice by gender published in "Gender and Transport in Less Developed Countries: A Background Paper in Preparation for CSD-9", Paper commissioned by UNED Forum as input for the workshop "Gender Perspectives for Earth Summit 2002: Energy, Transport, Information for Decision-Making" Berlin, Germany, 10 - 12 January 2001.

PART II: PROJECT JUSTIFICATION

1a. Changes in project design

Describe any changes in alignment with the project design with the original child project concept note (i.e. changes in component, outcome or output wording, changes in GEF funds allocation per component/outcome, changes in co-finance commitments and allocation per component/outcome, etc.).

During project development and as part of intensive stakeholder consultations, interagency and inter-ministerial coordination, the opportunity of linking this project with the ongoing Abidjan Urban Mobility Project (AUMP) [3] financed by the World Bank (WB) and implemented by the Ministry of Transport (MOT), has been identified. The AUMP's focus is the improvement and revamping of the urban transport system in Abidjan. It will introduce an all-electric bus fleet on the Bus Rapid Transit (BRT) system that will be financed by this project (AUMP Component A). Furthermore, it will support public transport fleet renewal by offering a scrapping premium for old vehicles as well as an electrification bonus for a pilot fleet of taxis and minibuses that will serve the BRT system (AUMP Sub-component C2). During the consultations, the Ministry of Environment and Sustainable Development (MINEDD) and MOT agreed to cooperate closely and to coordinate both initiatives. While the AUMP will incentivize the investment by urban public transport enterprises in an electric pilot fleet, the GEF UNEP project will enhance this effort by the introduction of favorable policies and regulation, building capacity of transport sector stakeholders, electric fleet monitoring, promoting e-mobility to transport sector stakeholders, and working on long-term environmental sustainability of e-mobility beyond the mere introduction of EVs (e.g. battery re-use and the promotion of renewable energy to fuel EVs). Both will shape the architecture for a transformative shift to electric mobility. This synergy with the AUMP project and the MOT resulted in the GEF project's ability to mobilize significantly more co-finance (US$ 5,687,000) than what had been originally planned in the concept note and PFD (US$ 1,452,000).

It is also noteworthy to mention that the originally intended support to introduce electric 2&3 wheelers was dropped since the Government of Côte d'Ivoire (GoCI) intends to reduce the role of 2&3 wheelers in public transport for safety reasons.

The concept note initially outlined three components, but the final project now has four components. The changes are outlined in the table below:

Changes in the Components' structure and wording:

Component No.	Concept note wording	CEO Endorsement Document wording	Explanation / justification for changes
Component 1	Revision of laws and set up of institutional framework to support accelerated introduction of electric mobility.	Institutionalization of and strategy-setting for low-carbon electric mobility	The component statements have been adjusted to align with the global e-mobility programme generic intervention logic wording.
Component 2	Piloting and demonstration of electric 2&3 wheelers, and cars and establishment of MRV framework for transport which aims to demonstrate the benefits and feasibility of low-emissions transport system, and the adoption of electric vehicles policies.	Short term barrier removal through feasibility analyses, the demonstration of electric vehicles and know-how development for a wider introduction of electric mobility in Côte d'Ivoire	
Component 3	Preparation of scale-up and replication of electric mobility. Based on the demonstration, fiscal policies and regulatory schemes, procurement guidelines including technical and business models are developed to incentivize uptake of electric mobility.	Preparing for scale-up and replication of low-carbon electric mobility	
Component 4	*No component 4 in the concept note*	Long-term environmental sustainability of low-carbon electric mobility	

[3] Source: World Bank. 2019. Project Appraisal Document for the Abidjan Urban Mobility Project.

1b. Project Description

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

Global environmental problem:

The global vehicle fleet is set to double by 2050, and almost all this growth will take place in low- and middle-income countries. By 2050 two out of three cars will be found in developing countries. This means that achieving global climate targets will require a shift to zero emissions mobility in all countries, including low- and middle-income ones.

Côte d'Ivoire (CI), as a lower-middle income country, is no exception. Strong economic growth, increasing population and urbanization have led and will lead to an expanding vehicle fleet and, if unmanaged, growing CO_2 emissions and air pollution. An outdated and poorly maintained vehicle fleet is aggravating the environmental problem through highly inefficient fuel use and the emission of large amounts of health threatening air pollutants.

Today, Côte d'Ivoire is the third-largest economy in West Africa with a GDP of US$ 43 billion in 2018. After the post-electoral crisis of 2011, the economy achieved annual growth rates of 10.7% in 2012 and around 8.8% between 2013 and 2015. Although economic expansion slowed down slightly since then, it still stood at an estimated 7% in 2019. Similar rates are expected in the years to come.

In 2018, Côte d'Ivoire passed the mark of 25 million inhabitants and population is likely to double within the next 30 years. About 50% of Ivorians live in urban areas, making it the most urbanized country in Sub-Saharan Africa (average urbanization rate: 40%).[4] The Greater Abidjan Agglomeration (GAA) is concentrating about 80% of CI's formal enterprises and is home to approximately 5.4 million people, representing 42% of the country's urban population. It is estimated that the population will increase to more than 7 million by 2030 and approximately 10 million by 2040.[5]

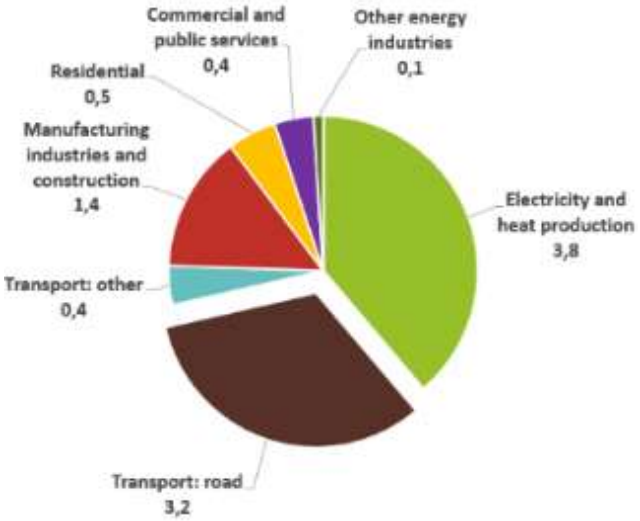


FIGURE 1: CO_2 EMISSIONS BY SECTOR, CÔTE D'IVOIRE 2017, IN MT[6]

The high rates of economic and population growth as well as increasing urbanization have led to rapid motorization. The total fleet of registered vehicles has more than doubled from 2005 (351,000) to 2015 (800,000) in Côte d'Ivoire, of which

[4] Source: https://data.worldbank.org
[5] Source: World Bank. 2019. Que la route soit bonne : Améliorer la mobilité urbaine à Abidjan.
[6] Source: IEA. 2019. CO2 emissions from fuel combustion – Highlights

80% can be found in Abidjan.[7] Growth has led to an increase of the transport sector's final energy consumption from 402 ktoe in 2005 to 1,188 ktoe in 2017 (of a total final energy consumption of 7,230 ktoe).[8] In the same year, 3.2 Mt of CO_2 emissions (of a total of 10.2 Mt) originated from road transport. This sector is thus the second largest CO_2 emitter in Côte d'Ivoire (cf. Figure 1).[9]

The GoCI has undertaken notable efforts to address the growing demand for transportation as well as the issue of energy use and emissions. A "Draft Road Map for Sustainable Transport in Côte d'Ivoire"[10] has been prepared by the Ministry of Transport (MOT). The Draft Road Map addresses the transport sector in CI as a whole (except for air travel) and proposes measures for ten general intervention axes[11]. One axis is to shift towards low carbon energy sources and the objective is formulated to achieve at least 30% renewable electricity as transportation fuel by 2050. While the Road Map states this objective and aims at improving public transport, it does not present a concrete plan on how both can be integrated. It is here where this project will support the GoCI with concrete measures to support implementation of the Draft Road Map. It should be noted that this draft version is not yet a binding government document but serves as a basis for further development.

In 2019, MOT started the implementation of the World Bank funded Abidjan Urban Mobility Project (AUMP). This project receives a total funding of US$ 540 million (US$ 400 million International Financing Institution – IFI – Debt, US$ 90 million commercial debt, US$ 10 million government contribution and US$ 40 million private sector equity). Its overall objective is to "improve accessibility to economic and social opportunities and to increase efficiency of the public transport system along the Yopougon-Bingerville corridor and its feeder lines in Abidjan". The following four project (sub-)components AUMP are highly complementary to this GEF funded e-mobility project: 1.) Introduction of an electric bus fleet on a Bus Rapid Transit (BRT) system along the Yopougon-Bingerville corridor through Abidjan; 2.) Establishment of a financing scheme that comprises a scrapping and electrification premium for an electric pilot fleet as well as the establishment of a first loss guarantee to cover a risk-sharing facility (RSF) that will be set up by the International Finance Corporation (IFC) with commercial bank partners; 3.) Support of the government-owned public transportation company *Société des Transports Abidjanais* (SOTRA) in its efforts to restructure its bus network, improve operational performance and by constructing two bus depots and two terminal stations, all in view of integrating SOTRA's services into the mass transport system (Metro and BRT); and 4.) Development of skills required for future needs of the urban transport sector.[12]

This GEF funded e-mobility project in CI will thus closely collaborate with the AUMP executed by MOT and will support the broader introduction of electric vehicles in the public transportation in Abidjan. Other cities in CI will benefit as well by newly introduced nationally valid policies and regulation and communication of lessons learned during project implementation in Abidjan.

Root causes and barriers:

The growth in transport demand, particularly in the Greater Abidjan Area (GAA), is a root cause for increasing GHG and air pollutant emission from the road transport sector. Contributing more than 60% to CI's GDP, the GAA is and will remain the country's engine of growth, attracting more and more people to work there. Being closely linked to growth in disposable income and the need to commute to work, mobility demand will grow accordingly.

Increased energy use and emissions from increased transport activity is amplified by the influx of many old and polluting vehicles, an underdeveloped public transport sector and inadequate road infrastructure, hampering efficient and environmentally friendly movement of people. Especially the very high average age of Côte d'Ivoire's rolling stock is

[7] Source: Ministère des Transports. 2019. Elaboration de la Feuille de Route Mobilité Durable en Côte d'Ivoire – Rapport Diagnostique.
[8] Source: https://www.iea.org/data-and-statistics
[9] Source: International Energy Agency. 2019. CO_2 emissions from fuel combustion – Highlights.
[10] Source: Ministère des Transports. 2019. Projet feuille de route pour une mobilité durable en Côte d'Ivoire: « Emergence – bas carbone dans les transports ». Version provisoire.
[11] Urban planning, low-carbon energy provision, improving the efficiency of transport modes and transport systems, reduction of unnecessary trips, solutions adapted for rural areas and secondary cities, construction and adaptation of infrastructure, effectivity and efficiency of regulatory and financial instruments, road safety, optimization of logistics, and education.
[12] Source: World Bank. 2019. Project Appraisal Document for the Abidjan Urban Mobility Project.

considered another root cause for increased GHG and air pollutant emissions. Over 90% of the country's vehicle fleet is imported used, which has led to a situation where average vehicle age of the fleet is as high as 19 years. Added poor maintenance of many vehicles and use of low quality, high sulphur fuels (only as of January 2021 50 ppm sulphur fuels are obligatory in CI), the combination of an old fleet and congested traffic leads to high fuel consumption, GHG and air pollutant emissions.

A multitude of barriers exist in CI preventing the uptake of electric mobility:Lack of awareness, knowledge and capacity: E-mobility is a novel technology in CI, and knowledge about this technology, its costs and benefits and how to operate and maintain electric vehicles is still uncommon among decision makers in government and public transport operators. On top of that, it can be expected that fleet operators will stick to better-known and tested combustion engines out of habit and remain sceptical about the new technology. This lack of awareness, knowledge and capacity in government and private sector is a key barrier preventing policymakers, public transport fleet operators and other stakeholders to consider e-mobility as an alternative option to conventional vehicles with internal combustion engines (ICE). Since so far, only very few privately owned electric cars are in use in CI, there is no presence of electric vehicles in daily life, which amplifies the perception of EVs being a technology option for industrialized countries. Complete absence of publicly accessible charging infrastructure is completing the picture of EVs not being useful for commercial and / or private use.

Lack of strategic e-mobility planning: Improving mobility has been identified a priority by GoCI and development of a Draft Road Map for Sustainable Mobility in Côte d'Ivoire is underway. Although the document already points out the importance of using electricity as a clean fuel in the transport sector, no overarching analysis linking scenarios for introduction and upscaling of e-mobility with power supply scenarios has been undertaken. The recently started Abidjan Urban Mobility Project (AUMP), which receives financing of USD 300 million by the World Bank, and which targets the introduction of an electric bus rapid transit system (BRT) in Abidjan and significant renewal of the taxi and mini-taxi fleet, including electric vehicles, is set to be a gamer changer for e-mobility in CI, but still lacks embedding in a coherent national e-mobility strategy. In addition, CI has considerable own resources of natural gas and efforts are underway to use this energy carrier in the transport sector. For example, SOTRA acquired 50 compressed natural gas (CNG) buses (of a total of 450 new buses), which were officially handed over to SOTRA in December 2018[13]. While the use of this energy carrier is understandable from an economic point of view, the decision to introduce CNG vehicles might lead to a lock-in, which will cause suboptimal results both from the perspective of the global environment as well as economic development. Ultimately, zero-emission transportation will rely on electric vehicles. It is therefore highly likely that a CNG bus fleet alongside the required refueling infrastructure will only serve as a bridge technology on the way to zero-carbon mobility. Direct investment in electric public transportation can avoid such an intermediate state while it does not prevent the use of natural gas in transportation – for instance, if natural gas is part of CI's fuel mix to generate electricity as it is the case today. Thus, this project will actively promote the increase in renewable power capacity to reduce carbon intensity of CI's electricity generation.

Lack of coordination and policy framework: Many stakeholders are involved in national e-mobility policy making in CI, including: the Ministry of Transport (Ministère des Transports – MOT) and its Directorate of Road Transport and Mobility (Direction Générale des Transports Terrestres et de la Circulation -DGTTC); the Ministry of Petroleum, Energy and Renewable Energies (Ministère du Pétrole, de l'Énergie et des Énergies Renouvelables – MPEER); the National Authority for the Regulation of the Electricity Sector in Côte d'Ivoire (Autorité Nationale de Régulation du secteur de l'Electricité de Côte d'Ivoire – ANARE-CI); the Ministry of Environment and Sustainable Development (Ministère de l'Environnement et du Développement Durable – MINEDD) and the associated Government Agency Ivorian Antipollution Centre (Centre Ivoirien Antipollution – CIAPOL); the Ministry of Construction, Housing, Sanitation and Urban Planning (Ministère de la Construction, du Logement, de l'Assainissement et de et de l'Urbanisme – MCLAU); the Ministry of Road Equipment and Maintenance (Ministère de l'Equipement et de l'Entretien Routier – MEER); the Ministry of the Economy and Finance (Ministère de l'Economie et des Finances – MEF); and the Ministry attached to the Prime Minister, in charge of the Budget and the State Portfolio (Ministère auprès du Premier Ministre, chargé du Budget et du Portefeuille de l'Etat – MPMBPE). The different actors often have varying objectives, and coordination is essential to develop a policy framework, which coherently incentivizes e-mobility while satisfying overarching objectives of the different players. This is particularly true when it comes to the internalization of costs and benefits of

[13] Source: https://ci.ambafrance.org/Remise-des-cles-de-450-bus-Iveco-a

e-mobility across sectors. While for example the use of CNG might be beneficial from a cost perspective when only focusing on public transportation, greater benefits can be achieved when considering the use of natural gas for power generation, which can the also be used for e-mobility in the transport sector, and which facilitates the integration of higher shares of variable renewable power generation and its direct spill-over into the transport sector, thus preparing the transition to low carbon energy and transport sectors.

Lack of targeted financial products to accelerate fleet renewal and the uptake of e-mobility in public transportation: The public transport sector is scattered and dominated by artisanal public transport operators operating large numbers of outdated, cheap, polluting and often unsafe vehicles in the taxi and minibus sector, often without formal business structures. Their low purchasing power is a barrier to market uptake of cleaner and more efficient vehicles since these businesses operate on very tight budgets and have little access to affordable finance. So far, no financing mechanisms for investment in clean and efficient vehicles exist and no subsidies for the purchase of EVs are in place. This in combination with the high upfront costs of electric vehicles makes it very difficult for potential clients to purchase EVs and to benefit from the lower total cost of ownership (including purchase costs as well as life-time fuel and maintenance costs) of such vehicles. The AUMP implemented by World Bank aims at the introduction of targeted finance for fleet renewal with a bonus for electric vehicles. This project supports the implementation of e-mobility incentives by linking the AUMP with the expertise outreach of the GEF 7 Electric Mobility Programme.

Lack of EV offer and charging infrastructure: To date new electric cars and minibuses cannot be purchased in CI. This is largely due to low EV demand and due the lack of capacity for local EV maintenance. Car manufactures apply readiness indicators to decide which technology will be offered in which markets. So far, car manufacturers with EVs in their vehicle portfolio offer them in only a very few Sub-Sahara African countries, among which are South Africa and Mauritius. Nonetheless, the market is moving quickly, and Nissan is soon to be expected to offer a range of EVs in East Africa. This project, through the outreach of the Global Programme, will support the process to make new EVs available in the Ivoirian market. The complete absence of publicly accessible charging infrastructure is another barrier which renders EV operation as part of fleet vehicles cumbersome. The planning and provision of a basic EV charging infrastructure at strategic points within the urban area of Abidjan, mainly targeting the charging of EV taxis and EV minibuses as drivers wait for clients, will significantly enhance the viability of e-mobility as part of public transport fleets in Abidjan.

Lack of sustainable e-mobility planning and battery end-of-life regulation: Electric vehicles will bring along their own set of environmental challenges, specifically in the form of electronic waste and increased power demand. Since there is no e-mobility market yet, there is no elaborated framework that would ensure that EVs are operated and recycled as environmentally friendly as possible. For example, managing e-waste as a result of used EV batteries is not yet included in the existing e-waste management regulation. Furthermore, e-mobility is not yet explicitly considered in renewable energy capacity planning. The lack of planning for sustainable e-mobility is closely linked with the development of an overarching e-mobility strategy.

The Theory of Change (ToC, see Figure 2) for this project foresees that based on the outputs funded by the project, and targeting the different root-causes and barriers, project outcomes will be achieved which trigger the required behavioural change to sustainably introduce e-mobility in Cote d'Ivoire, with the ultimate goal to significantly reduce energy use and GHG and air pollutant emissions. Based on project activities the ToC foresees:

- The establishment of an institutional framework and the endorsement of a gender sensitive national strategy for the promotion of electric mobility in public transport ;
- The provision of evidence for technical, operational and financial viability of EVs enabling private sector stakeholders to plan for scaling up of e-mobility ;
- The provision of an adequate policy framework including technical standards and financial incentives to promote the investment in e-mobility, and ;
- The endorsement of recommendations on renewable energy integration and an amendment on e-waste regulations to support long-term environmental sustainability of low-carbon electric mobility,

The outcomes of the project will result in the needed gain in local experience which, in combination with the policy framework and the institutional support, is expected to lead to increased investment in e-mobility and renewable power generation, ultimately reducing GHG and air pollutant emissions from the transport sector.

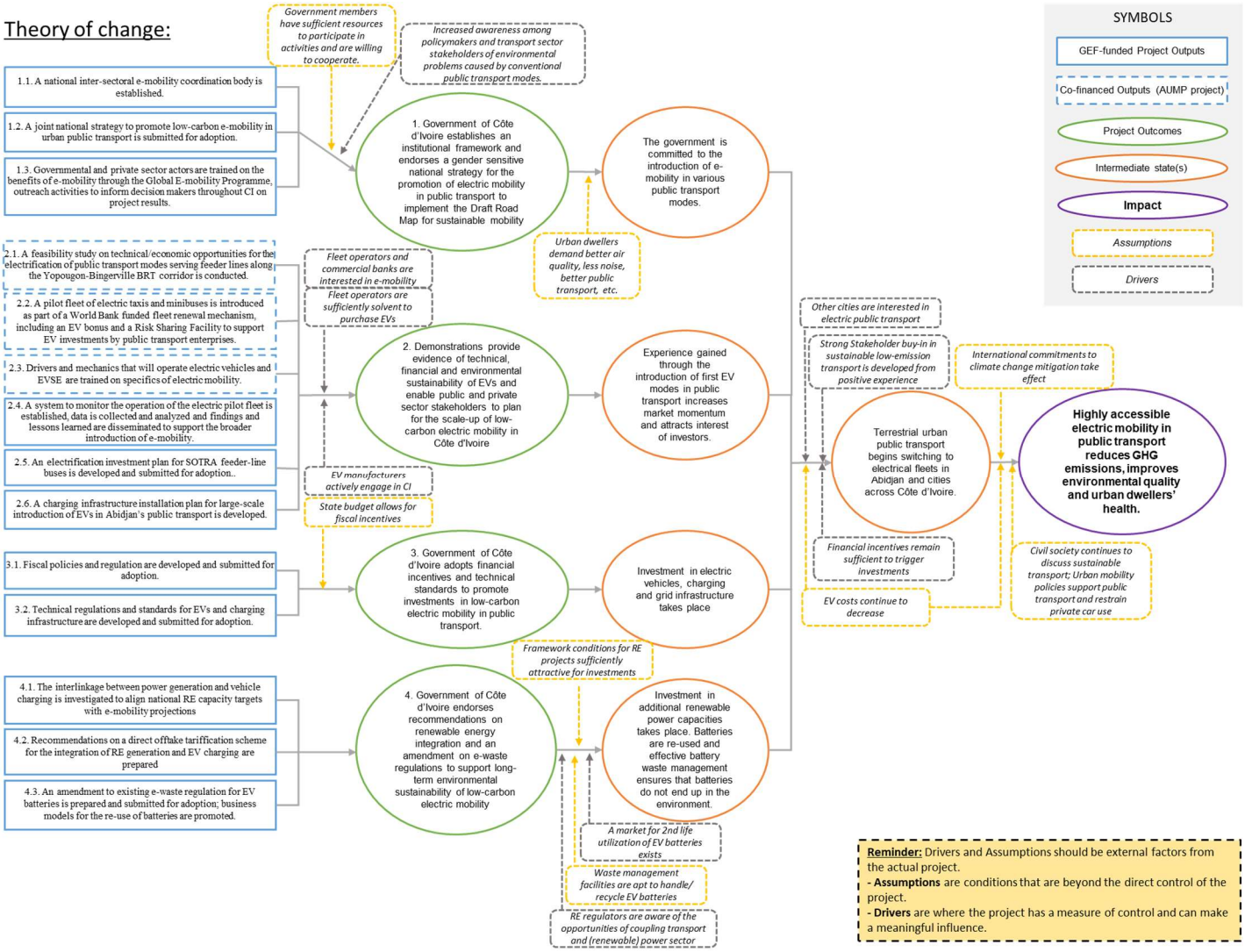


FIGURE 2 THEORY OF CHANGE

2) Baseline scenario and any associated baseline projects

Baseline projection of the vehicle fleet growth

Based on historic growth rates, the vehicle fleet in Côte d'Ivoire is estimated to grow from about 800,000 vehicles in 2015 to more than 1,300,000 vehicles in 2030 and to more than 2.6 million vehicles in 2050. This means that the vehicle fleet would triple while the population doubles until 2050. With no intervention to shift to cleaner and more efficient vehicles, this growth of the vehicle fleet will result in similar increases of transport energy use, CO_2 and air pollutant emissions, and will cause significant costs for the society stemming from fuel expenditures as well as health related costs.

Baseline projection of stock, sales, energy use and CO_2 emissions of the public transport sector

The public transport sector in Abidjan is served by SOTRA buses, minibuses (gbakas), communal taxis (wôrô-wôrôs), metered taxis and – to a small extent – transport of personnel which is organized by enterprises or other institutions and organizations themselves. It can be observed that the market share shifted considerably from SOTRA services (incl. buses and SOTRA operated boats on Abidjan's lagoon) especially to communal taxis but also minibuses (see Figure 3).

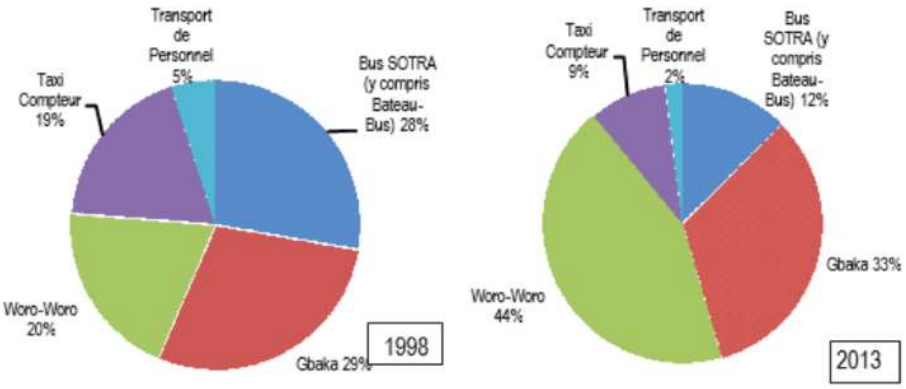


FIGURE 3: CHANGE IN PUBLIC TRANSPORT MODES FROM 1998 TO 2013[14]

The earlier shift away from SOTRA to informal transport modes can be explained through a lack of proper infrastructure and resulting low transportation speeds caused by congestions, missing investments in new SOTRA buses due to inadequate funding, greater flexibility of the informal transport modes as well as an increase in car ownership.[15]

This resulted in a situation whereby the taxi fleet almost quadrupled, the minibus fleet grew by about 80% while the SOTRA bus fleet stood at about 500 vehicles with a tendency to even decrease.

Based on the extrapolation of historical data from between 2000 and 2015 up to the year 2019, it can be estimated that about 39,000 taxis and 5,000 minibuses populated the streets of Abidjan. Given the recent efforts of the GoCI to increase SOTRA's transport capacities, about 1,200 SOTRA buses are now serving more than 100 lines in Abidjan, including the already mentioned 450 new CNG and diesel buses by manufacturer IVECO.[16] The original planning foresaw that a total of 2,000 buses was to be reached by 2020, but implementation is slightly delayed. At the end of 2019, an agreement to deliver another 450 CNG fueled buses has been signed with manufacturer Scania[17], but these vehicles have not been delivered yet. Note that SOTRA's current short-term procurement plan does not include electric buses.

In the baseline scenario, it is projected that by 2050 the taxi fleet will almost triple to about 110,000 vehicles, the minibus fleet will triple to nearly 15,000 vehicles and the SOTRA bus fleet will nearly triple to almost 3,000 vehicles.

The baseline scenario considers that some of the new vehicles would be battery electric vehicles (BEV) in the short and long term. In this scenario, it was assumed that the sales share of electric taxis, minibuses and SOTRA buses would be 10% in 2030 and 30% in 2050. This can be considered as a slow EV development path that would remain well behind the targets of the draft Road Map for Sustainable Mobility in Côte d'Ivoire (*Feuille de route pour une mobilité durable en Côte d'Ivoire: Emergence – bas carbone dans les transports*) published by MOT in December 2019, proposing an electric energy share in CI's complete national transport sector (incl. private transport modes, freight, etc.) of 10%[18] in 2030 and 30% in 2050.

The baseline scenario for the evolution of vehicle sales and stock as well as energy use and carbon dioxide emissions for the taxi, minibus and SOTRA bus sub-sectors are shown in the following figures:

[14] Source: Ministry of Construction, Housing, Sanitation and Urban Development. 2015. Urban Transport Master Plan for Greater Abidjan.
[15] Source: Ministry of Construction, Housing, Sanitation and Urban Development. 2015. Urban Transport Master Plan for Greater Abidjan.
[16] Source: http://www.transports.gouv.ci/actualites/transport-urbain-450-nouveaux-autobus-acquis-la-sotra-se-met-au-gaz-1155-bus-fin-2018
[17] Source: https://www.volkswagenag.com/en/news/2019/12/scania_abidjan.html
[18] A share of electricity use of 10% implies an EV share of between 20% to 30% of the total running fleet, given the much higher efficiency of EVs.

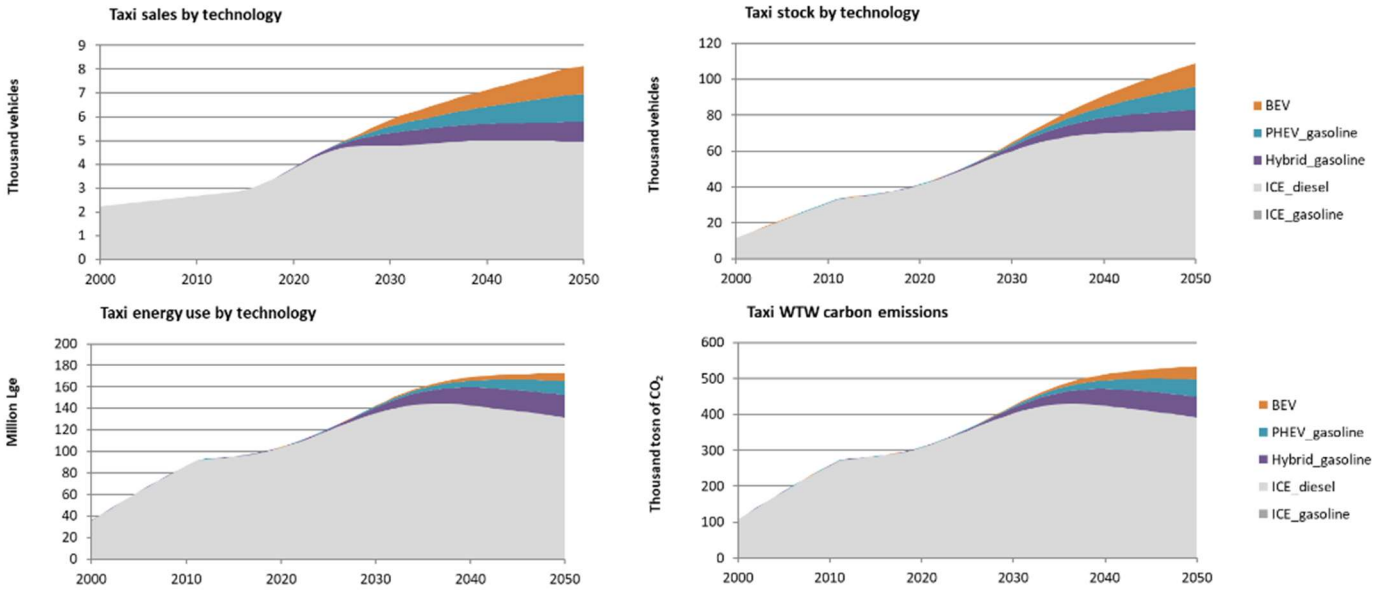


FIGURE 4: BASELINE SCENARIO FOR TAXIS

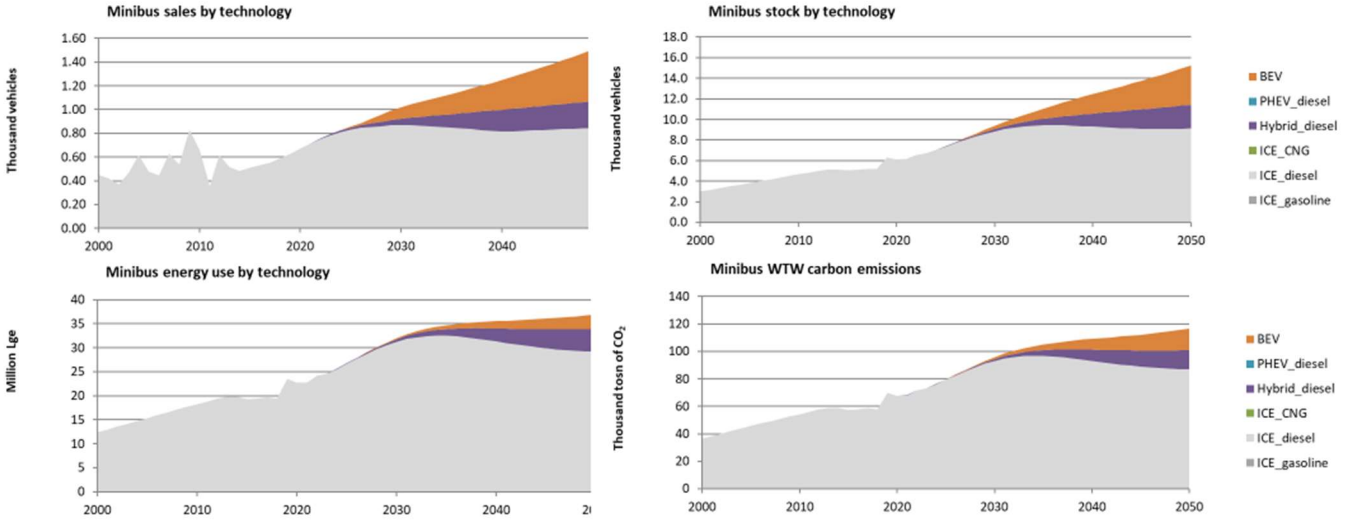


FIGURE 5: BASELINE SCENARIO FOR MINIBUSES (GBAKAS)

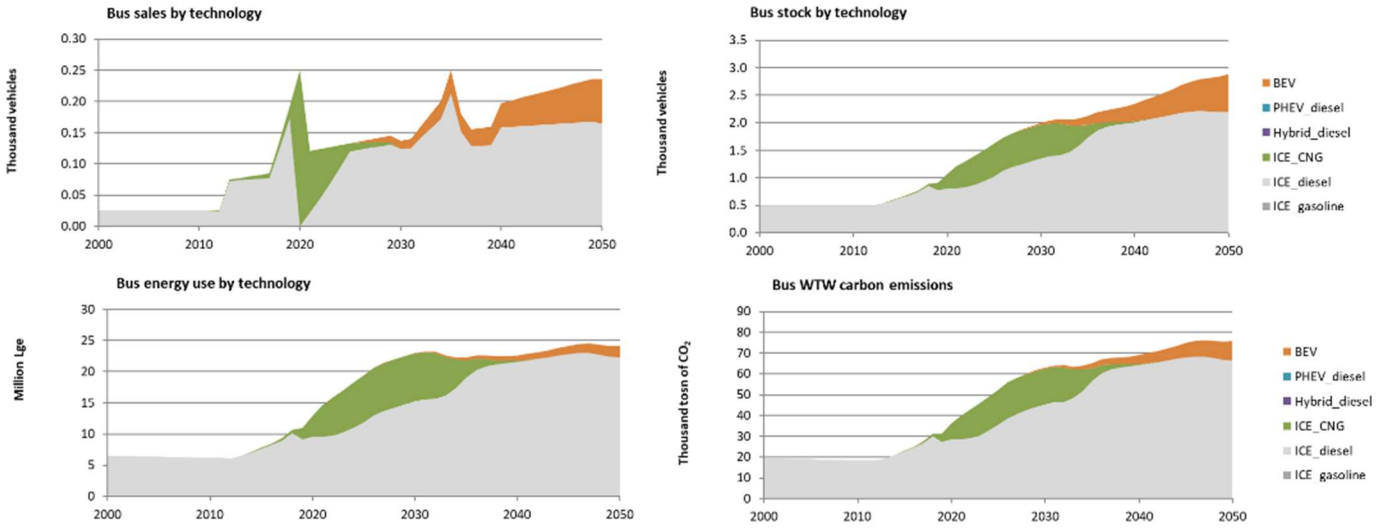


FIGURE 6: BASELINE SCENARIO FOR SOTRA BUSES

Under the baseline scenario, the annual Tank-to-Wheel (TTW) energy use of all three public transport sub-sectors would increase from 136 million Lge in 2019 to 234 million Lge in 2050 and annual Well-to-Wheel (WTW) carbon dioxide emissions would increase from 404 in 2019 to 726 thousand tons in 2050 (cf. Table 1). Note that carbon intensity of electricity used by EVs under the baseline scenario decreases from 0.554 kg to 0.250 kg CO_2 per kWh in 2050 under the assumption that Côte d'Ivoire reaches its official target of 42% renewable energies in the power mix by 2030[19] (when an equivalent of approximately 0.342 kg CO_2 per kWh is estimated) and that carbon intensity would further decrease until 2050 (to reach 0.250 kg CO_2 per kWh).

TABLE 1: EVOLUTION OF TTW ENERGY USE AND CO2 EMISSIONS UNTIL 2050[20]

	TTW Energy use [million Lge]			WTW carbon dioxide emissions [thousand tons]		
	2019	**2030**	**2050**	**2019**	**2030**	**2050**
Taxis	102	143	173	303	425	533
Minibuses	23	32	37	70	96	117
SOTRA buses	11	23	24	31	63	76
Total	136	198	234	404	584	726

Current national transport sector strategies

In urban transport planning, the key guiding document for the development of the public transport sector in Abidjan is the Urban Transport Master Plan for Greater Abidjan (*Schéma Directeur d'Urbanisme du Grand Abidjan - SDUGA*). The Master Plan was developed under the responsibility of the Ministry of Construction, Housing, Sanitation and Urban Planning (*Ministère de la Construction, du Logement, de l'Assainissement et de et de l'Urbanisme – MCLAU*). Adopted in 2016 with a planning horizon until 2030, the SDUGA pursues the following four main objectives:[21]

1) Enhancement of road network capacity that supports economic activities
2) Promotion of public transport use
3) Intermodal development/Transit-oriented development
4) Realization of an environmentally sound transportation system

[19] Source: Ministère du Pétrole et de l'Energie (MPE). 2016. Plan d'Actions National des Energies Renouvelables. Period 2016-2020/2030.
[20] Source: Own calculation based on the methodology for the estimation of GHG reductions and energy saving benefits as described in Annex M.
[21] Source: Ministry of Construction, Housing, Sanitation and Urban Development. 2015. Urban Transport Master Plan for Greater Abidjan.

Through the SDUGA, several mobility projects in Abidjan have received support from private and public stakeholders. These are, for instance, the Abidjan Urban Mobility Project (AUMP) funded by World Bank, the Metro Line 1 North-South project funded by the French Treasury, the Urban Transport Project (PTUA, by its French acronym) funded by the African Development Bank (AfDB), just to mention a few. The SDUGA is focusing on introducing more and improving public transport, electrification of public transport was not yet considered as an option. The proposed GEF E-Mobility project will be closely linked to the AUMP (see the Baseline Investment description below for more details).

Another, yet very recent, strategic initiative by the GoCI is the Draft Road Map for Sustainable Mobility in Côte d'Ivoire (*Feuille de route pour une mobilité durable en Côte d'Ivoire: Emergence – bas carbone dans les transports*) which has been published by MOT in December 2019. The Draft Road Map was developed under the impression that initiatives for sustainable transport sector development were still scattered between different both national and local institutions. It aims at "allowing all stakeholders to elaborate a shared vision for 2050, which will serve as a basis for mobility development strategies in Côte d'Ivoire." The Road Map is explicitly proposing to attribute a main role to renewable electricity to fuel the transport sector in the future (see Figure 7). [22] This project will build on the Road Map for Sustainable Mobility in Côte d'Ivoire and aims at the creation of an "E-Mobility Coordination Body" under the MOT and based on the Project Steering Committee of the GEF E-Mobility Project.

Horizon	2019	2030	2050
Electrique	0%	10%	30%
Hydrogène	0%	0%	5%
Bio	0%	5%	15%
Fossile	100%	85%	50%

FIGURE 7: FUEL USE TARGETS FOR THE IVORIAN TRANSPORT SECTOR[23]

Current regulatory and fiscal framework for the public transport sector

As discussed above, the high age of vehicles in the public transport fleet – the average age of communal taxis (wôro-wôro) and minibuses (gbakas) is 22 and 17 years, respectively [24] - is causing high levels of air pollution and inefficient use of fuel. Several initiatives by the GoCI are aiming at tackling these problems. First, there is the Road Transport Development Fund (*Fond de Développement du Transport Routier - FDTR*). Established in 2014 through *Décret n° 2014-96,* the Fund aims at systematically renewing 50,000 vehicles by 2020. It offers loans to road transport enterprises, for instance taxi or freight companies. The FDTR is organized as a state-owned public company with industrial and commercial functions (*Etablissement public à caractère industriel et commercial*), managed technically by the MOT and financially by the Ministry of Economy and Finances as well as the Ministry for Budget.

The second instrument to renew Côte d'Ivoire's vehicle fleet is *Décret n° 2017-792* curbing the maximum import age of vehicles to 5 years for taxis, 7 years for mini-buses and lorries up to 5 tons and 10 years for heavy duty vehicles such as buses and trucks. This decree is complemented by *Décret n° 2017-793* limiting the operational life of these vehicles (taxis: 7 years; mini-buses up to 34 seats and lorries up to 5 tons: 10 years; minibuses above 34 seats: 15 years; heavy duty vehicles such as buses and trucks: 20 years). These vehicle regulations are in part attributable to a Global Fuel Economy Initiative (GFEI) project funded with GEF 5 resources that supported vehicle fuel economy activities.

[22] Source: Ministère des Transports. 2019. Projet Feuille de Route pour une Mobilité Durable en Côte d'Ivoire – Version provisoire.
[23] Source: Ministère des Transports. 2019. Projet Feuille de Route pour une Mobilité Durable en Côte d'Ivoire – Version provisoire.
[24] Source: World Bank. 2019. Project Appraisal Document for the Abidjan Urban Mobility Project.

Furthermore, *Décret n° 2017-125* stipulates limits for air pollutant emissions for light and heavy-duty vehicles and motorcycles. A carbon tax on vehicle fuels is currently being investigated.

The National Environmental Fund promotes clean mobility and other environmental targets. The fund caters for motor vehicle air pollution standards as well as air quality monitoring. In addition to this, a tax exemption has been established for all imported used vehicles that are less than five years in age. Importers of older vehicles have to pay a tax of 50.000 CFAF[25] (West African CFA franc).[26]

The Project for Supporting the Modernization of Transport Sectors (*Projet d'Appui à la Modernisation du Secteur des Transports - PAMOSET*) is another, earlier initiative by the World Bank and the GoCI. Initiated in 2016, its primary objective is to improve the efficiency and security of transport services on the Ivorian section of the Abidjan – Ouagadougou corridor. Very often, outdated trucks are serving this route. Therefore, the project offers a scrapping premium for eligible vehicles to renew about 300 trucks, co-financed with funds from the WB International Development Association (IDA) and the GoCI. PAMOSET funds are managed by the FDTR (see above). The funding mechanism that has been developed under the PAMOSET and that has been integrated into the FDTR will also be applied within the AUMP.
Although small, it should be mentioned that Bolloré, an international industrial group, is operating a fleet of three electric buses (6 m length) at the University Félix Houphouët-Boigny d'Abidjan since October 2013.

Current national renewable energy strategy

In 2016, the GoCI has published it National Action Plan for Renewable Energies (PANER). It defines the official target to generate 42% of its electricity from renewables by 2030 (26% coming from medium to large-scale hydropower and 16% from other renewable energy sources, especially biomass and solar).[27]

Related baseline investments

Several investments aim at improving the transportation sector and to increase renewable energy generation in CI. In the area of renewable energies, implementation progress is more advanced in the hydropower and biomass sectors, a couple of projects are currently being implemented. Utility-scale solar projects on the other hand have received financial commitments by development banks but implementation is pending. This e-mobility project aims at giving additional momentum to renewable power projects in general by explicitly linking electric mobility to renewable energy generation. The main baseline investments are presented in the following table.

Project title	**Thematic Focus**	**Financier / Implementing Agency**	**Volume**	**Time frame**	**Sources**
Transport sector					
Project for Supporting the Modernization of Transport Sectors (PAMOSET)	Fleet renewal scheme (enhancing efficiency and security); freight	IDA World Bank / MOT – Directorate General of Road Transport and Mobility (DGTTC under the MOT)	US$ 30 m (concessional loan)	2016-2021	[28]
Greater Abidjan Port-City Integration Project	Improvement of urban management, logistics efficiency, port accessibility,	World Bank – IDA / Côte d'Ivoire Infrastructure	US$ 315 m (concessional loan)	2018-2025	[29]

[25] Ca. US$ 86 as per 12 June 2020.
[26] *Taxe de salubrité et de protection de l'environnement - Art. 1137 du Code général des Impôts* (Health and environmental protection tax – Article 1137 of the General Tax Code)
[27] Source: Ministère du Pétrole et de l'Energie (MPE). 2016. Plan d'Actions National des Energies Renouvelables. Period 2016-2020/2030.
[28] Source: World Bank. 2016. Project Appraisal Document for the Transport Sector Modernization and Corridor Trade Facilitation Project.
[29] Source: https://projects.worldbank.org/en/projects-operations/project-detail/P159697

	and urban mobility; project included the preparation of the feasibility study for the BRT system now implemented by the AUMP	Renewal Project (PRICI – Project Coordination Unit under the Ministry of Economic Infrastructure)			
Métro d'Abidjan – Ligne 1	Public transport infrastructure; urban railway	French Development Agency (AFD) – French Treasury / MOT	Project cost: US$ 1.5 bn; full funding through concessional loans via AFD	Project start: 2017, effective construction start: 2019, expected beginning of passenger service: 2023-2024	[30]
Abidjan Urban Transport Project (PTUA)	Investment in urban transport infrastructure; the AUMP is linked to this project as it finances the preparation of a bridge for use by BRT buses	AfDB, GEF, JICA, GoCI	€ 567 m AfDB loan, € 6.45 m GEF grant, € 63.49 m JICA loan, € 132.9 by the GoCI.	2016-2021	[31]
Global Fuel Economy Initiative (GFEI)	Fuel efficiency	GEF	US$ 2.26 m (grant for 20 countries, incl. CI)	2013-ongoing	[32]
Country child project of the GEF-6 Sustainable Cities Integrated Approach Pilot (IAP) Program (Abidjan Integrated Sustainable Urban Planning and Management)	Project Objective: To enhance local capacity to assess and respond to environmental degradation through the application of integrated sustainable urban planning and management methods while encouraging the uptake of innovative lower carbon technologies to reduce GHG emissions and improve air quality in the city of Abidjan	GEF/AfDB and UNIDO	US$ 5.25 (grant)	2015-ongoing	[33]
Energy sector					
Solar project "KfW Boundiali"	Grid-connected utility-scale photovoltaic power plants; (project is part of the official project pipeline comprising 13 projects at different sites with a total capacity of 466 MWp to be achieved by 2030 which are to be tendered by the GoCI)	Kreditanstalt für Wiederaufbau (Reconstruction Credit Institute – KfW) has shortlisted a project (37.5 MWp) in Boundiali in December 2019; tender pending	KfW, European Union Boundiali: € 27 m (KfW concessional loan; EU: € 9.75 m grant)	KfW, Boundiali 2018-2020 (2020: planned commis-sioning, but project has not been tendered yet)	[34], [35], [36]

[30] Source: http://www.lemetrodabidjan.ci/ and https://www.railway-technology.com/projects/abidjan-metro-ivory-coast/
[31] Source: https://www.afdb.org
[32] Source: https://www.thegef.org/project/stabilizing-ghg-emissions-road-transport-through-doubling-global-vehicle-fuel-economy
[33] Source: https://open.unido.org/api/documents/4957166/download/SC-IAP_Cote%20dIvoire_AfDB_UNIDO%20CEO%20Endorsement_13.09.2016.pdf
[34] Source: https://www.cinergies.ci/wp-content/themes/mxp_base_theme/mxp_theme/assets/solaire-tableau.jpg
[35] Source: https://www.ccilci.org/revue-de-presse/financial-afrik/7313-la-kfw-octroie-un-pret-pour-la-centrale-solaire-de-boundiali
[36] Source: https://cotedivoirenews.info/cote-divoire-bientot-une-centrale-solaire-construite-a-boundiali/

Scaling Solar	Supporting the implementation of grid-connected solar projects; planned: 60 MW PV system in CI; (is also one of the projects from the official project pipeline mentioned above)	International Finance Cooperation's (IFC)	Information not available	Announced 2019, planned commis-sioning: 2021; project has not been tendered yet	[37], [38]
Biomass plant Biokala	Utility-scale power generation; use of agricultural residues; planned capacity: 46 MW. (Note: other biomass projects have been envisaged by the GoCi, so far, priority has been given to implementing the Biokala project).	Co-financing by Proparco (French development finance institution), the Dutch development Bank (FMO) and Société Générale, a French bank	€ 90 m credit line	Announced: end 2019; planned commis-sioning: 2023	[39],[40]
Singrobo-Ahouaty hydropower plant	Hydropower; capacity: 44 MW	Main financier: African Finance Corporation (AFC)	AFC: Equity and bridge loan facility (totaling € 174 m)	First disbursement of the bridge loan facility: December 2018; completion planned: 2023	[41]
Gribo Popoli hydroelectric project	Hydropower; capacity: 112 MW	Main financier: Exim Bank China	Exim Bank China: Loan, € 258.2 m	Construction start: 2017; completion planned: 2021	[42]
Energos 2 programme	Renewable energies; energy efficiency; support to the tender offer process for the selection of IPPs in renewable energy, including pre-feasibility and feasibility studies, coordination/support of the tender offer process, and legal and financial support for developing power purchase agreements.	European Development Fund / AFD	€ 68.265 m (guarantee funds, TA grants)	2017-2021	[43]
Cross-cutting					
Transforming Financial Systems for Climate	Scale up climate finance and strengthen the capacities of local partners in climate-related sectors in 17 developing countries	GCF / AFD	€ 653 m (€ 615 m credit line + € 38 m technical assistance)	2019-2026	[44]

[37] Source: https://www.scalingsolar.org/
[38] Source: https://www.cinergies.ci/wp-content/themes/mxp_base_theme/mxp_theme/assets/solaire-tableau.jpg
[39] Source: http://www.energie.gouv.ci/actualites/details_actualite/energies-renouvelables-la-cte-d-ivoire-va-abriter-la-plus-grande-centrale-biomasse-d-afrique-de-l-ouest297
[40] Source: https://iclg.com/alb/8678-franco-dutch-funding-for-west-african-agro-industrial-project
[41] Source: http://www.iheci-spv.com/en/financial-close-of-singrobo-ahouaty-hydropower-project/
[42] Source: https://www.hydroreview.com/2017/11/03/112-mw-gribo-popoli-hydropower-project-in-western-africa-moving-forward/#gref
[43] Source: https://ec.europa.eu/europeaid/sites/devco/files/ad-3-1-aap-part-2-ivory-coast-2016_fr.pdf
[44] Source: https://www.greenclimate.fund/sites/default/files/document/funding-proposal-fp095-afd-multiple-countries.pdf

3) Proposed alternative scenario with a description of project components, outcomes, outputs and deliverables

The objective of this project is to facilitate a transformative shift to electric mobility, whereby electric vehicles become an accepted and actively supported pillar of urban public transportation in Côte d'Ivoire. To achieve this, relevant stakeholders of the transport and the energy sector will be brought together within an e-mobility coordination body and will be empowered to assess the technology and to design concrete measures to facilitate market introduction and scale-up. An ambitious and coherent policy framework will be put in place and financing mechanisms will be developed to encourage various commercial public transport fleet operators to introduce electric vehicles into their existing fleets. Incentivizing a sustained shift towards e-mobility beyond the end of the project will be achieved through the development of concrete e-mobility deployment targets and necessary actions to reach them, which shall be agreed by all relevant stakeholders.

The project will build on the following pillars:

- Technical Assistance to establish a national coordinating body on electric mobility to bundle expertise and information specific to the electrification of urban public transport at a central point within a relevant government institution, such as the Greater Abidjan Urban Mobility Authority (*Autorité de la Mobilité Urbaine dans le Grand Abidjan – AMUGA*) which would also inform work at the national level.
- Technical Assistance to provide international expertise and build know-how to develop a suitable policy framework, which incentivizes the introduction of e-mobility and minimizes environmental negative impacts of the technology;
- Technical assistance in developing a joint national strategy for the introduction of electric urban public transport modes, which is coordinated between all relevant institutions and stakeholders from the transport, power and environmental sectors;
- Incentivizing private sector investment to introduce about 200 electric taxis and 50 electric minibuses on a pilot basis using an electrification bonus funded by the World Bank under the fleet renewal mechanism FDTR.

The project consists of four components:

1) Institutionalization of and strategy-setting for low-carbon electric mobility
2) Short term barrier removal through feasibility analyses, the demonstration of electric vehicles and know-how development for a wider introduction of electric mobility in Côte d'Ivoire
3) Preparing the enabling environment for scale-up and replication of low-carbon electric mobility
4) Long-term environmental sustainability of low-carbon electric mobility

The proposed GEF project will be complementary and closely linked to the Abidjan Urban Mobility Project (AUMP). The AUMP is implemented by the MOT, began in 2019 and will end in 2025 (i.e. one year after this project is planned to end). The objective of the AUMP is "to improve accessibility to economic and social opportunities and to increase efficiency of the public transport system along the Yopougon-Bingerville corridor and its feeder lines in Abidjan."[45] To achieve this, the AUMP will implement the following main activities: [46]

1) Implementation and operationalization of an electric Bus Rapid Transit (BRT) service on the Yopougon-Bingerville corridor through financing "the construction of the infrastructure and BRT associated facilities" and "BRT rolling stock" (with finance contributions by private sector partners). This will be complemented by financing the modification of a bridge on the corridor to meet BRT requirements.
2) Technical Assistance (TA) for the integration of the BRT system into Abidjan's public transport network and financing of the required infrastructure e.g. on transit stations, feeder roads or bus stops. This also includes, among other things, the strengthening of SOTRA through TA to restructure the public company's city bus network and its integration in the BRT system.
3) Support the integration of the informal public transport sector into and improvement of non-motorized access to the BRT system and financing the renewal of 2,000 taxis (wôro-wôro) and 1,000 minibuses (Gbaka)[47].

[45] Source: World Bank. 2019. Project Appraisal Document for the Abidjan Urban Mobility Project.
[46] Source: World Bank. 2019. Project Appraisal Document for the Abidjan Urban Mobility Project.
[47] This fleet renewal is focused on more efficient conventional vehicles, but the AUMP also intends to use funds for bonuses for electric vehicles.

To enhance environmental sustainability and innovativeness, the AUMP is aiming at the introduction of electric public transport modes in two ways: First, the project will feature a 100% electric bus fleet of about 300 units on the BRT system. Second, the taxi and minibus renewal component will offer a premium for scrapping obsolete vehicles when new ones are bought. This scrapping premium will be managed through the mechanisms of the PAMOSET, whereby the FDTR will oversee the channeling of PAMOSET funds for fleet renewal to clients. Scrapping premiums paid for a minibus and a taxi are CFAF 3m and CFAF 1m[48], respectively, and typically this premium is only used for vehicles with conventional engines. On top of this, AUMP will grant a bonus for electric vehicles and components on a pilot basis. These subsidies for electric vehicles will be enhanced by the establishment of a first loss guarantee to cover a risk-sharing facility (RSF, based on the principles already introduced under the PAMOSET), which will be set up by the International Finance Corporation (IFC) in cooperation with commercial bank partners. The RSF will reduce the risk of banks to provide financing to fleet operators who wish to deploy electric vehicles, which in turn will result in preferential loan conditions.

Seeking to create synergies with the above, the GEF funded project's Component 2 on "Short term barrier removal through feasibility analyses, the demonstration of electric vehicles and know-how development for a wider introduction of electric mobility in Côte d'Ivoire" will be co-executed by the MINEDD and the MOT. The piloting of electric taxis and minibuses will be jointly implemented by MINEDD and MOT, based on the scrappage scheme / EV bonus and risk-sharing facility funded through the AUMP. While the AUMP is focusing on clean and efficient mobility in Abidjan, the GEF project will prepare for the broader e-mobility framework at the national level. The GEF project will lay the institutional and policy-framework while the AUMP will conduct a feasibility study on technical/economic opportunities for the electrification of public transport modes serving feeder lines along the Yopougon-Bingerville BRT corridor, provide the financing mechanism to introduce and scale-up e-mobility Côte d'Ivoire, and train drivers and mechanics that will operate electric vehicles and associated equipment. The joint implementation will be ensured through project focal points within the GEF Project Management Unit (PMU) under the MINEDD and the AUMP Project Coordination Unit (PCU) under AMUGA / MOT. Therefore, a Joint Implementation Unit (JIU) will be established, which will be co-chaired by the national project directors of both projects. Table 2 provides and overview of the execution arrangements for each output, which are further detailed in Section 6 on Institutional Arrangement and Coordination and in the Annex K.

TABLE 2 OVERVIEW OF THE EXECUTION ARRANGEMENTS BETWEEN MINEDD AND MOT AND THE BREAKDOWN OF FUNDING BETWEEN THE GEF AND THE AUMP

Component	Output	Funding	Execution arrangement
1	1.1. A national inter-sectoral e-mobility coordination body is established.	GEF funded	MINEDD will lead the work under this output. MINEDD will co-chair the PSC with MOT, which is executing the AUMP through AMUGA. MINEDD and MOT will jointly set-up the national e-mobility coordination body.
	1.2. A joint national strategy to promote low-carbon e-mobility in urban public transport is submitted for adoption.	GEF funded	MINEDD will lead the overall strategy development in close coordination with MOT. MINEDD will hire the expert working on this Output and support the coordination of the strategy development. MOT will ensure that the e-mobility strategy becomes an integral part of the Road Map for Sustainable Transport in Côte d'Ivoire.
	1.3. Governmental and private sector actors are trained on the benefits of e-mobility through the Global E-mobility Programme, outreach activities to inform decision makers throughout CI on project results.	GEF funded	MINEDD will lead the process of selecting relevant stakeholders to participate in the Global Programme Events, in coordination with MOT. MOT will appoint relevant staff, proposed for participation in the trainings offered by the Global E-Mobility Programme.
2	2.1 A feasibility study on technical/economic opportunities for the electrification of public transport modes serving feeder lines along the Yopougon-Bingerville BRT corridor is conducted.	Fully co-financed by the AUMP, through the MOT	MOT will lead the work under this output, which is co-financed by the AUMP. The GEF project will support the MOT in the development of the feasibility study by connecting the AUMP with relevant international experts and by providing links to relevant knowledge products produced by the Thematic Working Groups of the Global E-Mobility Programme.

[48] Ca. US$ 1,723 and US$ 5,169, respectively (exchange rate as per 12 June 2020).

	2.2 A pilot fleet of electric taxis and minibuses is introduced as part of a World Bank funded fleet renewal mechanism, including an EV bonus and a Risk Sharing Facility (RSF) to support EV investments by public transport enterprises.	Fully co-financed by the AUMP, through the MOT	MOT will lead the work under this output, which is co-financed by the AUMP. The GEF project will support the MOT in delivering this output, particularly through the Global E-Mobility Programme and the Africa Support and Investment Platform. The latter will reach out to its network of industry partners to support the introduction of EV models to the Ivorian vehicle market, which is a precondition to piloting electric taxis and minibuses.
	2.3. Drivers and mechanics that will operate electric vehicles and electric vehicle supply equipment (EVSE) are trained on specifics of electric mobility.	Fully co-financed by the AUMP, through the MOT	MOT will lead the work under this output, which is co-financed by the AUMP. The GEF project will assist the MOT in delivering this output, particularly with the support of the Global E-Mobility Programme, by connecting the MOT with relevant international experts which could provide the required trainings.
	2.4: A system to monitor the operation of the electric pilot fleet is established, data is collected and analyzed and findings and lessons learned are disseminated to support the broader introduction of e-mobility.	GEF funded	MOT will lead the technical and substantive work under this output. MINEDD will provide advisory, administrative and financial support to MOT.
	2.5: An electrification investment plan for SOTRA feeder-line buses is developed and submitted for adoption.	GEF funded	MOT will lead the technical and substantive work under this output, MINEDD will provide advisory, administrative and financial support to MOT.
	2.6: A charging infrastructure installation plan for large-scale introduction of EVs in Abidjan's public transport is developed.	GEF funded	MOT will lead the technical and substantive work under this output. MINEDD will provide advisory, administrative and financial support to MOT.
3	3.1. Fiscal policies and regulation are developed and submitted for adoption.	GEF funded	MOT, will lead the development of fiscal policies and regulations. MINEDD will provide advisory, administrative and financial support to MOT.
	3.2. Technical regulations and standards for EVs and charging infrastructure are developed and submitted for adoption.		MOT will lead the development of technical standards and regulation. MINEDD will provide advisory, administrative and financial support to MOT.
4	4.1. The interlinkage between power generation and vehicle charging is investigated to align national RE capacity targets with e-mobility projections.	GEF funded	MINEDD (with support of MPEER) will lead the study on interlinkages between power generation and vehicle charging.
	4.2. Recommendations on a direct offtake tariffication scheme for the integration of RE generation and EV charging are prepared.	GEF funded	MINEDD (with support of MPEER) will lead the development of the recommendations on direct offtake tariffication scheme for the integration of RE generation and EV charging.
	4.3. An amendment to existing e-waste regulation for EV batteries is prepared and submitted for adoption; business models for the re-use of batteries are promoted.	GEF funded	MINEDD will lead the preparation of the amendment of current e-waste regulation to include EV batteries.

Component 1: Institutionalization of and strategy-setting for low-carbon electric mobility in urban public transport.

This component addresses the lack of awareness, knowledge and capacity and works towards establishing a strategic e-mobility planning document. It furthermore addresses the coordination and policy framework barrier through establishment of an inter-sectorial e-mobility coordination body which will guide the development of the strategy and align e-mobility related policy making processes.

All outputs under this component will be funded through the GEF grant and will be fully executed by the MINEDD, with support from the MOT/DGTTC.

This component will gather key institutions and stakeholders from the transport and energy sector as well as urban planners in an interdisciplinary national public transport e-mobility coordination body. The e-mobility coordination body will be based on the GEF Project Steering Committee, headed by MINEDD. It will offer a platform where cross-cutting issues related to the nexus of e-mobility and transport, energy, environment, finance and urban planning can be discussed and where all needed activities to develop the framework for low-carbon e-mobility will be coordinated. This work will directly support the implementation of objectives of the Draft Roadmap for Sustainable Transport in CI with regards to electric urban public transport. The coordination body will provide overall guidance for the development of a national strategy for electrified public transportation and will be responsible for approval and subsequent submission for adoption by parliament. It will build upon existing institutional networks which have been established, for example, during the preparation of the Draft Roadmap for Sustainable Mobility in CI or under the AUMP. The coordination body's purpose is to discuss and present a strategy and concrete actions needed to electrify urban public transport and will integrate itself in existing networks and ongoing activities to modernize urban public transport.

Outcome 1: Government of Côte d'Ivoire establishes an institutional framework and endorses a gender sensitive national strategy for the promotion of electric mobility in public transport to implement the Draft Road Map for sustainable mobility.

Outputs:

- **Output 1.1: A national inter-sectoral e-mobility coordination body is established.**
  Electrification of urban public transport requires that initiatives by Ministries and other key stakeholders responsible for transport, urban and power system planning are well coordinated. Thus, a national inter-sectoral e-mobility coordination body to coordinate activities promoting e-mobility in urban public transport will be established. It will be based on but not limited to the Project Steering Committee and should include representatives from the Ministry of Environment and Sustainable Development (MINEDD), the Ministry of Transport (MOT), the Ministry of Petroleum, Energy and Renewable Energies (MPEER), the Ministry of Construction, Housing, Sanitation and Urban Planning (MCLAU), the Ministry of the Economy and Finance (MEF), the Ministry attached to the Prime Minister, in charge of the Budget and the State Portfolio (MPMBPE), the Abidjan Autonomous District (DAA), and the Employers federation of road transport companies (*Haut Conseil du Patronnat des Entreprises de Transports Routiers de Cote d'Ivoire* – HCPETR-CI. Since many of these bodies are already cooperating actively under the AUMP, the GEF project will benefit strongly from already established structures and work relationships.

  The coordination body's role is to review and discuss policy proposals from a strategic perspective and to ensure that positions and recommendations of all stakeholders are heard and considered. It will provide overall guidance for the development of the national e-mobility strategy for urban public transport to add concrete targets and action items to the Draft Roadmap for Sustainable Transport in CI. It will ensure that deliverables developed under the GEF E-Mobility project will be considered by relevant stakeholders. To increase gender parity, the PMU will ask the Ministries and other invited agencies to nominate male and female representatives. The objective is to reach at least 30% female members in the coordination body.

  Expected deliverables:

  D 1.1.1 Inter-ministerial workshop to kick-off the project and to outline the policy coordination process and work plan
  D 1.1.2 Preparation of a statement of cooperation (incl. shared goal, definition of processes, roles and responsibilities), submission to coordination body for adoption.
  D 1.1.3 Quarterly coordination body meetings
  D 1.1.4 Preparation of final report incl. post project action plan to implement the national e-mobility strategy for urban public transport (supporting the implementation of the Draft Roadmap for Sustainable Transport in CI) and submission for adoption
  D 1.1.5. Report on best practices and lessons learned from the GEF project on accelerating the introduction of low-carbon electric mobility in Côte d'Ivoire *(to be shared with the Global E-mobility Project)*

- **Output 1.2: A joint national strategy to promote low-carbon e-mobility in urban public transport is submitted for adoption.**
  Activities leading to this output will leverage on the Government's ambition to finalize the Road Map for Sustainable Mobility in Côte d'Ivoire (of which there currently is the draft version already mentioned above published in 2019). A detailed strategy and concrete short- to long-term scenarios and targets for the electrification of public transport will be developed to substantiate the Draft Road Map and amend existing urban transport development plans such as the Urban Transport Master Plan for Greater Abidjan (SDUGA). The strategy will be drafted by a team of national and international experts in close coordination with the Ministries and/or authorities. The draft strategy will be promoted and discussed in the meetings of the coordination body. The strategy will be interlinked with possible amendments to the National Renewable Energy Action Plan (PANER) and related Output 4.1. The strategy will consider and include action items to reduce gender-based inequalities with regards to equal access to and safe utilization of public transportation, women's participation in decision-making processes, and investing in women's skills and capacities in the new e-mobility industry.
  Since the strategy will to a great extent be informed by results of various other project activities, the Project Management Unit (PMU) will ensure that results will be disseminated accordingly and integrated in the definition of the strategy. Furthermore, the PMU together with the team of experts will ensure that draft resolutions for the e-mobility strategy are readily available in meetings of the e-mobility coordination body.

  Expected deliverables:
  - D 1.2.1 Set-up of a national strategy development team (comprising national policymakers, relevant stakeholders and an international e-mobility policy expert).
  - D 1.2.2 Workshop on national e-mobility strategy.
  - D 1.2.3 Collection and consolidation of transport and energy sector data including vehicle fleet and current policy frameworks.
  - D 1.2.4 Draft a gender sensitive national e-mobility strategy, including action plan.
  - D 1.2.5 Final gender sensitive national e-mobility strategy submitted for adoption.

- **Output 1.3: Governmental and private sector actors are trained on the benefits of e-mobility through the Global E-mobility Programme, outreach activities to inform decision makers throughout CI on project results.**
  With very few exceptions, e-mobility is a novel technology in Côte d'Ivoire. Thus, comprehensive knowledge about the technology, its requirements and benefits are still limited among decision-makers. This project will build knowledge and know-how among key stakeholders (e.g. government representatives, public transport operators, banks and other private sector stakeholders, transport sector experts) by inviting them to participate in events of the Africa Support & Investment Platform and the Subregional Working Group as well as the E-Mobility Global Programme. The objective is to enable stakeholders to support the various project activities and take informed decisions on the introduction of electric public transportation. Other objectives are to facilitate South-South cooperation and to create links and facilitate professional exchange between country representatives, manufacturers and financiers.
  To inform local decision-makers in other cities and communes/suburbs of Abidjan (which do not benefit from the electric pilot fleet) about the results of and lessons learned from the project, outreach events such as presentation meetings or small workshops will be carried out.
  The PMU will be responsible for nominating participants for trainings, meeting and events offered by the Global Programme in close coordination with MINEDD, MOT, MPEER and UNEP. PMU will also ensure that at least 30% of participants in the offered events are female.

  Expected deliverables:
  - D 1.3.1 Participation in launch of the Africa Support and Investment Platform.
  - D 1.3.2 Participation in first regional e-mobility training.
  - D 1.3.3 Participation in first regional training on e-buses.
  - D 1.3.4 Participation in first meeting on e-mobility financing/marketplace.
  - D 1.3.5 Participation in second meeting of the Africa Support and Investment Platform.
  - D 1.3.6 Participation in second regional training on e-buses.

D 1.3.7 Participation in second meeting on e-mobility financing/marketplace.
D 1.3.8 Participation in third meeting of the Africa Support and Investment Platform.
D 1.3.9 Participation in replication event.
D 1.3.10 Implementation of outreach events for decision-makers in other cities and communes/suburbs of Abidjan.
D 1.3.11 Review of all capacity building events, based on evaluation forms.

Component 2: Short term barrier removal through feasibility analyses, demonstration of electric vehicles and know-how development for a wider introduction of electric mobility in Côte d'Ivoire

This component addresses the awareness, knowledge and capacity barrier through enabling the roll-out of up to 250 electric vehicles (comprising passenger cars and minibuses) as part of taxi fleets in Abidjan. Purchase of EVs by taxi fleet operators will be enabled by the provision of targeted financing, which is leveraged as part of a mechanism through the AUMP (executed by MOT/DGTTC and AMUGA). This component is furthermore directly addressing the root cause of the aging and inefficient vehicle fleet by incentivizing fleet renewal and introduction of clean and efficient electric vehicles. It furthermore addresses the increasing demand for mobility services by development strategic planning documents for the further improvement of public transportation alongside the introduction of the electric BRT financed by the World Bank. Finally, this component addresses the necessity to plan and provide for a basic charging infrastructure primarily for use by e-taxis and e-minibuses.

The outputs 2.1, 2.2 and 2.3 of this component will be fully co-finance through the AUMP and executed by the MOT/DGTTC/AMUGA, while outputs 2.4, 2.5 and 2.6 will be funded by the GEF and co-executed by the MOT/DGTTC and MINEDD, under the technical leadership of the MOT/DGTTC.

This component will first identify technically and economically feasible opportunities for electrifying urban public transport modes in Abidjan. Based on these analyses, the investment of public transport enterprises in a pilot EV fleet will be supported. Drivers and mechanics will be trained to ensure the smooth, efficient and safe operation of the new fleet.
To prepare for the introduction of EVs in Abidjan, a charging infrastructure installation plan (incl. the assessment of potentially required grid reinforcement investment needs) for the pilot fleet and for an e-mobility development scenario until 2030 will be set up. Furthermore, a performance monitoring scheme will be implemented to collect EV operation data and use it as a basis for optimizing EV operations and showcasing the viability of the technology. The development of an electrification investment strategy for SOTRA buses complements this component.

Outcome 2: Demonstrations provide evidence of technical, financial and environmental sustainability of EVs and enable public and private sector stakeholders to plan for the scale-up of low-carbon electric mobility in Côte d'Ivoire.

Outputs:

- **Output 2.1: A feasibility study on technical/economic opportunities for the electrification of public transport modes serving feeder lines along the Yopougon-Bingerville BRT corridor is conducted. *[co-financed by AUMP]***

  This output will be implemented by AMUGA / MOT and funded though the AUMP. The objective of this output is to conduct a feasibility study to 1.) identify electric vehicles that are viable alternatives to existing taxis and minibuses; and 2.) to develop economically viable business cases for these alternatives. The analysis includes electric vehicle supply equipment (EVSE).

  The technical analysis will assess the availability of adequate electric vehicles for use as taxis and minibuses. It will also present specifications of the necessary charging infrastructure for the identified EV types. The economic analysis will apply investment appraisal techniques to identify business cases for electric taxis and minibuses that are economically more attractive to private fleet operators. The economic analysis will include the scrapping premiums available through CI's fleet renewal fund FDTR and determine an appropriate level for the electrification bonus, which will be made available to the FDTR through the AUMP. In addition, other monetary incentives such as indirect subsidies through tax breaks or customs duty exemptions/reductions will be assessed. (Note that VAT reductions and customs duty exemptions are already available to transport enterprises, but so far

only for conventional vehicles.) Operational costs incentives (e.g. through differentiated electricity tariffs for EV charging) will be part of the analysis. The economic analysis will also include the assessment of charging infrastructure investment needs. Assessment of subsidy levels and financing will be modeled in close cooperation with the fleet renewal fund FDTR, the ministries in charge (i.e. MEF, MPMBPE, MOT), and local commercial banks.

The feasibility study will be the basis for the support to the investment into the pilot fleet of e-taxis and e-minibuses under Output 2.2. Results will also inform activities under Outputs 3.1 (Fiscal/financial incentive framework definition) and 4.2 (Electricity tariff setting).

This Output will also benefit from the Global Thematic Working Groups on light-duty and heavy-duty vehicles: These Working Groups can be consulted through the Africa Support and Investment Platforms to i) identify available technical options for EVs and charging infrastructure, ii) obtain input on best practice methodologies for feasibility analyses, iii) retrieve information about capital expenses, EV and charging infrastructure operation costs, and iv) integrate best practices in electric public transport business modeling and financial incentive design.

Specific deliverables will be defined in the AUMP.

- **Output 2.2: A pilot fleet of electric taxis and minibuses is introduced as part of a World Bank funded fleet renewal mechanism including an EV bonus and a Risk Sharing Facility to support EV investments by public transport enterprises.** ***[co-financed by AUMP]***

  This output will be implemented by AMUGA / MOT and funded through the AUMP. CI's fleet renewal fund FDTR already offers commercial fleet operators a scrapping premium for obsolete vehicles. This premium was fixed at a rate that allows for purchasing new vehicles with a combustion engine. This incentive is insufficient to purchase EVs, thus there is no example where an obsolete vehicle was replaced by an electric vehicle when using this premium. The objective of this output is to leverage private sector investment in electric taxis and minibuses through an adequate financing mechanism including an EV bonus and a Risk Sharing Facility to support EV investments. Based on the results of the feasibility study for electric taxis and minibuses (Output 2.1), the scrapping premium will be complemented by an electrification bonus offered through the AUMP, which will be integrated into the FDTR. Both financial incentives will be further enhanced through the AUMP by the establishment of a first loss guarantee to cover a risk-sharing facility (RSF) that will be set up by the IFC in cooperation with commercial bank partners. The objective of the RSF is to motivate commercial banks to offer affordable loans to private public transport operators to modernize their fleet and to introduce EVs.

  The procedures for the renewal of obsolete vehicles through the FDTR are defined in the 'Manual on the renewal procedures of obsolete vehicles (*Manuel de renouvellement des véhicules vétustes*)' published in March 2019 by the MOT. It defines inter alia eligibility criteria for transport enterprises, the role of the FDTR and the renewal process itself. This manual so far only covers conventional vehicles. Therefore, the manual will be reviewed to consider specifics of e-mobility, and to integrate electrification bonus. It will also include some minimum technical standards such as the existence of an onboard diagnosis system to facilitate the monitoring of the vehicles of the pilot fleet (see Output 2.4). Furthermore, FDTR staff will be trained on specifics of e-mobility in the context of the FDTR so that it can successfully sensitize fleet operators for the subject, support the credit request preparation process for EVs (incl. EVSE) appropriately, or to verify the capability of fleet operators to introduce EVs. Once the scrapping and electrification premium are in place and the FDTR Manual is reviewed, the investment opportunity will be promoted by the FDTR to fleet operators and commercial banks. This output aims at the introduction of 200 electric taxis and 50 electric minibuses. These private sector investments will be incentivized through electrification bonuses using a budget of up to US$ 5 million, co-financed by the MOT through the AUMP. Note that the FDTR is not limited to Abidjan but accessible nationwide, including the electrification premium. This will allow other cities to also embark electric public transport. To raise awareness of this opportunity, the GEF project will included decision-makers from other cities in its activities as well and link up with them if investment in electric public transport modes materializes to exchange on lessons learned and results.

Specific deliverables will be defined in the AUMP.

- **Output 2.3: Drivers and mechanics that will operate electric vehicles and electric vehicle supply equipment (EVSE) are trained on specifics of electric mobility.** ***[co-financed by AUMP]***

  This output will be implemented by AMUGA / MOT and funded through the AUMP. This output will support the professionalization of drivers and mechanics with regards to the specifics of electric mobility. First, e-mobility specific training modules (incl. training material) will be developed. These training modules will become part of the skills development package of the AUMP that will support the professionalization of drivers, mechanics and entrepreneurs in the informal transport sector. To anchor the know-how in the country, training-of-trainer courses will be carried out to establish a pool of local trainers who are qualified to carry out the EV/EVSE operation and maintenance/repair training units.

  The Employers Federation of Road Transport Companies (HCPETR-CI) as well as the Ivorian Society for the Technical Control of Automobiles (SICTA) are suggested to be key partners in the context of the driver and mechanics trainings.

  Only very few women in CI are currently occupying driver or mechanics jobs. The gender-sensitization of the training programs under the AUMP will help reduce gender stereotypes that affect women's self-efficacy and interest in engaging in professional roles in the public transport sector. To open new employment opportunities, training opportunities will be actively promoted to women to motivate them to participate in these trainings.
  This output will be implemented by the AUMP.

  Specific deliverables will be defined in the AUMP.

- **Output 2.4: A system to monitor the operation of the electric pilot fleet is established, data is collected and analyzed; findings and lessons learned are disseminated to support the broader introduction of e-mobility.**

  This output will be implemented under the overall responsibility of MINEDD and funded by the GEF. The objective of this output is twofold: First, to use EV operation monitoring to help optimizing EV operation and solve potential problems. Second, to use the gathered data to demonstrate the technical and economic viability of the technology.
  Modern vehicles are typically equipped with onboard diagnosis systems for monitoring a vehicle's systems (e.g. battery charging state, charging rates, battery temperature, malfunctions etc.). Additional fleet monitoring systems allow for vehicle tracking, monitoring of driver behavior, accident detection, etc. These systems deliver valuable data that can be used for optimizing operation (e.g. charging schemes, fuel consumption reduction, reduction of maintenance cost through early warning) but also for evaluating the effects of this project, for instance, on actual GHG reductions. The project will seek to ensure that electric taxis and minibuses that are purchased through the FDTR (Output 2.2) are readily equipped with onboard diagnosis systems and that they allow for data extraction. Operations monitoring would not be complete without monitoring other aspects such as maintenance and economic performance. For maintenance and repair, a logbook will be prepared in which the respective activities but also encountered problems can be logged. To assess economic performance, fleet operators will be asked to regularly provide statistics on costs and revenues associated with the operation of EVs to the extent possible.

  During the monitoring phase, all collected data will be analyzed in pre-defined intervals and identified problems will be extracted. Findings and recommendations will be communicated to fleet operators, in writing and through personal communication supporting the implementation of corrective actions. Finally, the data will be used to cross-check assumptions made in the technical and economic feasibility studies and to communicate successes and good practice as well as lessons learned to stakeholders in Côte d'Ivoire and the E-Mobility Global Programme.

  The E-Mobility Global Programme will support these activities by providing relevant technical expertise on monitoring systems and offering advice if systematic problems during EV exploitation are observed.

Expected deliverables:

D 2.4.1 Set-up of a technical e-mobility team, comprising national stakeholders (especially representatives from fleet operators, technically oriented government agencies) and an international expert (also for other technical outputs).
D 2.4.2 Development of a concept to monitor technical and economic performance data.
D 2.4.3 Quarterly collection of EV monitoring data.
D 2.4.4 Analysis of monitoring data, reporting of findings and recommendations to fleet operators and PMU.
D 2.4.5 Preparation of two monitoring summary reports, incl. publishable section for dissemination.

- **Output 2.5: An electrification investment plan for SOTRA feeder-line buses is developed and submitted for adoption.**

This output will be implemented under the overall responsibility of MINEDD and funded by the GEF. After years of stagnation, Abidjan's public bus operator SOTRA has recently entered a path of substantial growth and fleet modernization to increase access to affordable public transportation. 450 new buses, of which 50 are fueled with Compressed Natural Gas (CNG), have been put into operation in 2019[49], 400 more diesel and 50 CNG buses were ordered at the end of 2019[50]. SOTRA's objective is to systematically renew its rolling stock and increase its fleet to 2,000 vehicles by 2030. SOTRA has no electric buses yet but is in principal open to test the technology. Thus, there is a window of opportunity to introduce electric buses as low-carbon alternative. Based on a technical and economic pre-feasibility study, the objective of this output is to develop an investment strategy for e-buses and EVSE within the SOTRA fleet, which is ready for adoption.

Expected deliverables:

D 2.5.1 Preparation of a pre-feasibility study for the electrification of SOTRA buses, incl. drafting of electrification scenarios.
D 2.5.2 Consultation meeting(s) with SOTRA representatives and experts to discuss and promote SOTRA electrification scenarios.
D 2.5.3 Drafting of an electrification investment strategy for SOTRA buses is developed and submission for adoption.

- **Output 2.6: A charging infrastructure installation plan for large-scale introduction of EVs in Abidjan's public transport is developed.**

This output will be implemented under the overall responsibility of MINEDD and funded by the GEF. Depending on the timing of the charging process and the associated power load caused by EVs as well as the chosen charging technologies, changes in required peak generation[51] and distribution capacity patterns might emerge. Based on the target to cover about 10% of transport energy with electricity in 2030 (as proposed in the draft Road Map for Sustainable Transport) or any other target proposed by the e-mobility coordination body, a charging infrastructure development plan for electric mobility in Abidjan will be developed and the effects on the distribution grid and generation capacity will be studied. If grid constraints are identified, measures to optimize charging to minimize peak loads on the distribution grid are proposed alongside potentially remaining grid reinforcement needs. Investment requirements for both the charging infrastructure itself and potential distribution grid and generation capacity reinforcement will be presented in an e-mobility charging infrastructure investment plan for Abidjan.

Important partners for charging installation planning are the MPEER and, grid developer CI-ENERGIEs and grid operator CIE. As some charging infrastructure will be installed in public space, the Ministry of Construction, Housing, Sanitation and Urban Planning (MCLAU) as well as the Autonomous District of Abidjan (DAA) and affected Communal Governments will be consulted accordingly.

Expected deliverables:

[49] Source: http://www.transports.gouv.ci
[50] Source: Information obtained from SOTRA during the scoping mission and Scania website: www.scania.com.
[51] Effects on power generation are dealt with in Output 4.1. in the context of RE deployment planning.

D 2.6.1 Set-up of a renewables and grid integration team, comprising national energy sector stakeholders (incl. government agencies, public utilities, potentially independent power producers) and an international expert (also for other outputs).
D 2.6.2 Study on charging and distribution grid infrastructure investment needs for the large-scale introduction of EVs.
D 2.6.3 Workshop to present and discuss the results of the charging infrastructure and distribution grid development study.
D 2.6.4 Finalization of an infrastructure development investment plan for Abidjan until 2030 and submission to national coordination body for adoption.

Component 3: Preparing the enabling environment for scale-up and replication of low-carbon electric mobility

This component addresses the policy framework barrier by developing adequate proposals to incentivize the uptake of e-mobility through fiscal and regulatory measures addressing both the transport and the power sector. It furthermore addresses the lack of charging infrastructure by developing technical regulations and standards, which is a prerequisite for charging infrastructure development.

All outputs under this component will be funded by the GEF and will be co-executed by the MOT/DGTTC and the MINEDD, under the technical leadership of MOT/DGTTC.

This project component seeks to implement the enabling conditions for the broad and long-term deployment of EVs in urban public transport. It will build upon the institutional framework provided by Component 1 as well as the feasibility analyses and the lessons learned during the introduction of the electric demonstration fleet under Component 2. It is expected to establish the financial, regulatory and operational conditions for EV to be introduced in public urban transport nationwide. Although the demonstration of e-mobility focuses on public transportation fleets in Abidjan, all regulation or policies will be developed on the national level, contributing to mainstreaming of electric mobility throughout CI.

Outcome 3: Government of Côte d'Ivoire adopts financial incentives and technical standards to promote investments in low-carbon electric mobility in public transport.

Outputs:

- **Output 3.1: Fiscal policies and regulation are developed and submitted for adoption.**
  This Output builds upon the results of Outputs 2.1 and 2.2, where an economically viable financial support scheme for EVs in public transport is proposed and elements of this support scheme (i.e. scrapping premium and electrification bonus) are implemented through the FDTR. The objective of this output is to prepare and propose regulations (or their reform) required to render the purchase and use of electric taxis, minibuses and buses more competitive than conventional vehicles. The proposals will include financial incentives (e.g. potentially required adjustment of vehicle import taxation, import taxation for EVSE and preferential electricity pricing) but also the leveraging of other fiscal budgets to refinance the financial incentives (e.g. earmarked taxes that disincentivize the use of GHG intensive/polluting technology).
  The respective regulations will be drafted and promoted via face-to-face meetings with the ministries in charge (i.e. the MEF, the MPMBPE and the MOT), reviewed by the e-mobility coordination body and submitted for adoption to relevant ministries. Options for preferential electricity pricing will be explored in cooperation with the MPEER, ANARE-CI (i.e. the national authority in charge of proposing electricity tariffs) and the MEF under consideration of the results of Output 4.2 (under this Output, a tariff scheme is explored that links renewable power production with off-takers from the transport sector).

  Expected deliverables:
  D 3.1.1 Set-up of a policy team, comprising national stakeholders (especially from government agencies responsible for fiscal policies and electricity tariff setting) and the international e-mobility policy expert.
  D 3.1.2 Consultation meetings/workshops with government agencies and experts to develop favorable fiscal policies/regulation.
  D 3.1.3 Preparation of a tax reform proposal and submission for adoption.
  D 3.1.4 Preparation of proposal on preferential electricity tariffs for e-mobility and submission for adoption.

- **Output 3.2: Technical regulations and standards for EVs and charging infrastructure are developed and submitted for adoption.**
  The definition of technical e-mobility standards is an important prerequisite to avoid the existence of different and potential technically incompatible or even unsafe vehicle and charging station combinations. Based on the technical feasibility study (Output 2.1), requirements for the identified possible EV types and proven EV and EVSE technical standards will first be compiled and a detailed regulation gap analysis will be carried out. Technical regulations include, inter alia, grid connection and operation rules, payment standards for charging stations, charging interface (socket) standards, or electrical safety standards for both EVs and charging stations. With regards to charging infrastructure specifications, this Output will build upon specifications defined under the AUMP for the pilot fleet, complement them, if needed, and ensure that the new rules are officially published.

  For public transport modes, especially buses and minibuses, the physical design of the vehicles' passenger compartment plays an important role when it comes to accessibility for physically impaired persons or safe traveling of children, women or vulnerable persons. The project will thus also propose standards for minibuses and buses that adhere to international best practice standards for barrier-free access and passenger safety.

  Based on this, technical regulations and related standards will be drafted. The new technical regulations will apply to all relevant electric vehicles such as private cars and other commercial vehicles, which are similar to the vehicles being investigated under the above mentioned outputs in order to mainstream e-mobility already at the early stages of market introduction.

  With regards to general vehicle regulations on vehicle safety, environmental protection, energy efficiency etc. the project will adhere to internationally agreed standards as defined, for instance, by the UNECE World Forum for Harmonization of Vehicle Regulations (WP.29).

  Vehicle-related regulations will be elaborated in close coordination with the MOT and the Ivorian Society for the Technical Control of Automobiles SICTA. EVSE-related regulation will be elaborated in cooperation with the MPEER, the National Authority for the Regulation of the Electricity Sector in Côte d'Ivoire (ANARE-CI) and grid operator CI-ENERGIES.

  The Global Electric Mobility Programme will provide substantial input to these activities by providing information and exchange opportunities on tested international regulation and standards and supporting their adoption to the local situation.

  Expected deliverables:
  D 3.2.1 Consultation meetings/workshops with government agencies and experts to develop technical regulations/standards.
  D 3.2.2 Preparation of draft technical regulations/standards package and submission for adoption.

<u>Component 4: Long-term environmental sustainability of low-carbon electric mobility</u>

This component addresses the lack of sustainable e-mobility planning and battery end-of-life regulation.

All outputs under this components will be funded by the GEF and executed by the MINEDD.

This component seeks to ensure long-term environmental sustainability by promoting the development of renewable energies as power source for e-mobility and developing an initial regulatory framework for the collection and management of used EV batteries. Furthermore, the project aims to develop regulation for collection of used EV batteries for re-use, recycling and safe disposal in close collaboration with the Economic Community of West African States (ECOWAS). As a supranational entity, ECOWAS, through the Council of Ministers, enacts regulations and directives which are binding to all member states. It will therefore be evaluated whether draft regulation for the collection of used EV batteries for re-use, recycling and safe disposal can be developed at the sub-regional ECOWAS level. Therefore, the GEF 7 E-Mobility Project in Cote d'Ivoire will closely collaborate with the two other GEF funded e-mobility projects in the region, which

are Sierra Leone and Togo. All three national e-mobility projects in the ECOWAS region have similar outputs on battery end-of-life regulation, and it will be evaluated whether resources can be pooled to trigger policy development at the sub-regional level.

Outcome 4: Government of Côte d'Ivoire endorses recommendations on renewable energy integration and an amendment on e-waste regulations to support long-term environmental sustainability of low-carbon electric mobility .

Outputs:

- **Output 4.1: The interlinkage between power generation and vehicle charging is investigated to align national RE capacity targets with e-mobility projections.**
  CI aims at generating 42% of its electric energy based on renewable sources of energy and the Draft Roadmap for Sustainable Mobility in CI proposes a quota of at least 30% renewable electricity as energy source for transportation by 2050. Substantial e-mobility growth requires the addition of new power generating capacities, incl. renewable energies. Activities under this output will promote the parallel development of e-mobility and renewable power capacities. First, additional power generation needs will be estimated, based on the e-mobility deployment targets defined under Output 1.2. Then, feasible options to use renewable energy sources to cover the required additional capacities will be identified and quantified. Results will inform the preparation of a proposal for amending the National Renewable Action Plan (PANER). The MPEER and MINEDD – which share the mandate to develop renewable policies in CI – will be important partners to provide information about planned RE projects and guidance on the RE potential in the country.

  Once drafted, the proposed amendments will be presented to the national e-Mobility coordination body and, if needed, revised and submitted for adoption to the MPEER and MINEDD.

  Expected deliverables:
  D 4.1.1 Preparation of a study to estimate additional renewable power generation needs for low-carbon e-mobility.
  D 4.1.2 Workshop on the results of the renewable power development study.
  D 4.1.3 Preparation of a proposal for amendments to the National Renewable Action Plan and submission for adoption.

- **Output 4.2: Recommendations on a direct offtake tariffication scheme for the integration of RE generation and EV charging are prepared.**
  E-mobility holds the opportunity to create immediate demand for renewable electricity and thus a potential income source for RE projects. In CI, electricity tariffs are proposed by the regulator ANARE-CI and fixed by the MPEER together with the MEF. The state-owned utility CI-ENERGIES monitors and manages the purchase, transport and movement of electrical energy and develops RE projects. CI-ENERGIES also acts as the central off-taker for renewable electricity at fixed tariffs. Together with these agencies, options for a tariff scheme that allows for the direct offtake of renewable energy by the public transport sector will be explored. The objective is to propose a tariffication scheme that supports the alignment of supply and demand and that is tailored to the needs of renewable power producers and EV fleet operators. This activity will be closely coordinated with the economic feasibility analyses carried out under Output 2.1. and informs tariffication regulations development under Output 3.1. To set attractive tariffs for renewable power generation (especially using solar, small hydropower and biomass), developers of such projects will be consulted accordingly. The activities will be guided by the e-mobility coordination body.

  Expected deliverables:
  D 4.2.1 Preparation of a study to estimate supply patterns and levelized costs of electricity from renewable sources (e.g. from solar, small hydropower and biomass) and demand patterns by EV fleet operators. The study identifies viable electricity price thresholds in order to develop a proposal for renewable electricity tariffs specifically for the transport sector, results will be used within the power tariff-setting process under Output 3.1.

D 4.2.2 Workshop with power and transport sector representatives (incl. government agencies and private sector) to discuss the results of the short study on renewable electricity pricing for the transport sector.

- **Output 4.3: An amendment to existing e-waste regulation for EV batteries is prepared and submitted for adoption; business models for the re-use of batteries are promoted.**
  Under this Output, a proposal for an amendment to the existing e-waste regulation for EV battery waste management will be elaborated, based on global best practices for their re-use, recycling and/or safe disposal, including a review of take back obligations as a matter of extended producer responsibility. This activity will be carried out in close coordination with the MINEDD as well as SGS Renovo, an international firm which is appointed by the GoCI to implement CI's e-waste management system together with its partner African Recycling Society (SAR).

  After reaching the end of their useful lifetime, EV batteries often still can be reused in other less-demanding applications, for instance as stationary energy storage devices. As second-life usage significantly reduces the ecological footprint of batteries as opposed to recycling or disposal, options for their re-use within CI will be explored in a study. Based on existing global experience, the study will make recommendations on how re-using old EV batteries can be realized in CI through local refurbishing. Possible business models and an action plan for implementation will be proposed. The results of this study will be presented to the e-mobility coordination body and in particular MPEER, CI-ENERGIES and power sector stakeholders as well as start-up hubs in a workshop to narrow down results to concrete actions. These activities will be supported by the Global Thematic Working Group on battery life cycle issues.

  It will be evaluated whether more comprehensive battery end-of-life regulation can be developed at the sub-regional level within the ECOWAS framework. For this purpose, close collaboration with the other two national e-mobility projects funded by the GEF in the region, which are Sierra Leone and Togo, is envisaged.

  Expected deliverables:
  D 4.3.1 Set-up of battery re-use and recycling team, comprising national stakeholders (incl. MINEDD and subordinate agencies responsible for waste treatment, waste management/battery refurbishment companies, power sector) and an international battery/recycling expert, and evaluation of possible policy development at sub-regional level within the ECOWAS framework
  D 4.3.2 Consultation meetings with government agencies and responsible e-waste agencies to develop amendment to e-waste regulation
  D 4.3.3 Preparation of draft amendment to e-waste regulation for collection, recycling and disposal of used EV batteries and submission for adoption.
  D 4.3.4 Preparation of a study on second-life use of EV batteries incl. draft action plan to implement battery refurbishment/ re-use
  D 4.3.5 Workshop on business opportunities for the re-use of EV batteries.
  D 4.3.6 Finalization of the action plan to implement battery refurbishment and re-use and submission for adoption.

4) Alignment with GEF Focal Area and/or Impact Program strategies

This project is aligned with Objective 1 of the Climate Change Focal Area to "Promote innovation and technology transfer for sustainable energy break-throughs", through CCM 1-2 – Promote innovation and technology transfer for sustainable energy breakthroughs for electric drive technologies and electric mobility.

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

Côte d'Ivoire has already taken some first initiatives towards electrifying public transport. Proof of this are the plan to introduce an electrified mass transit system (i.e. the new BRT line on the Yopougon-Bingerville corridor and Metro Line

1) as well as the proposal in the draft Road Map for Sustainable Transport to cover 30% of transport energy demand with electricity by 2050. However, without this project it is unlikely for Côte d'Ivoire to formulate and introduce a comprehensive policy framework that would facilitate a large-scale introduction of low-carbon and environmentally friendly electric transportation in various public transport sub-sectors. This is due to a lacking framework for the coordination of government agencies and authorities, limited awareness of and access to knowledge and know-how about the new technology among public and private public transport and power sector stakeholders and missing access to financing sources. Without the interventions of the project, the build-up of knowledge and institutional capacities is anticipated to take much longer and effective introduction of e-mobility would be delayed.

The combination of the financial vigor embedded in the AUMP and the political power of the GEF project, implemented by UNEP and co-executed by MINEDD and MOT, leverages the competitive advantages of all project stakeholders. Together with the expert support provided by the Global E-Mobility Programme, Abidjan will be one of the first Sub-Sahara African cities to integrate e-mobility at scale in public transportation and to bring new electric vehicles to the local car dealerships.

The activities of the proposed project will be built on the baseline activities and support knowledge and know-how transfer, awareness and acceptance raising among transport and power sector stakeholders and the development of an integrated policy environment in which e-mobility can thrive. Then, the project will identify EVs that are viable alternatives to existing taxis and minibuses, develop economically viable business cases incl. a financial incentive scheme (e.g. electrification bonuses, tax breaks) for these alternatives and facilitate access to financing opportunities for investments in electric public transportation modes. Activities will furthermore push for accelerating the development of renewable energy sources by and thus leverage additional environmental benefits. Environmental sustainability will be strengthened further by promoting the re-use of EV batteries in other applications and amending existing electronic waste regulation for the management of used EV batteries.

The GoCI will provide co-financing for the implementation of all project components, especially by contributing to the development of the e-mobility strategy and the policy framework for electric public transport (incl. the transport and power sector as well as environmental policies). Co-financing by the MOT through the World Bank finance AUMP to electrify minibuses and taxis serving feeder lines to the BRT system will facilitate the actual implementation of electric public transport modes in the artisanal transport sector on a pilot basis, thus closing a considerable funding gap. UNEP will offer support through coordination with Global Programme activities and exchange with other country projects where best practices are produced.

Furthermore, incremental costs are minimized because knowledge products are not prepared for CI only, but for various countries through the Global Programme. Stakeholders will benefit from participating in Africa Support & Investment Platform, Sub-Regional Working Group and Global Programme events.

6) Global environmental benefits (GEFTF)

The project will result in total direct emission savings of 82,574 tCO_2 of which 18,741 tCO_2 are realized through the investment in 200 electric taxis and 50 electric minibuses, calculated over the lifetime of these EVs, and 63,833 tCO_2 are expected to stem from replication. Indirect CO_2 emission savings stemming from the introduction of policies and regulations are estimated to account for 148,944 tCO_2 and are based on a top-down approach applied to the public transport sector in Abidjan, applying a causality factor of 60%.

Results of the top-down modelling approach for the alternative scenario including vehicle sales and vehicle stocks as well as energy use and well-to-wheel emissions by technology are presented in Figure 88 to Figure 1010.

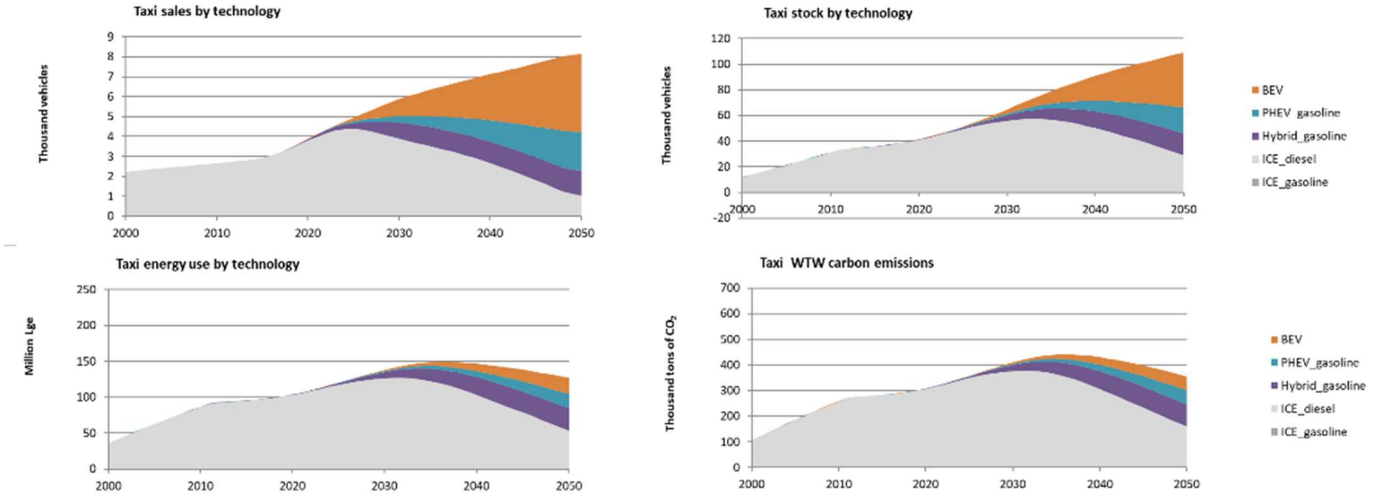


FIGURE 8 ALTERNATIVE TOP-DOWN SCENARIOS FOR TAXIS (WOROWOROS)

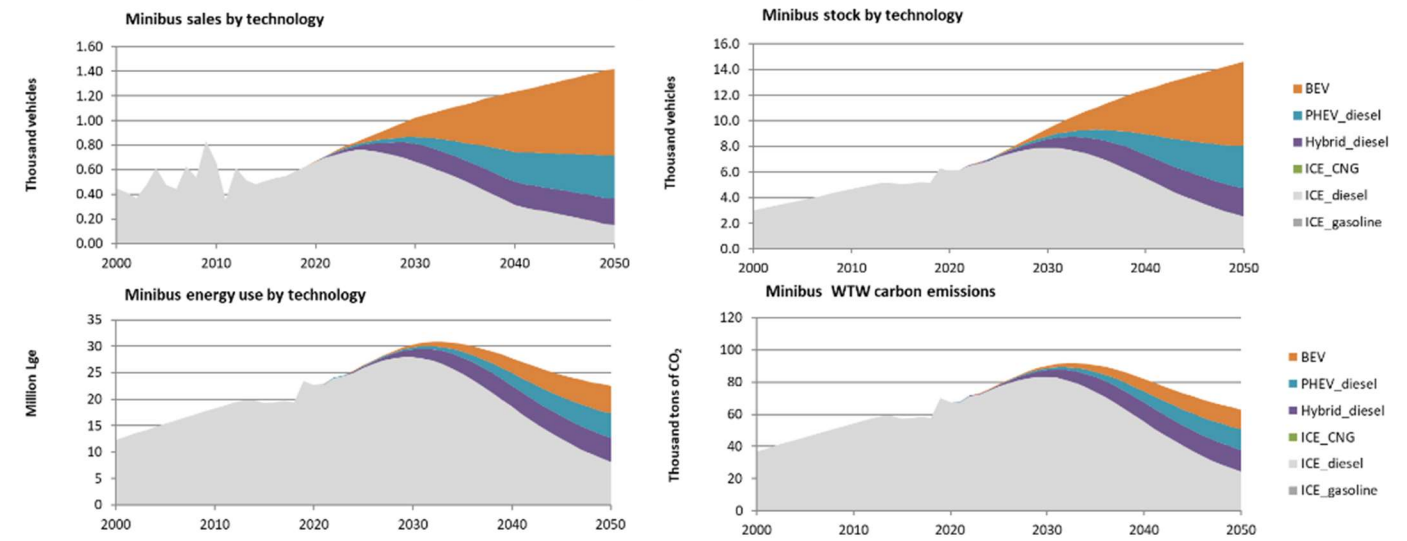


FIGURE 9 ALTERNATIVE TOP-DOWN SCENARIO FOR MINIBUSES (GBAKAS)

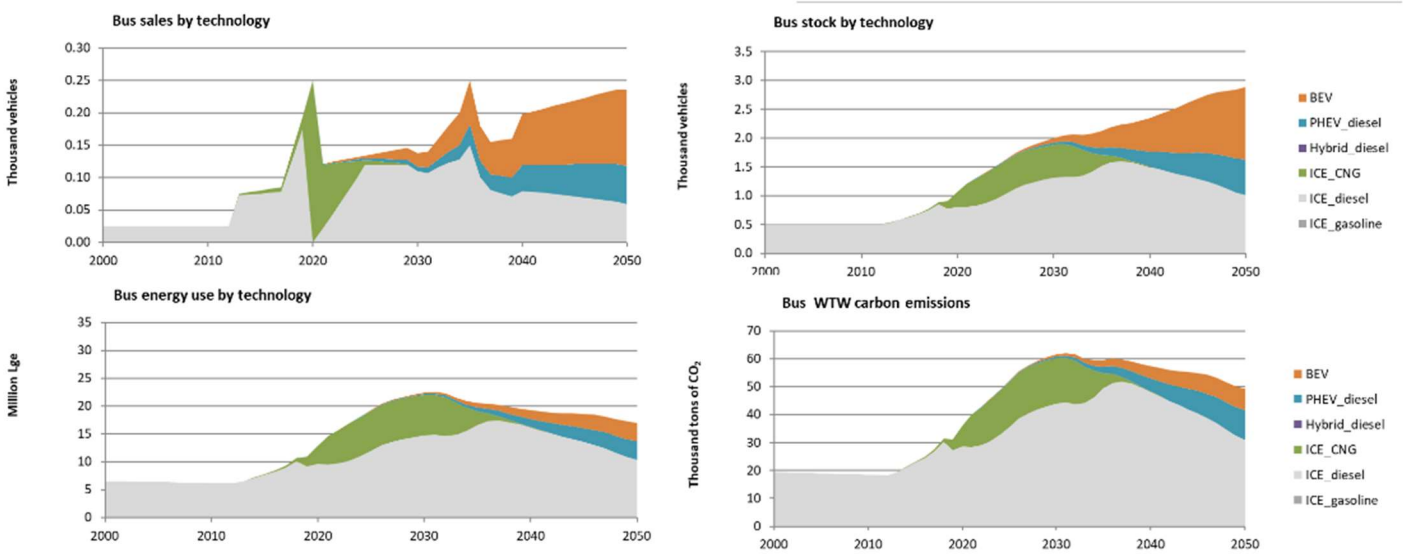


FIGURE 10 ALTERNATIVE TOP-DOWN SCENARIOS FOR SOTRA BUS FLEET

Under the alternative scenario, an aggressive roll-out of electric vehicles is assumed, reaching sales of 5% EVs by 2025, 20% by 2030 and 75% by 2050 for taxis, minibuses and buses. Compared to the baseline scenario, energy use and well-to-wheel emissions are substantially reduced, see Table 33.

TABLE 3 ENERGY USE AND EMISSION UNDER THE ALTERNATIVE SCENARIO

	TTW Energy use [million Lge]			WTW carbon dioxide emissions [thousand tons]		
	2019	**2030**	**2050**	**2019**	**2030**	**2050**
Taxis	102	138	129	302	410	355
Minibuses	23	30	23	70	90	63
SOTRA buses	11	22	17	31	62	49
Total	**136**	**191**	**169**	**404**	**562**	**467**

Under the alternative scenario, the three public transport modes are expected to mitigate a cumulative amount of 336 thousand tons of CO_2 by 2036[52]. Of this top-down value taking into consideration the entire public transportation fleet in Abidjan, total direct emissions reductions are estimated to amount to about 83 thousand tons of CO_2. Of this 83 thousand tons of CO2 18.7 thousand tons are stemming from the demonstrated 200 taxis and 50 minibuses, while the remainder of the emission reductions (63.8 thousand tons of CO2) are assumed to derive from replication throughout CI.

Indirect emission reductions are estimated to account for 148.9 thousand tons of CO2 and are based on the top-down approach taking into account level III causality factors (60%) for taxis and buses and a level V (100%) causality factor from the SOTRA bus fleet. Details of these impact estimations are described in Annex M – Estimates of Direct and Consequential Greenhouse Gas Emission Reductions. The GoCI has proposed to partly electrify the transport sector in its draft Road Map for Sustainable Transport in CI. But since there is no concrete electrification strategy and policies yet, the project contribution can be considered substantial as it will work towards the implementation-oriented development of electrification policies in the public transport sector.

Total top down emission mitigation potential, tCO2	**335,636**
Thereof	
Total direct emissions mitigation 2021 - 2036, tCO2	**82,574**
Direct emission mitigation from demonstration assets 2021 - 2036, tCO2	18,741
Secondary direct emission mitigation from replication 2021 - 2036, tCO2	63,833
Indirect emission mitigation from policy 2021 -2036, tCO2	**148,944**
Total project related emissions reductions, tCO2	**231,519**

7) Innovativeness, sustainability and potential for scaling up

Innovativeness:

[52] The time-frame of post project emissions is determined by the technical lifetime of the assets purchased as part of the project (15 years for EVs) and the time of procurement (2021).

The introduction of electric vehicles will be a new form of transportation that will bring about systematic innovation in technology, transport sector related businesses, policymaking, environment and society.

While some Sub-Saharan African countries (e.g. Rwanda, Tanzania, Kenya or Uganda) are already promoting electric mobility, the introduction of electric public transport modes per se will be an innovation for Côte d'Ivoire as only a negligible number of vehicles are fueled by electricity in the country today.

E-mobility will call for a variety of new business types. Since operating own energy supply infrastructure is not the core business of fleet operators, it is very likely that specialized businesses will take care of this. This will lead to the creation of new companies that will act as intermediaries between the energy and transport sector or open new business opportunities for utilities. The establishment of assembly lines for EVs holds another possibility for new businesses and jobs. In East Africa, for instance, Kiira Motors (Uganda) and Volkswagen (Rwanda) started assembling electric cars in 2019.[53] It is noteworthy that Côte d'Ivoire has already recognized the opportunity to create new automotive jobs and – although not always in e-mobility – has initiated vehicle assembly projects. For instance, SOTRA Industries, a subsidiary of the public transport operator SOTRA, is already assembling minibuses in partnership with IVECO in Abidjan.

E-mobility crosses sectoral boundaries, especially those of the transport and power sectors. The planned integration of renewable energies in the charging of electric vehicles can be expected to lead to further innovation. While energy from large hydroelectric power stations is already quite established in Côte d'Ivoire (15% of the country's power mix in 2017[54]), especially utility-scale on-grid solar and bioenergy-based power plants are either under development or under construction (for more details, refer to section ii.2)). It is the explicit approach of this project to develop e-mobility and the renewable power sectors in a mutually beneficial way by ideally creating direct demand for renewable electricity through e-mobility and increasing national RE deployment targets.

Innovation is not only limited to power generation. Charging infrastructure will have to be integrated into the distribution grid without destabilizing power supply. By studying the effects of e-mobility on the distribution grid, new knowledge will be built up. Furthermore, innovative regulation for EVSE connection to and operation on the distribution grid will be introduced. In the longer term, e-mobility even offers the possibility to stabilize power supply by using vehicle batteries as a fully functioning component of smart grids (vehicle-to-grid technology).

Innovation also comes with higher safety standards and the physical design of the new vehicles with regards to accessibility for all. The project will ensure that newly introduced EVs adhere to international best practice safety standards and facilitate barrier-free access to public transport for elderly, physically impaired persons, persons traveling with children etc.

The need for the re-use, recycling and disposal of batteries will also lead to further innovation in waste management. So far, there are very few activities of formal recycling or safe disposal of electronic waste in Côte d'Ivoire. In 2015, an estimated 1.500 tons of e-waste were produced in Abidjan, with its major share ending up in landfills and informal recovery points due to the lack of formal collecting and recycling facilities.[55] E-waste management regulation has been put into force in 2018. The *Décret no. 2017-217* regulates the management of waste from electrical and electronic devices but does not yet cover used EV batteries. Amendments to the regulatory framework and capacity building activities for the management of used EV batteries that will be proposed and carried out by the e-mobility project will improve the current status quo. As second-life usage significantly reduces the ecological footprint of batteries as opposed to recycling or disposal, the project will also make recommendations on how re-using old EV batteries can be realized in CI through local refurbishing, potentially opening up new business opportunities.

Innovative schemes to finance electric mobility will be developed within the programme, combining, for example, commercial and concessional ways of funding. Innovative contracts in the context of the operation of an electrical fleet

[53] Source: The EastAfrican (2019). Uganda and Rwanda lead East Africa in switch to electric cars. https://www.theeastafrican.co.ke/business/Uganda-and-Rwanda-lead-East-Africa-in-switch-to-electric-cars-/2560-5368192-4lx2rz/index.html
[54] Source: https://www.iea.org/data-and-statistics?country=COTEIVOIRE&fuel=Energy%20supply&indicator=Electricity%20generation%20by%20source
[55] Source: University of Leeds (2020). E-Waste Implementation Toolkit – Abidjan District. https://ewit.site/city/abidjan/

like lease-back agreements, lease-purchase agreements, vehicle rental to operators, battery lease contracts and options for Public Private Partnerships will be investigated in the project to find the most viable and feasible arrangements to reliably operate electric public transport modes.

The new vehicle technology will also lead to the acquisition and application of new knowledge in CI's transport-related businesses: garages and their car mechanics will adopt new knowledge and skills in the repair and maintenance of EVs, utilities will learn to plan and operate charging stations, banks will learn about the new technology to design suitable new finance products, etc.

Sustainability of market development after the project:

The sustainability of the project will be ensured through the activities of the Support and Investment Platform for Africa that will hosted by UNEP. Activities will include participation of financiers (such as development banks), EV and EVSE manufacturers and project support agencies and aim at the development of follow-up projects to scale-up the e-mobility market in CI beyond the duration of the GEF programme. The lead of the platform for Africa, UNEP, has committed to continue leading and supporting this platform after the finalization of the GEF programme. The GEF programme will be closely linked to existing e-mobility initiatives of UNEP and the IEA, which will continue after completion of the GEF programme.

The GEF project is designed to offer a coherent set of activities to create a framework in CI in which e-mobility can thrive after the project has ended. The following measures will ensure the sustainability of the project:

- The new links that will have been established through the national e-mobility coordination body will remain functional because its work and specifically the preparation of a joint national strategy to promote e-mobility will be closely linked to the development of the ongoing Road Map for Sustainable Mobility in Côte d'Ivoire.
- By actively involving all relevant stakeholders at all stages of the process of the development of new policies, business models, finance schemes, etc. will create a strong sense of ownership and build up capacities that will motivate and empower them to continue working on the subject of e-mobility.
- Various capacity building and training measures for policymakers and other decision-makers in the public transport sector ensures that knowledge about e-mobility will be anchored in the country.
- The training-of-trainer measures in preparation of the training measures for drivers and car mechanics ensures that the required know-how is transferred into the country so that respective trainings can be continued independently of the project.
- The pilot investment in electric taxis and/or minibuses will be proof for the technical and economic viability of the new technology. This will create trust in and acceptance of the technology.
- Development banks have been included in the Global Programme, the World Bank and commercial banks will be actively involved in the project in CI. Finance schemes will be developed in close cooperation with them and tested in the Pilot Investment. The successful demonstration of the bankable e-mobility pilot investment will create trust in the finance sector and attract funding for future investments.
- The scrapping and electrification premium for the pilot investment in taxis and/or minibuses will be integrated into the existing scrapping premium scheme handled by the fleet renewal fund FDTR. This will lay the foundation for the continuation of the payment of such premiums after the end of the project.
- Knowledge management will actively seek opportunities to transfer knowledge into the country and ensure that lessons learned, and experience made in CI are also fed back to the Support and Investment Platform for Africa to ensure South-South knowledge exchange. (See also section 8. Knowledge Management).

Potential for scaling-up:

This project focuses on the electrification of public transport modes serving lines feeding Abidjan's BRT system. This encompasses the artisanal public transport segment and the segment served by SOTRA. It is estimated that there are currently about 5,500 minibuses (Gbakas), 12,000 municipal taxis (Wôro-wôros) and 11,300 other taxis operated in the artisanal transport sector. In 2019, SOTRA operated about 1,200 buses and aims to increase its fleet to 2,000 buses by 2030. Given the economic evolution in the country and the expected population growth in Abidjan, demand for public transport will grow accordingly. Thus, the technical potential to electrify only the public transport segment is considerable.

This project will lay the foundation to electrify taxis, minibuses and buses. It will support private sector investment in 200 electric taxis and 50 electric minibuses and propose measures to enable investment in new electric buses for SOTRA. Through this project, a policy and financial framework will be in place that is likely to trigger additional investment in the electrification of these public transport sub-sectors. By demonstrating the feasibility of low-carbon e-mobility through the pilot investment, by raising awareness and acceptance among key stakeholders and by identifying financing sources and establishing a sound framework, it is likely that some fleet operators will at least partly switch to e-mobility, incl. SOTRA. In particular, the studies undertaken as part of the GEF project to electrify the SOTRA bus fleet will feed into the AUMP and will enable decision takers to consider the purchase of electric buses to achieve the fleet target of 2,000 units. Although this project focuses on Abidjan with its pilot investment, project results such as regulation and incentives (e.g. the electrification bonus available through the FTDR or fiscal incentives) will apply to CI in general. Thus, this project together with the AUMP will automatically create investment opportunities in other cities of CI. To raise awareness of these opportunities, the project will also carry out outreach events for decision-makers in other cities.

1c. Project Map and Geo-Coordinates

The project intervention primarily aims at enabling pilot investments in electric public transport modes in Abidjan (5° 20' 43'' N; 4° 1' 27'' W, cf. Figure 11). At the same time, newly created national regulation or best practices created in Abidjan are likely to stimulate the uptake of e-mobility in other cities of Côte d'Ivoire as well. To raise awareness of new investment opportunities, the project will also carry out outreach events for decision-makers in other cities. In addition, the goal to accelerate renewable power deployment may trigger investments throughout the country.

FIGURE 11: MAP OF CÔTE D'IVOIRE[56]

1d. Child Project

The current project is hosted under the "Global Programme to Support Countries with the Shift to Electric Mobility", led by UNEP.

The Global Programme is based on the following four components:

- Component 1: Global thematic working groups and knowledge materials

[56] Source: Wikimedia, © BY OCHA, CC BY 3.0

- Component 2: Support and Investment Platforms
- Component 3: Country project implementation
- Component 4: Tracking progress, monitoring and dissemination

The Global Programme has put in place the monitoring framework below to track progress both globally and at the level of the country child projects. 12 indicators have been designed for this purpose: 6 relying on global level information (highlighted in blue) and 6 relying on country level information (highlighted in green).

Global E-mobility Programme Monitoring Framework

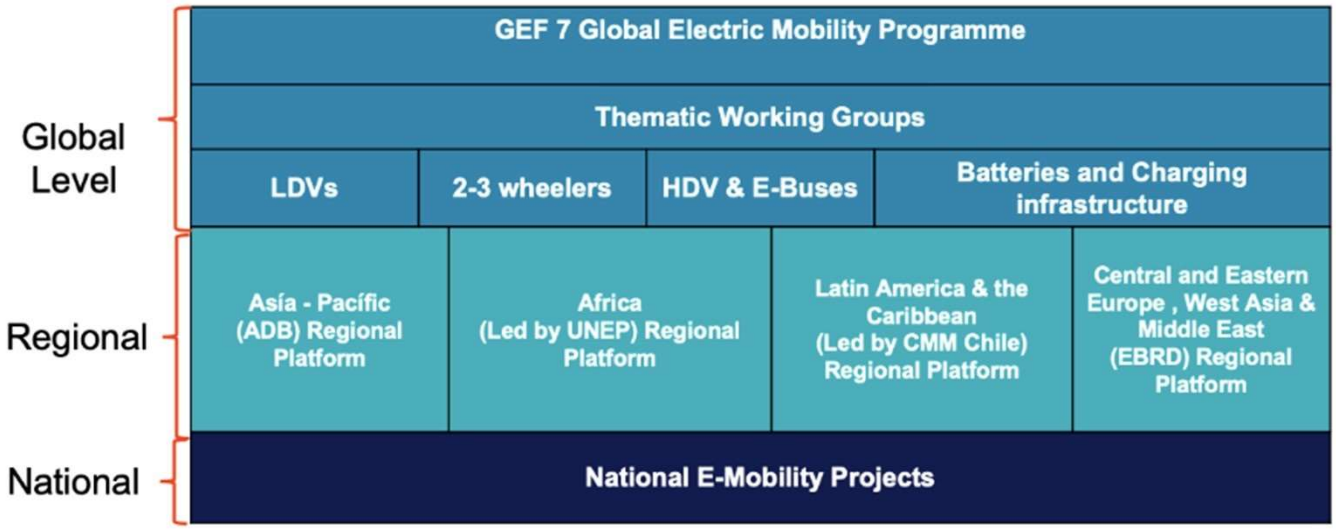
Global level monitoring | Country level monitoring

Objective level indicators			
Indicator A: Direct and Indirect Greenhouse Gas Emissions Mitigated (metric tons of CO2) mitigated			
Indicator B: Direct and Indirect enegy savings (MJ)			
Indicator C: Number of direct beneficiaries (disaggregated by Gender)			
Component 1 **Global thematic working groups and knowledge materials**	**Component 2** **Support and Investment Platforms**	**Component 3** **Country project implementation (Child Projects)**	**Component 4** **Tracking progress, monitoring and dissemination**
Outcome 1 Knowledge products are generated to support policy making and investment decision-making through four global thematic working groups	**Outcome 2** Conditions are created for market expansion and investment in electric mobility through support and investment platforms	**Outcome 3** Conditions are created at country and city level for the introduction of electric mobility demonstration projects, and wider up take of electric mobility	**Outcome 4** Projects and electric mobility markets are tracked, and key developments, best practices and other lessons learned are shared to promote wider uptake of electric mobility.
Indicator 1.1 # of knowledge products developed by the four thematic working groups and used by the Support and Investment platforms in their training and outreach activities	Indicator 2.1 % of countries using services and knowledge products offered by the Support and Investment Platform	Indicator 3.1 % of countries with an improved institutional framework and a strategy to promote the uptake of low-carbon electric mobility	Indicator 4.1 % of countries generating and sharing best practices and other lessons learned on low-carbon electric mobility with the global programme
	Indicator 2.2 # of e-mobility scale-up and / or replication concepts facilitated as a result of the match-making	Indicator 3.2 % of countries with nationally generated evidence of the technical, financial and/or environmental benefits of low-carbon electric mobility	Indicator 4.2 # of e-mobility knowledge products refined based on evidence coming from the country projects
	Indicator 2.3 # of financial institutions / development banks (national/regional) that have been engaged through the Global Programme and are actively supporting e-mobility projects	Indicator 3.3 % of countries that have improved preparedness to accelerate market transformation towards low-carbon electric mobility	Indicator 4.3 # of non-e-mobility programme countries committing to actively promote the uptake of low-carbon e-mobility
	Indicator 2.4 # of US$ leveraged to scale-up low-carbon electric mobility through the support and investment platforms	Indicator 3.4 % of countries with measures in place to ensure the long-term environmental sustainability of low-carbon electric mobility	

The global project will report against this framework on an annual basis, using (1) the global level data from the Global Thematic Working Groups and from the Support and Investment Platforms, and (2) country level data provided by each country project during their annual Project Implementation Review (PIR) process.

For this purpose and whenever applicable, the global level indicators highlighted in green are translated into a country-level indicator in the Project Results Framework located in Annex A of the present CEO Endorsement Document. During project implementation, the Ministry of the Environment and Sustainable Development of Côte d'Ivoire (MINEDD) will be requested to report against the indicators of the country Project Results Framework (Annex A) on an annual basis, during the PIR process, in addition to the usual GEF Core Indicators (mentioned at the top of the table above).

At the global level, a steering committee integrated by the International Energy Agency (IEA) and the United Nations Environment Programme will coordinate and monitor the implementation and the outputs of the GEF 7 Electric Mobility Programme. On technical gaps, four thematic working groups at the global level will support the rapid introduction of electric mobility in GEF recipient countries. These working groups will generate universal knowledge products that contain best practices, factsheets, interactive tools and guidance, as well as experiences from countries that have advanced their e-mobility market. The working groups will be integrated by representatives from the global programme regional platforms, GEF-7 countries, IEA, vehicle manufacturers, utilities, researchers and the civil society. The governance structure is presented in the figure below. For Africa, the regional platform will be led by UNEP.



Governance structure between the global programme, the national e-mobility projects, and the regional Support and Investment Platform:

The coordination between the global program, the steering committee, the thematic working groups, and the national projects will be facilitated by the regional Support and Investment Platform. The role of the regional platform is to provide customized technical assistance to ensure the success of the country projects. Moreover, knowledge products developed by the working groups will be adapted and disseminated by the regional platform according to the regional and national context, specific needs and languages.

The Africa Support and Investment Platform will interact with and support participating countries in the region to link with each other through the following activities:

- The creation of a community of practice for the GEF 7 regional countries;
- Facilitation of knowledge transfer between countries, and regions, especially those with common characteristics like SIDS;
- The creation of thematic groups in light-duty vehicles (LDVs), 2-3 wheelers, and buses at regional level;
- A marketplace between countries, technology providers and financial institutions;
- Help desk for technical assistance to GEF 7 African countries;
- Personalized assistance from international experts in electric mobility;
- Generation of training sessions and workshops.

The national child projects will generate a learning curve on electric mobility that can be transferred to other countries within and outside of the region through the global programme. As a first contact point, the regional Support and Investment Platform will facilitate the flow of learnt lessons from child projects, such as: data and demonstration results, working business models, operational know-how, working financial instruments, and working policies and regulations. At the global level, the scenarios proposed to share country knowledge and experiences on electric mobility are the thematic working groups, while at the regional level the countries will participate in the community of practice, the thematic regional groups, the marketplace, trainings and workshops.

2. Stakeholders

Please provide the Stakeholder Engagement Plan or equivalent assessment.

Stakeholder main group	Stakeholder name	Existing activities with potential to be leveraged	Content engagement, contributions to the project (identified by Component)
Government	Ministry of Environment and	MINEDD is responsible for the development and enforcement of climate	**General project contribution:**

Stakeholder main group	Stakeholder name	Existing activities with potential to be leveraged	Content engagement, contributions to the project (identified by Component)
	Sustainable Development (*Ministère de l'Environnement et du Développement Durable – MINEDD*) and the associated Government Agency Ivorian Antipollution Centre (*Centre Ivoirien Antipollution – CIAPOL*)	change and air pollution policies, the promotion of green technologies, renewable energy policies (in cooperation with the MPEER, see below) and the oversight and monitoring of electronic/electrical waste management. MINEDD has been the Executing Agency of the Global Fuel Economy Initiative (GFEI) project that supported vehicle fuel economy activities and contributed to the development of the regulation to limit the maximum age of imported vehicles. CIAPOL is an independent public administrative body under MINEDD and responsible for combatting environmental pollution.	MINEDD will be the Executing Agency of the project and host the Project Management Unit which will be responsible for the overall management of the project (incl. day-to-day implementation, financial management, project monitoring, liaising of project partners, communication and dissemination of results, coordination with GEF Agency UNEP. MINEDD will also chair the Project Steering Committee. MINEDD will, as Thematic Focal Point, lead the implementation of all deliverables of Components (Comp.) 1 and 4. **Specific project contribution** Comp. 1: As Executing Agency, MINEDD will play a crucial role gathering all relevant stakeholders and moderating the process of the various complementary project activities of agencies and other key stakeholders. MINEDD will be member of and co-chair the national Coordination Body. It will support the development of a national e-mobility strategy and moderate the respective negotiations. Comp. 4: MINEDD supports renewable power target adjustment together with MPEER, supports the GHG and air pollutant emission reduction study and feeds its results into the e-mobility strategy development process, uses them to inform UNFCCC processes, makes proposals for setting up a national system for implementing Certificates of Origin for renewable electricity and supports the preparation of the certification of EV battery waste management.
Government	Ministry of Transport (*Ministère des Transports – MOT*) and its Directorate of Road Transport and Mobility (*Direction Générale des Transports Terrestres et de la Circulation - DGTTC*).	The MOT is the responsible authority in CI for transport-related matters. The MOT supervises the main transport sector agencies (e.g. SICTA, FDTR) and public transport sector operators (e.g. SOTRA). As lead agency, it implements various (public) transport sector projects (e.g. the East-West BRT corridor through AUMP, the Metro Line 1 project, or the fleet renewal through PAMOSET). Activities related to terrestrial transport are typically carried out through the DGTTC. MOT technically manages the Road Transport Development Fund (FDTR) which is organized as a state-owned public company (see below).	**General project contribution** MOT is the main co-financing partner. It will execute Outputs 2.1-2.3 of this project (Feasibility study, supporting investment by public transport fleet operators in fleet electrification, training of drivers and mechanics on e-mobility). Furthermore, MOT/DGTTC will, as Thematic Focal Point (i.e. Component Leader), support and oversee the implementation of all deliverables of Comp. 2 and 3. As Implementing Agency of the AUMP, it is the key partner coordinating the project's activities with those of the AUMP. MOT/DGTTC is also an important link to other transport sector baseline investments and main transport sector agencies like SICTA, FDTR or SOTRA. MOT will be member of and co-chair the national Coordination Body.

Stakeholder main group	Stakeholder name	Existing activities with potential to be leveraged	Content engagement, contributions to the project (identified by Component)
			Specific project contribution Comp. 1: MOT will be member of and co-chair the national Coordination Body. It will support the development of a national e-mobility strategy. Comp. 2 and 3: MOT will contribute to these components by co-financing/executing Outputs 2.1-2.3 (see above) and overseeing the implementation of all remaining Outputs of these two components.
Government	Road Transport Development Fund (*Fond de Développement du Transport Routier – FDTR)*	The FDTR is organized as a state-owned public company with industrial and commercial functions and aims at renewing 50,000 public transit vehicles by 2020. It offers credits to road transport enterprises, for instance taxi or freight companies. It is managed technically by the MOT and financially by the Ministry for the Economy and Finances as well as the Ministry for Budget (MPMBPE, see below).	The FDTR is the agency through which the scrapping premium and electrification bonus will be channeled to public transport fleet enterprises. (Comp. 2)
Government	Greater Abidjan Urban Mobility Authority (*Autorité de la Mobilité Urbaine dans le Grand Abidjan – AMUGA*)	AMUGA is the administrative body which oversees improving urban transportation in the GAA. This institution, which was officially operationalized only recently (on 29 January 2020), is the authority that will be in charge of implementing the transport component of the SDUGA. The WB AUMP intends to transfer project management responsibility from DGTTC (see above) to AMUGA. At the time of the preparation of this proposal, this process was not yet finalized. AMUGA was officially operationalized on 29 January, 2020.	Once project managements responsibility in the WB AUMP is transferred from DGTTC to AMUGA, AMUGA will play a key role in supporting the coordination the proposed project's activities with those of the AUMP.
Government	Ministry of Petroleum, Energy and Renewable Energies (*Ministère du Pétrole, de l'Énergie et des Énergies Renouvelables – MPEER*)	MPEER defines and implements national policies for CI's energy sector, incl. hydrocarbons, electricity and renewable energies. Policies with regards to renewable energies are developed in coordination with MINEDD (see above). Through its Directorate of Planning and Statistics (*Direction de la Planification et de la Statistique*), it is in charge of designing and implementing sector studies, contributing to national development and investment planning, ensuring and monitoring sector investment planning, participating in the implementation of dedicated sector projects, defining sector development targets and strategies (such as the National Renewable Energy Action Plan	MPEER will play an important role in all aspects of the project dealing with the coupling the transport with the power sector. Specifically, these are: i.) Contributing to the definition of the national inter-sectoral e-mobility strategy from the perspective of the power sector (Comp. 1); ii.) Support the review and potentially revision of power sector strategies, targets and policies because of e-mobility deployment (Comp. 2, 3 and 4); iii.) In its function to issue tenders for renewable energy projects and to set electricity tariffs, it would play a crucial role in the realization of renewable power projects and/or linking them to the transport sector through dedicated Power Purchase Agreements (which would also influence the definition

Stakeholder main group	Stakeholder name	Existing activities with potential to be leveraged	Content engagement, contributions to the project (identified by Component)
		2016-2020/30), among other tasks. It is also launching calls for proposals for renewable energy projects to be implemented by independent power producers. Furthermore, it supervises the independent power utility and grid developer CI-ENERGIES (see below) as well as the ANARE-CI, the national authority regulating the electricity sector (see below). The development of the renewable power sector is carried out in cooperation with MINEDD. The MPEER, together with the Ministry of the Economy and Finance (see below), are also the Government agencies responsible for electricity tariff setting.	of a Finance Scheme for electrified public transportation) (Comp. 2 and 4). MPEER will be member of the national coordination body. It will also link project activities to and ensure access to electricity regulator ANARE-CI and grid operator/power utility CI-ENERGIES (see below).
Government	National Authority for the Regulation of the Electricity Sector in Côte d'Ivoire (Autorité Nationale de Régulation du secteur de l'Electricité de Côte d'Ivoire – ANARE-CI)	ANARE-CI is monitoring the compliance with laws and regulations in the electricity sector. Its Directorate of Economic and Financial Studies controls the financial obligations between independent power producers and private concessionaires to the State. It proposes electricity tariffs to the Government. Furthermore, it controls and monitors technical regulations in the electricity sector and supports the resolution of disputes between electricity consumers, power producers and the state.	ANARE-CI will support several activities: (i) The development of technical standards for grid connection and operation of charging stations (Comp. 2); (ii) The development of electricity sector-related policies and regulation linking the power to the transport sector (Component 3); (iii) Tariff-setting in potential Green Power Purchase Agreements for public transport operators, incl. advisory on the design of related financial flows (Component 4).
Government	Ministry of Construction, Housing, Sanitation and Urban Planning (*Ministère de la Construction, du Logement, de l'Assainissement et de et de l'Urbanisme – MCLAU*)	The MCLAU defines and implements national policies on urban planning, land use planning, housing and the maintenance of public facilities and buildings. It was at the initiative of the MCLAU that the Urban Planning Master Plan SDUGA, which includes an important transport component, was developed and adopted. The proposed project will directly leverage the objective to realize an environmentally sound transportation system and indirectly the objectives to promote public transport use and an inter-modal, transit-oriented development. Besides SDUGA, Urban Master Plans in 30 secondary towns in Côte d'Ivoire were also developed through the MCLU's initiative.	MCLAU will be member of the coordination body and will be consulted on all questions related to urban infrastructure planning (e.g. the setup of charging stations or public transport routing in the city) as well as the development of the national strategy to promote e-mobility in urban public transport. Furthermore, MCLAU will be an important channel through which project results can be disseminated to and introduced in other cities in CI.
Government	Ministry of Road Equipment and Maintenance (*Ministère de l'Equipement et de l'Entretien Routier – MEER*)	The MEER is responsible for implementing government policies in the area of road infrastructure.	MEER will be one of the key contact partners in charging infrastructure planning (Comp. 2).
Government	Ministry of the Economy and	MEF is the ministry responsible for implementing the Government's	MEF will play a crucial role in the analysis of existing finance and subsidy schemes in

Stakeholder main group	Stakeholder name	Existing activities with potential to be leveraged	Content engagement, contributions to the project (identified by Component)
	Finance *(Ministère de l'Economie et des Finances – MEF)*	economic, financial and monetary policies. State-owned companies, e.g. in the energy and transport sectors, are funded through this ministry. The MEF, together with the MPEER (see above), are also the Government agencies responsible for electricity tariff setting.	Abidjan's public transport sector (Comp. 2) and supporting the development of an adequate Financing Scheme for electrified public transport modes (Comp. 3). As the MEF also acts as intermediary to international and other financing sources, it will act as an important link to potential financing institutions (Comp. 3).
Government	Ministry attached to the Prime Minister, in charge of the Budget and the State Portfolio (*Ministère auprès du Premier Ministre, chargé du Budget et du Portefeuille de l'Etat – MPMBPE*)	The MPMBPE is responsible for taxation and customs through the Directorate-General for Taxation (*Direction Générale des Impôts – DGI*) and the Directorate-General of Customs (*Direction Générale des Douanes – DGD*), respectively. The Ministry is regulating the importation of vehicles (registration, taxes, duty, etc.).	Like the MEF (see above), the MPMBPE will play an important role in the analysis of existing finance and subsidy schemes in Abidjan's public transport sector (Comp. 2) and supporting the development of an adequate Financing Scheme for electrified public transport modes (Comp. 3). It also the agency to authorize fiscal incentives through the DGI and exemptions from customs duties through the DGD for EVs and associated charging infrastructure.
Government	*Cellules genre* (Gender Units) within the Ministries	Gender Units (*cellules genre*) have been established in all sector Ministries to increase consideration of gender aspects in ministerial decision-making processes.	The project will liaise with these Gender Units and actively seek their participation and contributions during project implementation.
Financial institutions	World Bank	The WB is financing several closely interlinked urban transport sector initiatives: The Abidjan Urban Mobility Project (AUMP) which finances the implementation and operationalization of an all-electric BRT system, TA for integrating the BRT system into Abidjan's public transport network and fleet renewal in the informal public transport sector, among other things. (For more details, please refer to section 1b.) The WB, together with the GoCI, is co-financing the PAMOSET project through which trucks will be renewed. The PAMOSET is relevant to the proposed projects because the scrapping premium for obsolete taxis and minibuses will be managed through mechanisms that were initially defined by this project.	WB is the main financier of the AUMP implemented by the MOT. Through the AUMP, it will also be ensured that the electric taxis and minibuses are integrated appropriately into the feeder lines serving the new BRT system.
Financial institutions	Banks : There are about 27 banks in CI, the five biggest are : *Société Générale de Banques en CI (SGBCI), Ecobank CI, NSIA Banque CI, Banque Atlantique CI (BACI) and Société Ivoirienne*	Banks and non-life insurance companies are providing credits and insurance products to stakeholders (persons and/or companies).	Banks will contribute to the implementation of Comp. 1 (Institutionalization of /Strategy-setting for low-carbon e-mobility) by providing data and contributing to the definition of the national inter-sectoral e-mobility strategy. Banks will also contribute in the implementation of Comp. 2 by participating in i) the economic feasibility study for the introduction of EVs in public transit and business model development, ii) the design of financing models for the introduction of electric taxis and minibuses under the WB

Stakeholder main group	Stakeholder name	Existing activities with potential to be leveraged	Content engagement, contributions to the project (identified by Component)
	de Banque (SIB).[57] Non-life insurance companies: There are about 21 insurance companies in CI, the five biggest are: SAHAM Assurance, Allianz, SUNU Assurances IARD, Axa, NSIA and Atlantique.[58]		AUMP and iii) the financing of EVs and EVSE. Banks will also play a key role as beneficiaries of a Risk Sharing Facility that will be introduced by the AUMP and thus financiers of EVs to public transport enterprises. Insurance companies will insure the operation of electric buses, minibuses and taxis. (Comp. 2)
Municipalities	Abidjan Autonomous District (*District Autonome d'Abidjan – DAA*) with its Directorate for Transport and Urban Mobility (*Direction des Transports et de la Mobilité Urbaine – DTMU*)	The DAA is one of 14 districts in CI and encompasses 10 municipalities. The DAA is headed by a District Governor who is appointed by the Head of State, the post of Mayor of Abidjan was replaced by that of the Governor in 2011. Transport Matters are dealt with under the DTMU. It regulates and authorizes of transport activities in Abidjan and is responsible for the organization and management of Abidjan's traffic.	The DTMU will represent the interests of the DAA as member of the Coordination body (Comp. 1). It is an important partner who can provide information about the organization of the public transport market on the context of the feasibility analyses and relevant regulation (Comp. 2). It will be consulted to ensure that public transport services introducing EVs in the project are authorized in line with existing city regulation.
NGO/CSO	Employers federation of road transport companies (*Haut Conseil du Patronnat des Entreprises de Transports Routiers de Cote d'Ivoire – HCPETR-CI*)	The HCPETR-CI represents the interests of road transport enterprises in CI. In partnership with authorities, it supports the development of regulation and the economic and technical further development of the sector. It offers trainings and consultancy (e.g. online guides) to road transport companies on regulatory, technical and business management aspects and keeps track of developments in the sector by keeping statistics on key indicators such as fuel and operation costs, tariffication of passenger transport, financing etc.	The HCPETR-CI will represent the interests of road transport enterprises (Comp. 1). It also contributes to the project by i) providing information and data about the Ivorian transport sector and market to support the feasibility analyses and business modeling, ii) supporting the review of the policy framework, and iii) disseminating results to transport sector companies. (Comp. 2 and 3)
Private sector	Chamber of Commerce and Industry of Côte d'Ivoire (*Chambre de Commerce et d'Industrie de*	CCI-CI has been working on the development of e-mobility projects with a focus on manufacturing of EVs.	CCI-CI will contribute to the project in general by linking the project with private sector enterprises in Côte d'Ivoire.

[57] As of end 2018. Source: https://www.kapitalafrik.com/2018/11/24/ranking-of-ivorian-banks/
[58] As of 2018. Source: https://www.atlas-mag.net/en/article/the-ivorian-insurance-market-in-2018-ranking-of-companies-and-turnover-per-class-of-business

Stakeholder main group	Stakeholder name	Existing activities with potential to be leveraged	Content engagement, contributions to the project (identified by Component)
	Côte d'Ivoire – CCI-CI)		
Private sector	Companies operating in public transport: Abidjan Transport Company (*Société des Transports Abidjanais – SOTRA*), and minibus (Gbaka) and Taxi operators	SOTRA is the public transport provider for Abidjan and its suburbs. The semi-public company operates buses as well as a water bus fleet on the lagoon of Abidjan. After some years of stagnation, SOTRA has now entered a path of considerable reform, renewal and growth. SOTRA plays a key role in the WB AUMP as bus operator that will serve feeder lines to mass transit lines (BRT and metro). To modernize Abidjan's bus fleet and increase access to public transport, the State of CI has in 2018 acquired a total of 450 new buses for SOTRA. To reduce emissions and air pollution, 50 of these new buses are using natural gas. Another agreement to deliver another 400 diesel and 50 gas fueled buses has been signed at the end of 2019. SOTRA has no electric buses yet but is in principal open and interested in testing the technology and integrating them into its fleet. It is also noteworthy that SOTRA Industries, a subsidiary of the transport operator, is assembling small buses in Abidjan in partnership with IVECO. In the artisanal public transport sector, all minibuses and taxis are operated with fossil fuels so far. Especially the taxi sector is using funds of the FDTR to renew its fleet, no EVs have been introduced, though.	Public transport operators will play a central role in identifying technically and economically feasible opportunities to introduce EVs in its fleet and the definition of a respective financing scheme and investment plans. (Comp. 2 and 3). Operators will be a key addressee for capacity building measures. SOTRA and representatives of the taxi and minibus subsectors will be invited to be member in the coordination body and participate in the definition of the national strategy to promote e-mobility in public transport which would ideally include a strategy and targets for the electrification of Abidjan's public transport fleet (Comp. 1).
Private sector	Ivorian Electricity Company (*Compagnie Ivoirien d'Electricité – CIE*)	CIE operates power generation facilities (large hydropower and thermal power plants) and the power transport and distribution grid owned by the State of CI, and sells, imports and exports electricity. It plays this role as concessionary of the State of CI. CIE is a private enterprise and part of the pan-African Eranove Group. It was the first independent power producer in Côte d'Ivoire.	As grid operator, CIE will play a key role in EV charging infrastructure and associated potentially necessary distribution grid reinforcement planning (Comp. 2) as well as advisor in the review of renewable power capacity targets (Comp. 4). As operator of hydropower plants and electricity supplier, it is a candidate for the directs sales of renewable electricity to fleet operators (Comp. 4).
Private sector	Côte d'Ivoire Energies (CI-ENERGIES)	Côte d'Ivoire's state company CI-ENERGIES is responsible for managing the supply and demand of electrical energy, developing power generation capacity, incl. renewable energies, developing the transmission and distribution networks and managing financial flows in the electricity sector.	As state company which is responsible for developing renewable power capacities as well as the distribution grid, CI-ENERGIES will be a key partner in charging infrastructure charging planning (Comp. 2) and RE capacity development planning (Comp. 4).
Private sector	Independent Producers of Renewable Energies	CI is currently making progress in developing a policy framework which to incentivize investment in renewable energies, especially solar, small	Independent producers of renewable energies are candidates for the directs sales of renewable electricity to fleet operators (Comp. 4). The project will observe market

Stakeholder main group	Stakeholder name	Existing activities with potential to be leveraged	Content engagement, contributions to the project (identified by Component)
		hydropower and biomass. With the support of international institutions, it is possible that first projects will be developed and implemented soon. Projects for larger-scale grid-tied renewable energy projects will be identified through tenders by the State of CI through the MPEER (see above). This project might present the opportunity to give renewable power projects some additional push as the transport sector could act as a direct off-taker of renewable electricity.	developments in the renewable power sector closely in cooperation with the MPEER and ANARE-CI.
Private sector	Car and bus manufacturers/ importers; Automobile industry association *Groupement Interprofessionnel Automobiles Matériels et Equipementiers – GIPAM*E	There are numerous companies importing and selling used and new fossil-fueled cars. Diesel and some gas fueled busses are imported directly for SOTRA by the GoCI from international suppliers like IVECO, Scania, Tata, Iran Khodro, Volvo etc. GIPAME represents the automobile industry, automobile equipment manufacturers and industries related to the transport sector, incl. finance institutions, in CI.	Automobile manufacturers that have EVs in their portfolio will contribute to the implementation of Comp. 2 and 3 by i) providing the vehicles for the electrical taxi and/or minibus fleet, ii) participating in trainings, workshops and/or meetings, iii) contributing to the technical/ economic feasibility analyses and the definition of possible business models, iv) supporting the review and update of the policy framework and v) help with potentially required trouble shooting during EV operation and maintenance. Wherever needed, manufacturers will also be consulted about required charging stations. GIPAME will contribute to the implementation of Comp. 1 by i) participating in the Coordination Body meetings and ii) supporting the development of the national e-mobility strategy. GIPAME will furthermore contribute to Comp. 2 and 3 by i) participating in the trainings/ workshops/ meetings organized, ii) contributing market intelligence to the technical/ economic feasibility analyses and iii) supporting the review and update of the policy framework. GIPAME will generally contribute to the project by promoting the introduction of EVs and charging equipment to its members and actively liaising members with the project.
Private sector	Société générale de Surveillance – SGS Renovo and Société Africaine de Recyclage – SAR	SGS Renovo, an international control and certification company, is authorized by the State of CI for the control, handling and disposal of electronic waste and used tires. First, electronic and electrical devices which are imported into CI are registered through SGS Renovo, and second, the company also levies an environmental tax through which the Ivorian e-waste management system is financed. Finally, SGS is also in charge of	SGS Renovo and SAR will be consulted during the development of e-waste management regulation and associated certification with respect to vehicle batteries. This activity and thus SGS/SAR will benefit from support from the Global Thematic Working Group on battery lifecycle issues. (Comp. 4)

Stakeholder main group	Stakeholder name	Existing activities with potential to be leveraged	Content engagement, contributions to the project (identified by Component)
		the e-waste management system, incl. the establishment of e-waste collection centers and subsequent waste treatment. The latter is implemented by SGS Renovo's partner SAR. Used EV batteries is not yet defined as e-waste under this scheme.	
Private sector	Ivorian Society for the Technical Control of Automobiles (*Société Ivoirienne de Contrôles Techniques Automobiles – SICTA*)	SICTA is the largest company in CI that inspects and certifies vehicles and has vast experience in the automobile industry. In its function, it ensures that vehicles meet safety and emission standards. SICTA is overseen by the MOT and a subsidiary of the SGS Group, seated in Geneva.	On the one hand, SICTA has an excellent insight into the country's overall vehicle fleet and its condition. Thus, SICTA is a crucial partner to support the project by providing information about the current rolling stock in the public transport sector and supporting the definition of technical standards for EVs (Comp. 2). On the other hand, it will – in its original function – be charged with the inspection and certification of new EVs and thus be trained on the operation and maintenance of EVs. Furthermore, SICTA is a candidate to nominate staff for training of trainer activities under Comp. 2 aiming at the establishment of capacities for EV driver and mechanics trainings.
International organization	United Nations Entity for Gender Equality and the Empowerment of Women, (UN Women)	UN Women is the organization dedicated to gender equality and the empowerment of women. UN Women has offices in Abidjan.	During the scoping mission, UN Women representatives have signaled their willingness to support the project in gender related questions and will be consulted accordingly.
GEF Agency	United Nations Environment Programme (UNEP) - Sustainable Mobility Unit (SMU)	The UNEP SMU is the lead Executing Agency of the Global E-mobility project and is also leading the Africa Support and Investment Platform of the programme.	The project will benefit from the services and trainings offered by the Africa Support and Investment Platform. In addition, the SMU will be providing execution support to the project, as outlined in the OFP's letter in annex N-2.

In addition, provide a summary on how stakeholders will be consulted in project execution, the means and timing of engagement, how information will be disseminated, and an explanation of any resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement.

Consultations of stakeholders in project execution

The main stakeholders will be represented in the project steering committee (PSC) which will have: i) to define the methodology approach to adopt for a successful project implementation; ii) to endorse TORs of project consultants, studies reports prepared by consultants and documents to be presented to workshops or endorsement meetings. The PSC will form the basis of the e-mobility coordination body and will ensure that policy proposals and regulatory schemes will be considered for adoption by the relevant institutions.

Thematic working groups will be established depending on the component of the project to deal with specific tasks in the project. On a specific thematic the groups will be technical adviser for the Project Management Unit, project consultants and project steering committee. Resource persons will be identified as member of the thematic working groups depending on the topics to be discussed.

The project will hold technical meetings for large discussion on a specific thematic when needed in the objective of consulting a large number of stakeholders.
Finally, national workshops will be held and so offer to stakeholders to endorse studies, reports and draft policies prepared by consultants or/and thematic working groups.

Furthermore, during the project inception phase, all relevant stakeholders will be consulted to refine details of the project design. During this process, special attention will be given to those stakeholder groups which could not yet be consulted or informed about the project during project preparation, also because the second preparatory mission to CI had to be cancelled due to the COVID-19 pandemic. These are, for instance, representatives from other cities, informal taxi and minibus operators, private sector enterprises (e.g. vehicle importers), independent renewable power producers, or educational institutes working on transport sector topics.

Dissemination of information among stakeholders
To keep all stakeholders informed, the project will use different means to communicate and disseminate results, experiences and lessons learned. It will be one of the main duties of the PMU to build up and maintain networks and strategic partnerships between stakeholders by facilitating and moderating a target-oriented exchange on the subject matter. Platforms for exchange are face-to-face meetings, workshops, online meetings, phone calls, depending on the tasks at hand (e.g. development tasks, decision-making, coordination, etc.).

Resource requirements throughout the project/program cycle to ensure proper and meaningful stakeholder engagement.
To ensure proper and meaningful stakeholder engagement the project will have to provide (to steering committee members, thematic working groups members, participants in meetings and workshops, etc.) travel fees and daily subsistence allocation (DSA).

Finally, select what role civil society will play in the project:
☒ *Consulted only;*
☐ *Member of Advisory Body; contractor;*
☐ *Co-financier;*
☐ *Member of project steering committee or equivalent decision-making body;*
☐ *Executor or co-executor;*
☐ *Other (Please explain)*

3. Gender Equality and Women's Empowerment

Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women's empowerment?

☒ *Yes*
☐ *No*

If possible, indicate in which results area(s) the project is expected to contribute to gender equality:

☐ *closing gender gaps in access to and control over natural resources;*
☒ *improving women's participation and decision making; and or*
☒ *generating socio-economic benefits or services for women.*

Does the project's results framework or logical framework include gender-sensitive indicators?

☒ *Yes*
☐ *No*

Gender Analysis:

The GoCI has ratified a number of international conventions related to the promotion of gender equality, including the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) (ratified on 18 December 1995); the Convention on the Political Rights of Women (ratified on 6 September 1995); the ILO Convention No. 100 concerning Equal Remuneration for Men and Women Workers for Work of Equal Value (ratified on 5 May 1961). The country also has been involved and upholds key international and regional instruments related to the advancement of women, including the Beijing Declaration and Platform for Action; the Solemn Declaration on Gender Equality of the African Union (2004); the Copenhagen Declaration; the Millennium Development Goals (2000); the Resolutions of the 23rd Special Session of the UN General Assembly; and the African Charter on Human and Peoples' Rights (ratified on 6 January 1992).
The Constitution of 2016 affirms equality for all and prohibits all forms of discrimination based on sex in access to or exercise of employment, political, religious or philosophical opinions.

Although measures have been taken to reduce gender-based inequalities in Côte d'Ivoire, they persist in various spheres of life. According to the Global Gender Gap Index (GGGI)[59], the country in 2019 still ranked low at place 142 out of 153 measured countries. However, slight improvement from a value of 0.57 in 2010 to 0.61 in 2019[60] could be observed. The Index measures four areas of life: 1) Economic participation and opportunity; 2) Educational attainment; 3) Health and survival; and 4) Political empowerment.[61] Figure 12 shows how CI scored in 2019 in these four areas (the outer circle represents a score of 1, the inner circle 0. The blue line indicates the average of all measured 153 countries).

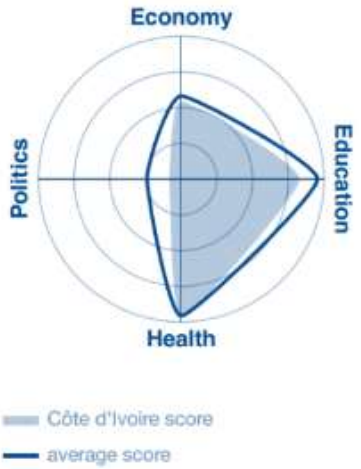


FIGURE 12: GLOBAL GENDER GAP INDEX CÔTE D'IVIORE[62]

The gender gap is most striking in Political Empowerment (score: 0.082). Specifically, only 11% of parliamentarians are female, women in ministerial positions make up 15% of all ministers. Furthermore, only about 16.7% of legislators, senior officials and managers in Côte d'Ivoire are female. To tackle the problem of female representation, the GoCI has passed the 'Law 2019-870 promoting the representation of women in elected assemblies'. It stipulates that ballot lists for the election of Deputies to the National Assembly, Senators, and Regional, District and Municipal Councillors must include at least 30% women. This project will use this quota as minimum target to be achieved when it comes to the composition of committees, participation in capacity building measures, etc. Furthermore, by Ministerial Order, Gender Units (*cellules genre*) have been established in all sector Ministries to increase consideration of gender aspects in ministerial decision-making processes. The project will liaise with these Gender Units and actively seek their participation during project implementation.

According to the GGGI, the labor force participation rate of women was 49.3% and 66.9% for men, but only 22.5% women occupied positions of professional and technical workers. In CI's transport sector, women are particularly under-

[59] The Global Gender Gap Index (GGGI) is a gender parity score ranging from 0: full imparity between women and men to 1: full parity between women and men.
[60] Sources: Value for 2010: https://tcdata360.worldbank.org/ and value for 2019: World Economic Forum. 2019. Global Gender Gap Report.
[61] Source: http://hdr.undp.org/en/content/gender-inequality-index-gii
[62] Source: World Economic Forum. 2019. Global Gender Gap Report.

represented. According to the World Bank, only 8% of SOTRA's workforce (total: 4,000 employees) are women in clerical jobs, only about 10 women occupy technical jobs as drivers or in maintenance and only less than 20 women are estimated to work as taxi or minibus drivers.[63] It should be noted here, that the GoCI has, in an effort to increase employability of young Ivorians between 21 and 40 years, launched a third edition of a driving license programme in October 2019. The objective of this project is to issue 4,000 of driving licenses within a year. Of these, 30% are officially reserved for young women. In the preceding years 2017 and 2018, the actual rate of women who received who obtained a license was 19% and 24% respectively.[64]
Wage equality for similar work scores at 0.683, here it ranks at place 57 of 153.[65] In terms of educational attainment, it can be observed that the gender gap is widening from enrolment in primary education (score: 0.92) to tertiary education (score: 0.69). To create higher parity in these areas, the project will ensure that equal wages are paid for similar work when hiring staff and that women will explicitly be addressed to participate in training or similar measures.

But also, public transport services themselves play an important role with regards to gender equality. As they facilitate access to economic and social benefits, they should be designed that they meet the needs of women and men in an equitable, affordable and responsive manner. The Transport Gender Toolkit by the Asian Development Bank[66] identifies several typical differences between women's and men's mobility that frequently create disadvantages for women.

Unfortunately, there is hardly any hard data available regarding gender differences and inequalities in the use of public transport services in Abidjan or Côte d'Ivoire. Still, discussions and observations during the scoping mission as well as some documents indicate that the following differences are prevailing in Abidjan:

- Use of transport modes: Access to different transport modes varies between women and men because of different access to cash income, gender roles or cultural norms. Typically, women often must rely on simpler and slower transport modes like walking or public transport. The diagnostic report that prepared the Draft Road Map for Sustainable Mobility in Côte d'Ivoire confirms that women are more likely to be pedestrians than men.[67]
- Differences in travel patterns: Women typically have mor complex travel patterns as they combine several tasks (e.g. care giving, income-earning activities) in one day. Inequalities then arise when, for instance, ticket prices are not reflecting these travel patterns leading to higher mobility costs for women than for men. In Côte d'Ivoire, ticket prices for transportation increased constantly since 2008 and are extraordinarily high leaving women in a more financially insecure situation than men.
- Mobility and Safety: Women frequently encounter violence and harassment which then often reduces the movement radius of women and girls limiting their ability to, for instance, attend school or work.

These three key differences all lead to a lower accessibility to (motorized) public transport for women. Although the project cannot address the root causes of these inequalities directly, it still has several entry points to help tackling these problems, as described in the gender action plan below.

Gender Action Plan:

The project will pursue the following gender equality objectives:

- Decision-making and leadership in the transport sector: Enhance women's participation and role in in transport sector design and decision-making processes, with women as agents of change
- Increase the access to and control over mobility resources of women: Support women's improved access, use, and control of mobility resources
- Access to socioeconomic benefits and services through improved mobility: Target women as specific beneficiaries, and invest in women's skills and capacity

The concrete activities, targets and means of verification as well as responsible parties are shown in the following table:

[63] Source: World Bank. 2019. Project Appraisal Document for the Abidjan Urban Mobility Project.
[64] Source: http://www.gouv.ci/_actualite-article.php?recordID=10450&d=1
[65] Source: World Economic Forum 2019. Global Gender Gap Report.
[66] Source: Asian Development Bank. 2013. Gender Tool Kit: Transport - Maximizing the Benefits of Improved Mobility for All.
[67] Source: Ministère des Transports. 2019. Elaboration de la Feuille de Route Mobilité Durable en Côte d'Ivoire – Rapport Diagnostique.

Project Components / Outputs	Objectives	Activities	Targets / Means of Verification	Responsibility
Overall Project Management	Promote women representation in participatory and decision-making processes and empowerment of women	Prepare a "Gender Representation Guidelines" document (2 or 3 pages max.) for all participatory and decision-making bodies and capacity building measures of the project. The guidelines lay out through which measures a balanced representation of women in these bodies can be ensured. The guidelines are prepared in collaboration with the gender units (*cellules genre*) of the MINEDD and the MOT, in consultation with gender experts in the country (e.g. from UN Women).	Gender Representation Guidelines document drafted and issued by the end of Month 3	PMU
	Ability to monitor women participation in project meetings, trainings and workshops	Develop an attendance sheet template which allows to identify participants by gender, to be used in all in project meetings, training and workshops.	Attendance sheet template prepared and ready to be used by the end of Month 3	CTA
	Mainstream gender into progress reporting	Report on the project's gender mainstreaming activities in each progress and Project Implementation (PIR) report.	2 reports per year (1 progress report and 1 PIR)	PMU
Component 1 Output 1.1	Ensure women representation in project bodies	Based on the Gender Representation Guidelines, encourage member entities of the national coordination body to appoint women as their representatives.	The national coordination body has at least 30% female members (gender disaggregated attendance sheets)	PMU
Component 1 Output 1.2	Ensure that the national e-mobility strategy considers gender aspects in an equitable manner	The joint national strategy to promote low-carbon e-mobility in urban public transport in CI will include a gender analysis and action plan to mainstream gender equality right from the beginning of the development process. Gender-related action items will be included in the draft joint national e-mobility strategy.	1st draft of gender sensitive national strategy prepared by the end of Year 2. Final gender sensitive national strategy prepared by end of Year 3.	PMU together with the e-mobility policy and strategy expert
Component 1 Output 1.3	Empowerment of women through participation in regional / international events	Based on the Gender Representation Guidelines, participation of women in regional / international events, meetings and trainings will be promoted actively. The agencies or institutions that will be invited to participate will be encouraged to nominate women to participate in the events.	At least 30% of participants attending / participating in the events are women. (gender disaggregated attendance sheets)	PMU
Component 2 Output 2.3	Build capacities of women through trainings	Based on the Gender Representation Guidelines, participation of women in driver trainings will be promoted actively. Acknowledging that women representation is very low within the drivers population, the project will assess through which channels women can be reached.	100 e-taxis drivers and 50 e-minibuses drivers have passed the trainings, out of which at least 5 are female[68]. (gender disaggregated attendance sheets)	PMU

[68] Since female taxis and minibuses drivers in Abidjan are extremely rare, it would not be realistic at all to set a target of 30% women participation for that very specific category of training beneficiaries. Given these exceptional reasons, the project will therefore actively work to ensure that at least 5 female (but hopefully even more) taxis or minibuses drivers will receive this training.

Component 3 Output 3.2	Enhancing safety and vehicle ergonomics for all passengers, incl. women, children, elderly and physically impaired persons	During the preparation of technical standards and regulations for EVs and charging infrastructure, the experts will need to consider that passenger compartments meet international standards for physically impaired persons and safe traveling of children, women or vulnerable persons.	The technical standards' definitions for e-taxis, e-minibuses and e-buses will include features to enhance women's and vulnerable passengers' (e.g. elderly) safety and comfort following global best practices.	PMU together with e-mobility technology and business expert
All Components	Promote women participation in project consultation meetings / workshops.	Based on the Gender Representation Guidelines, the participation of women / appointment of women representatives will be encourage in all project consultation meetings and workshops outlined in the Workplan (refer Annex L for more details)	At least 30% of participants attending the project consultation meetings / workshops are women. (gender disaggregated attendance sheets)	PMU

4. Private Sector Engagement

Elaborate on the private sector's engagement in the project, if any.

The private sector will be closely involved in the GEF E-Mobility Project in Cote d'Ivoire. This involvement can be distinguished in two main groups: 1.) Private companies operating taxi and minibus fleets, which decide to participate in the fleet renewal scheme, including the incentives to buy electric vehicles implemented and funded as part of the AUMP, and including additional bonus payments / subsidies for the purchase of electric vehicles (in addition to the first loss guarantee, which enables the participation of private sector companies, which would otherwise not be deemed eligible to take a loan for fleet renewal); and 2.) EV and EV supply equipment manufacturers.

The former group will be involved through the fleet renewable scheme implemented as part of the AUMP. World Bank has already experience with the implementation of fleet renewal schemes in Cote d'Ivoire based on the Transport Sector Modernization and Corridor Trade Facilitation project (PAMOSET[69]), which includes a fleet renewal financing facility for long-haul heavy cargo trucks. Component 2 of the project targets the development of a heavy cargo truck fleet renewal scheme implemented through the Fonds de Développement des Transports Routiers (FDTR), whose capacity is set to be strengthened as part of the project. Commercial banks have already been selected "to host the line of credit and the selection of operators qualified for truck renewal, including clear flow of funds". The fleet renewal scheme including the demonstration of electric vehicles (through substantial EV subsidies) implemented as part of the AUMP and targeting a fleet of up to 250 e-taxis and e-minibuses, will be based on the structures and experiences with private sector fleets gained under the PAMOSET project.

In addition, the project will reach out to local private sector operating taxi and minibus fleets through workshops and trainings organized as part of the project in Cote d'Ivoire: For example, output 2.3 foresees the training of drivers and mechanics that will operate electric vehicles and electric vehicle supply equipment. Many more trainings and other events targeting the private sector and in particular the urban formal and informal transport sector will be organized and implemented as part of Component D of the AUMP "Human capital development and operational support (US$25 million equivalent, of which US$25 million IDA)".

Through the Global Programme, the GEF project will reach out to EV manufacturers to support the introduction of new EVs through local dealerships in Cote d'Ivoire. The availability of new EVs on the local market alongside the capacity to maintain and service these vehicles is a prerequisite for the successful introduction of EVs at scale in taxi and minibus fleets. Many car manufacturers having EVs in their vehicle portfolio have dealerships in Cote d'Ivoire, for example Renault, Peugeot, Citroen, Mitsubishi, Nissan, Kia, Hyundai, Volkswagen, Ford, Fiat, to name a few. Yet, none of them is offering EVs. The Cote d'Ivoire E-Mobility Project with the support of the Global Programme and its implementing

[69] TRANSPORT SECTOR MODERNIZATION AND CORRIDOR TRADE FACILITATION PROJECT, PAD 1854,World Bank June 2016

partners such as the IEA and the SOLUTIONSplus consortium, will make use of its network and outreach to partner with at least one manufacturer to introduce new EVs in the Ivoirian vehicle market.

In addition, the project will establish links between e-bus charging solution providers part of the EC SOLUTIONSplus consortium and the e-mobility project in Cote d'Ivoire to evaluate possible involvement in the electric bus rapid transit system, which is part of the AUMP. EC SOLUTIONplus EV charging industry partners will also be involved in the development of studies and plans concerning the introduction of public EV chargers in Abidjan. The involvement of EV supply equipment manufacturers is not limited to the partners of the Global Programme and the EC SOLUTIONSplus project but all interested e-mobility solution providers will be invited to participate in the Cote d'Ivoire e-mobility project.

Main elements to reach out to global EV and EV supply equipment manufacturers include:

- Through the Global Programme Thematic Working Groups jointly implemented by IEA and UNEP : Both organizations have substantial outreach to the private sector, for example through IEA's Mobility Model Partnership[70] or through the Climate and Clean Air Coalitions (CCAC) Global Industry Partnership on Soot-Free Clean Bus Fleets[71], which is implemented in partnership with UNEP and other leading clean transport organizations such as the International Council on Clean Transportation (ICCT), and which includes leading bus manufacturers such as BYD, Cummins, Scania and Volvo Buses.
- Through the events organized by the Africa Regional Support and Investment Platforms hosted by UNEP : The platform will organize market-place and replication events, which bring together EV and EV supply equipment manufacturers with e-mobility projects and potential financiers (including development banks, the Green Climate Fund, private investors). The e-mobility project in Cote d'Ivoire will be showcased during these events to raise the attention of manufacturers in the provision of EVs.
- Through global events organised as part of the Global Programme to raise awareness about the GEF Global E-Mobility Programme. This includes for example activities planned for the Conference of the Parties (COP) of the UNFCCC taking place during November 2021 in Glasgow, United Kingdom. Sustainable transportation has been identified a key topic of this year's COP and the GEF Global Programme as well as the participating country projects will be adequately showcased. In addition, COP 27 is planned to take place in Africa, which provides a great opportunity to further bring to the attention the importance of electric mobility in African countries to reach the climate targets set under the Paris Agreement.

5. Risks

Elaborate on indicated risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, the proposed measures that address these risks at the time of project implementation.

[70] https://www.iea.org/areas-of-work/programmes-and-partnerships/the-iea-mobility-model
[71] https://www.unep.org/news-and-stories/press-release/bus-manufacturers-commit-bring-cleaner-soot-free-buses-20-megacities

Risk description	Main categories	Risk level rating	Risk Mitigation Strategy and Safeguards	By Whom / When?
Negative perceptions about e-mobility technology and the impacts this will bring to society and industry hamper acceptance.	Political	Medium	i) Knowledge and know-how development through capacity building and training measures and targeted support by the Africa Support & Investment Platform and the Subregional Working Group as well as the E-Mobility Global Programme ii) Focus on market segment (public transport) with professional operators and significant international experience as well as mature technological solutions	i) By MINEDD and PMU; ii) by MOT / i) through activities in Comp. 1 and the general project approach to offer expertise through the Global Programme activities; ii) through activities in Comp. 2
Specifically, negative perceptions about e-mobility technology are generated by a technical failure of the electric taxi and/or minibus fleet (incl. charging infrastructure), failure or low performance through insufficient maintenance or accidents	Technical / Political	Medium	i) Apply international best practice in setting up procurement guidelines and introducing technical standards ii) Select mature technology solutions and only fleet operators for the introduction of EVs which are committed to the new technology, are big enough and have enough capacities and adequate infrastructure to operate and maintain an electric fleet successfully iii) Upskilling for drivers and mechanics iv) Safety and technical training for drivers and mechanics v) Careful choice of counterpart for pilot investments vi) Select state-of-the-art vehicles meeting high safety standards (e.g. similar to standards in Europe) vii) Insurance cover viii) Contractual arrangements (e.g. performance-based contracts or insurance schemes) should ensure that cars are maintained well and operated as much as possible	By PMU and MOT in close coordination with the WB AUMP / Through activities in Comp. 2
Rapid staff change in the government might limit the gains from capacity building measures and inter-ministerial coordination	Political / technical	Medium	i) Inter-ministerial structure (National E-mobility Coordination Body and PSC) with a wide range of stakeholders involved will keep many people informed so that continuity can be ensured ii) Co-implementation with WB AUMP will prevent stagnation	PMU / Through activities of Component 1 and overall project design (co-implementation)

Materials (e.g. studies, policy proposals, business models, finance schemes, procurement guidelines etc.) developed are not relevant for country context	Technical	Low	i) Active participation in the Global Project and Africa Investment Support Platform ii) Informed advice from the inter-sectoral Coordination Body to the PMU iii) Active involvement of local stakeholders from government, private sectors, civil society in the technical and economic feasibility analysis, business modeling and finance scheme design, the setup of procurement guidelines for the pilot fleet, and policy proposal development in the energy, transport and waste management sectors iv) Ensure that stakeholders endorse materials developed component by component (through workshops or face-to-face meetings held or individual consultation) v) Liaise international consultants with relevant stakeholders from the beginning of an activity and frequent exchange between PMU, the consultant and stakeholders on proposed concepts; support to the consultant by pro-actively providing relevant local market information	i-ii) By the PMU in close coordination with inter-sectoral Coordination Body; iii-v) by the PMU with support of the MOT, MINEDD and MPEER where relevant / i-ii) Through activities of Comp.1; iii-v) through activities of Comp. 2, 3 and 4
Change in leadership and priorities in the government (i.e. elections)	Political / Institutional	Substantial	i) Inter-ministerial mechanism (i.e. Coordination Body and PSC) should generate consensus on benefits of low-carbon electric mobility ii) Observation of political developments and active networking with new leaders	By the PMU with support of the MOT and MINEDD/ Through activities of Component 1
Higher upfront cost of electric vehicles may pose a barrier to implementation and scale up of activities	Economic	Medium	i) Financial mechanism shall be attractive ii) Encourage Banks to promote “credits for EVs” and particularly vehicles for public transport (buses and minibuses, taxis)	By the MEF, the Ministry attached to the Prime Minister, in charge of the Budget and the State Portfolio, World Bank (which funds the scrapping and electrification premium through the AUMP) and the PMU / Through activities of Comp. 2 and 3
Objection or low commitment from industry to technology changes leading to lack of interest or participation	Political / Economic	Substantial	i) Electric vehicle bonus and awareness raising measures will be designed in such a way as to defray these objections. ii) Active and early involvement especially of public transport fleet operators in the technical and economic feasibility analysis, business modeling and finance scheme design.	By the PMU with MOT / Through activities of Comp. 2 and 3
Insufficient and incomparable systems for tracking results	Capacity / Technical	Medium	Performance monitoring component will provide data and allow for identification of the need for corrective action	By the PMU with MOT / Through activities of Comp. 2

Delays in implementation of cofinancing	Financial / technical	Low	WB AUMP is already under implementation and funding is ready to flow.	By the MOT with support of the WB / Through activities of Comp. 2
Inadequacy of the exit strategy and lack of ownership of the program after the end of the GEF funded activities and inability to source resources to continue the program's activities in the medium/long term (including thematic working groups and support and investment platforms).	Political / Financial	Medium	i) Develop exit strategy early on ii) Active involvement of local stakeholders from government, private sectors, civil society in the technical and economic feasibility analysis, business modeling and finance scheme design, the setup of procurement guidelines for the pilot fleet, and policy proposal development in the energy, transport and waste management sectors iii) Ensure that stakeholders endorse materials developed component by component (through workshops or face-to-face meetings held or individual consultation)	PMU / i) At the latest after half time of the project; ii-iii) Through activities in all components
Countries are not interested in second life and disposal of batteries so early on in market transformation to electric vehicles	Political / Environmental	Low	Explore various options for second life, including central (with utility) and decentral solutions	By the PMU with MINEDD and support of MPEER / Through activities of Comp. 4
Materials from EVs (e.g. from batteries) might generate environmental pollution	Environmental	Medium	Second life and tracking of these materials will be integrated into the approach	By the PMU with MINEDD / Through activities of Component 4
Extreme weather events due to climate change temporarily affect operations of (parts of) the pilot fleet or temporarily impact project implementation.	Climate	Low	This GEF funded project is essentially a Technical Assistance (TA) project and should not be directly impacted by climates risks. The outputs related to the investment in infrastructure / vehicles (outputs 2.1, 2.2 and 2.3) are part of the AUMP project, executed by the Ministry of Transport (which contributes to the GEF project objective in the form of co-finance). Please refer to the detailed climate risk assessment in the section below.	PMU

From the risk matrix it becomes clear that the project design is already paying heed to a number of risks associated with typical market barriers, and that implementation details of individual components will add relevant and important contributions to mitigating the risk to impact of this project. The risk mitigation strategies rely to a significant degree on the convening power of the PMU and EA as well as the MOT, and their ability to motivate different stakeholder groups including the transport but also the power sector to collaborate on this endeavour.

Climate risk assessment

(i) How will the project's objectives or outputs be affected by climate risks over the period 2020 to 2050, and have the impact of these risks been addressed adequately?

Vulnerability and exposure

Cote d'Ivoire is vulnerable to multiple climate risks resulting from global warming. The Climate Change Knowledge Portal of the World Banks summarizes key climate vulnerabilities as following[72]:

- Floods repeatedly hit Cote d'Ivoire, especially in the southern part of the country where the highest amount of rainfall occurs. The city of Abidjan is very prone to flooding and poor sanitation systems within urban areas, such as clogged drains and sewers, lead to flooding during the rainy season.
- Droughts are expected to increasingly impact the semi-arid northern savannah region of the country in the coming century.
- Cote d'Ivoire is exposed to many different diseases that are influenced by climate parameters (e.g. malaria), which is also the leading cause of morbidity and mortality. As temperatures increase, malaria could expand into previously unaffected areas as temperatures become more conducive to the survival of the vector. Additionally, re-emergence of potentially epidemic outbreaks of diseases such as cholera and meningitis has occurred recently. The northern part of the country is most threatened by meningitis while urban areas are mostly affected by cholera. Poor sanitation and water resources infrastructure also enhance the risk of some of these diseases.
- The potable water supply in the country has increased in recent years but there are frequent service disruptions and a large share of the population still remains without access to clean water. Poor infrastructure and capacity in this sector contribute to flooding and disease outbreaks in urban areas as well as lack of access to potable water for parts of the population. The Abidjan water table has already seen a reduction in its levels, and pollution is present in many waterways throughout the country.
- In addition to the points summarized above, the risk of landslides is increasing with increased extreme weather events such as heavy rainfall. In 2009, an estimated 10,000 people have been affected by landslides.

Within the context of this project, the risk of project assets being affected by floods is most important and needs to be anticipated. This is due to the fact that the demonstration project will take place in Abidjan, which has been identified to be very prone to flooding during the rainy season.

The risk of flooding will need to be addressed during project implementation especially when selecting the locations for EV charging infrastructure. Flooding of EV chargers can lead to malfunction or destruction. Equally, locations prone to flooding can be subject to extended power cuts. In all cases, damage, loss or underutilisation of the EV charging equipment can occur as a result of local flooding and need to be prevented though proper selection of the charging station location. Therefore, the feasibility studies will need to anticipate flooding occurring from rivers bursting their banks but also from overflowing sewage systems, resulting in local flooding.

Furthermore, the handling of EVs during rainy season and when passing flooded roads will need to be included in the driver trainings.

The project aims to develop a national development plan for low-carbon and climate-resilient electric mobility. It aims at the development and adoption of technical regulations and standards for EVs and charging infrastructure (Output 3.2). It will be ensured that developed regulations for the installation of electric vehicle charging infrastructure will be adapted to local climate and heavy rainfall. Standards and the policy framework for regulating the disposal of vehicles' batteries (output 4.3) will be designed to ensure that extreme weather events and flooding do not lead to increased contamination.

Under the precondition of proper planning, the project is expected to have moderate risk with regards to impact from climate change.

(ii) Has the sensitivity to climate change, and its impacts, been assessed?

[72] https://climateknowledgeportal.worldbank.org/country/cote-divoire/vulnerability

The sensitivity to climate change and its impacts has been assessed and the adverse effects of flooding have been identified the key risk which needs to be addressed when planning for EV charging installation and EV demonstration.

(iii) Have resilience practices and measures to address projected climate risks and impacts been considered? How will these be dealt with?

Resilience to climate risk will be ensured through proper planning and selection of the demonstration assets. The Global Project, through the Africa Support and Investment Platform, will facilitate the exchange of experiences and best practices, also including resilience practices with regards to the nexus of e-mobility and extreme weather events. The Thematic Working Groups, and in particular the working group on EV charging infrastructure, grid integration, renewable power and batteries will enable the global spill-over of best practices with regards to the planning and use of EV charging systems, including issues of resilience against climate risks such as heavy rainfalls.

(iv) What technical and institutional capacity, and information, will be needed to address climate risks and resilience enhancement measures?

The technical design of the charging equipment used to charge EVs for operation in taxi and minibus fleets will need to be adapted to local climate condition and in particular extended rainy seasons with occasionally heavy rainfalls. It will need to be in accordance with the latest building codes, to ensure resilience to extreme weather events. Regulations for charging stations (output 3.2) will also need to be in accordance with such codes. Capacity for proper operation and maintenance of EVs under all weather conditions will need to be built with drivers and fleet operators, and will be included in training curricula developed under output 2.3. In addition, the building of such capacity will need to be anticipated when designing plans to electrify the bus fleet of SOTRA in Abidjan.

COVID-19 Risk and Opportunity analysis

Risks:

The COVID-19 pandemic has the potential to affect the project in the following ways:

Reduced taxi and minibus operations. Whether due to mobility restrictions imposed by health authorities, the increased possibility of teleworking, the need for social distancing, or a significant economic contraction, the COVID-19 pandemic has the potential to reduce the levels of public transport travel in Abidjan. In such a situation, taxi and minibus drivers could suffer losses in income and become less open to adopting new technologies, such as electric vehicles. This result would negatively impact on the effective execution of the project's outputs, potentially leading to a slower adoption of electric taxis and minibuses in Abidjan.

Lockdown and movement restrictions. Mobility restrictions and the need for social distancing could also lead to reduced possibility for activities that have traditionally required in-person participation, such as workshops, meetings, trainings and consultations.

Government priorities. In the event of an extreme economic contraction, the pandemic could lead to a reduced focus by legislative powers on the adopting of policies, laws and standards related to electric mobility. It could also lead to a situation where financial incentives such as import tax reductions or exemptions promoting electric mobility would not materialize as planned.

Mitigation measures:

Reduced taxi and minibus operations. The project pilots are planned to take place in 2021 and 2022, by which stage it is projected that the COVID pandemic will no longer impact the daily lives of citizens to the extent experienced today (2020). In the event that lockdowns and travel restrictions continue to impact the country, the PMU will re-evaluate –

together with the AUMP Project Coordination Unit - the project workplan to postpone field activities until the second or – depending on the actual situation - third year of project execution (2022-2023).

Lockdown and movement restrictions. In the event of mobility restrictions and the need for social distancing, alternative and innovate forms of meeting organization and communication will be implemented (i.e. using online platforms). The impacts of the pandemic in 2020 have meant that such technologies are already becoming commonplace and acceptable for usage by a broad range of stakeholders.

Government priorities. Project activities requiring governmental consideration of laws and decrees is planned primarily for the project's second and third year, when it is estimated that action on the pandemic will be in place and less of a requirement for legislative authorities. If the pandemic continues to be requiring the attention of decision-makers, such project activities will be rescheduled for the project's third year.

Opportunities:

With initial studies indicating that the effects of COVID-19 are intensified by poor air quality, the pandemic has led to an increased focus on this situation globally. Abidjan have levels of air quality which are very poor, and thus efforts to improve the situation are embraced by civil society and health authorities. As the GEF project directly aims to improve air quality through a reduction in polluting internal combustion engine vehicles, there will be significant opportunities to tackle this problem and there is the clear opportunity that awareness in the public and among decision-makers will be higher than could be expected under normal circumstances.

In addition, the COVID-19 pandemic can lead to an increased uptake of green jobs in the e-mobility value chain. Within the framework of this project this is for example related to skilled work necessary to service and maintain EVs in Cote d'Ivoire. It is furthermore related to additional business opportunities in the sector of waste management, and in particular e-waste and used EV batteries. Opportunities seem to emerge with the preparation of used EV batteries, for example for re-use as energy storage in the power sector. Furthermore, the repurposing of used EV batteries, for example through demounting of battery packs and testing of cells for re-use in battery packs based on used cells, can be a way of creating new value chains in Cote d'Ivoire.

Budget savings and reallocation to web-conferencing: if travel and in-person meetings were to be suspended for several months (or even years) due to COVID-19 restrictions, it is likely most of the project's meetings, trainings and workshops would have to be conducted virtually. While setting up the modalities and building stakeholders' capacity for virtual meetings has a cost, savings made from the unused traveling and venue costs budgeted as part of the GEF grant could compensate for this. Whenever relevant and after consultation with the project's steering committee, part of travel and meeting costs could be re-directed by the PMU to develop/enhance web-conference capabilities that are best fit to the country's COVID-19 restrictions.

Furthermore, reducing traveling to a minimum can also lead to considerable reduction of travel-related CO_2 emissions. Since the world has already learned during the first months of the pandemic to make more use of virtual meeting and exchange opportunities, the PMU will assess if viable alternatives are available to traveling and try to reduce traveling to the necessary minimum. Potentially saved costs will be used to develop/enhance web-conference capabilities and/or enhance selected project activities where this makes sense.

Another potential benefit of switching to on-line meetings, webinars and workshops is that it can allow for a higher and broader participation than physical in-person meetings, which are very often limited to a maximum amount of participants because of budgetary constraints (i.e. travel, venue and catering costs) and room capacity.

6. Institutional Arrangement and Coordination

- Institutional arrangements:

Describe the institutional arrangement for project implementation.

This project is funded by the GEF and co-financed by the Ministry of Environment and Sustainable Development (MINEDD), the Ministry of Transport (MOT) and the Ministry of Petroleum, Energy and Renewable Energies (MPEER). UNEP will be acting as the GEF Implementing Agency. The MINEDD will be the project's Executing Agency.

Given the double focus of the project in transport and environment as well as the joint implementation with the AUMP, the MINEDD and MOT have agreed on a collaborative implementation arrangement. This collaboration is based on four main pillars:

1) The embedding of the support to the establishment of a pilot fleet of electric taxis and minibuses (i.e. Outputs 2.1-2.3) executed by MOT under the AUMP into the logical framework of this GEF-funded project,
2) the distribution of responsibilities for each component between both Ministries on the level of the implementation of activities (i.e. the MINEDD will lead all activities under Components 1 and 4 and the MOT all activities under Components 2 and 3),
3) the co-chairing of the Project Steering Committee (PSC), and,
4) the establishment of a Joint Implementation Unit (JIU) to ensure close coordination between the two initiatives.

While the Implementing Agency (as meant by WB terminology) and the Project Coordination Unit of the AUMP are entirely governed under the World Bank-funded AUMP, they become key collaboration partners of this GEF-funded project and assume different roles and responsibilities. These will be coordinated in the JIU. Further details on the functioning of the JIU may be found in **Annex K**.

The overall implementation structure is illustrated in the organogram below.

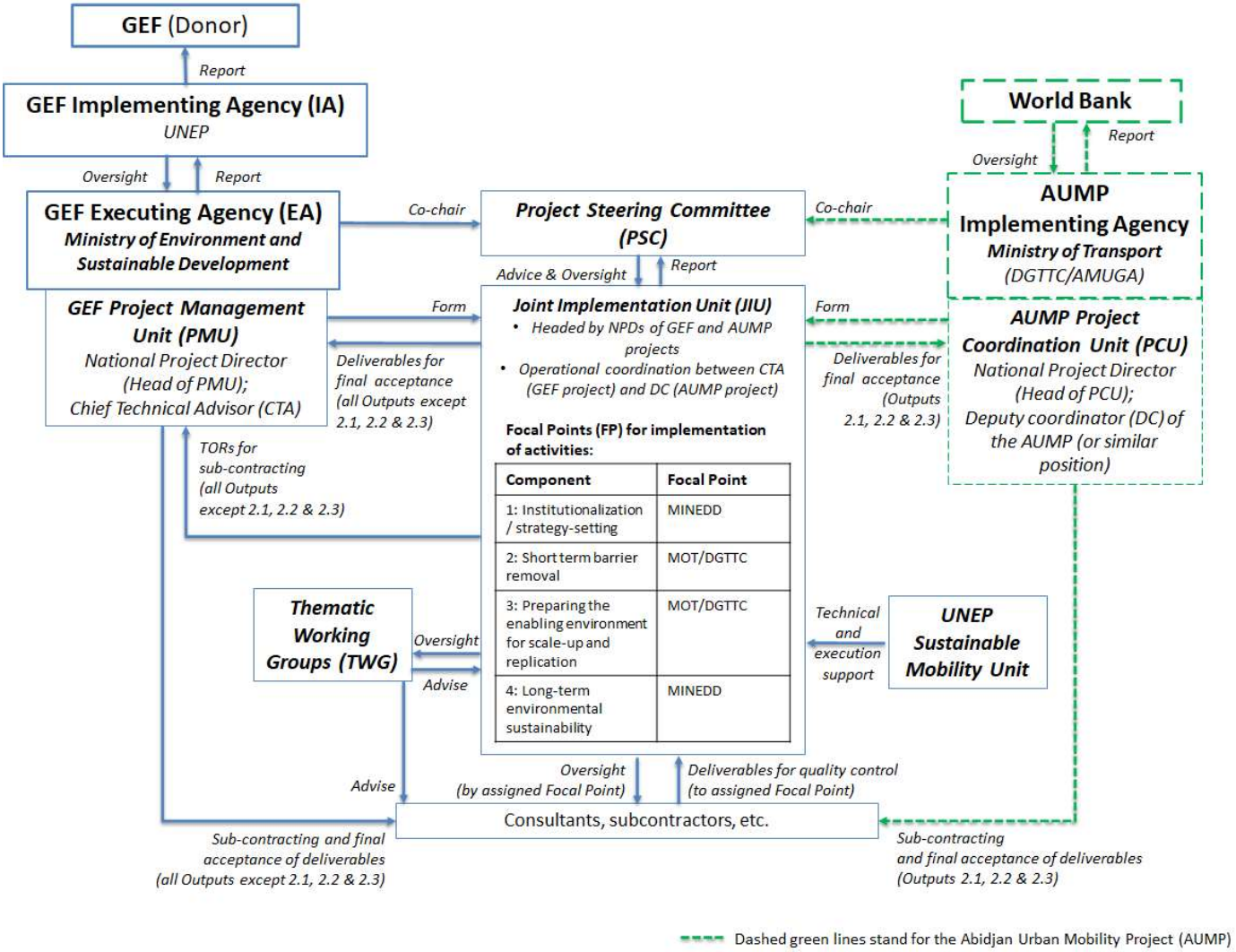


FIGURE 13: PROJECT ORGANIZATION CHART

The main project bodies of this GEF-funded initiative are the following (refer to Annex K for more details):

A **Project Steering Committee (PSC)** will be established to provide overall guidance and oversee the progress and performance of the project as well as to enhance and optimize the coordination and contribution with various project partners. The PSC will be co-chaired by the National Project Director (NPD) of this project (MINEDD) and the National Project Director of the AUMP (MOT/DGTTC). It will convene at least three times per year. It will include representatives from the following Ministries and organizations:: the Ministry of Environment and Sustainable Development, the Ministry of Transport, the Ministry of Petroleum, Energy and Renewable Energies, the Ministry of Economy and Finance, the Secretary of State to the Prime Minister in charge of Budget and State Portfolio, the Autonomous District of Abidjan (DAA), the Employers Federation of Road Transport Companies (*Haut Conseil du Patronnat des Entreprises de Transports Routiers de Côte d'Ivoire*), ANARE-CI, CI-ENERGIE, CIE, ECOWAS and the Africa Support and Investment Platform Coordinator of the Global e-mobility project. Since the AUMP already has established a similar PSC, this project can build upon this existing project body which will strongly increase implementation efficiency. Please note that members of the PSC will also be members of the National E-mobility Coordination Body to be established under Component 1 of the project. The Coordination Body however will involve a wider range of stakeholders from the public and private sector.

A **Project Management Unit (PMU)** will be established within the MINEDD to manage day-to-day operation of the GEF project. The PMU will be headed by the National Project Director (NPD) and will include the Chief Technical Advisor (CTA).

Since this project will be implemented in parallel to and in close coordination with the AUMP, the MINEDD and the MOT will establish a **Joint Implementation Unit (JIU).** The JIU will be headed by the National Project Directors of both projects. On the operational level, the MOT will nominate a person (e.g. a deputy coordinator of the AUMP, or similar position) who will act as direct counterpart to MINEDD's CTA in the JIU. The JIU's main purpose is to ensure regular communication and coordination between the two projects on the level of the implementation of activities.

The implementation of activities under each project component will be shared between the two Ministries as follows: The implementation of Components 1 and 4 will be led by the MINEDD and Components 2 and 3 by the MOT. In this context, the MINEDD will be referred to as **Focal Point for Components 1 and 4 and the MOT as Focal Point for Components 2 and 3** (The term Focal Point, or Point Focal in French, was agreed upon by both Ministries and stands for the entity that leads a Component. It shall not be confused with the GEF Focal Point.). Note that MINEDD as Executing Agency for the GEF will remain accountable to GEF/UNEP for all project results, except for Outputs 2.1, 2.2 and 2.3 which will be implemented by MOT under the AUMP. (Refer to Annex K for a detailed description of the responsibilities of both Ministries in this collaborative setup.)

Ad-hoc **Thematic Working Groups (TWG)** will be formed as needed to interact with stakeholders at institutional level and support the implementation of the project components. The TWGs will meet regularly during project implementation to work inter alia on the following topics:

- TWG 'Feasibility assessment, business modeling and financing': The objective of this TWG is to identify technically and economically feasible opportunities for electrifying taxis, minibuses and/or SOTRA buses. It will support the development of viable business models and finance schemes, propose financing opportunities and quantify potentially required financial subsidies.
- TWG 'Technical regulations and standards for EVs and EVSE': This TWG will take care of the definition of technical regulation and standards for EVs and charging infrastructure.
- TWG 'Charging infrastructure installation planning and grid integration analysis': This TWG will develop a plan for the setup of charging infrastructure in the city of Abidjan and support the work to identify possible distribution grid constraints.
- TWG 'Renewable Energies': This TWG will elaborate a proposal to amend the National Renewable Action Plan in view of the uptake of e-mobility in the public transport sector. It will also support the investigation of options for the direct purchase of renewable power for charging EVs and help identifying RE projects where RE Power Purchase Agreements could be applied.
- TWG 'E-waste management': This TWG will work on the integration of used EV batteries into the existing e-waste management scheme but also help identifying options for the re-use and/or recycling of batteries.

Finally, the Ministry of Environment and Sustainable Development (MINEDD) and Cote d'Ivoire's GEF OFP have requested the UNEP Sustainable Mobility Unit (SMU) to provide execution support, which is described in the letter attached in **Annex N-2**.

Coordination with other initiatives:

Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives. Please identify other relevant ongoing (GEF) projects and present the possibilities of coordinating with the project. This should include global or regional GEF projects.

This GEF project will collaborate very closely with the AUMP, the institutional collaboration arrangements have been discussed in detail above.

The AUMP consist of four main components as shown in the following table. Expected synergies through the cooperation are shown in this table as well.

Component	Sub-Component	Outputs under the LogFrame of the GEF project executed by the AUMP	Comments / Synergies
A: Implementation of the East-West Bus Rapid Transit (BRT) corridor between Yopougon and Bingerville	A1: Implementation and operationalization of the BRT system along the corridor between Yopougon and Bingerville	N/A	Buses operating the BRT system will be electric. Together with the electric pilot fleet on the feeder lines (Sub-Component C2, Output 2.2), it is very likely that this integrated approach will trigger very high attention by public transport sector stakeholders, policy-makers and the general public beyond Abidjan and even beyond Côte d'Ivoire.
	A2: Integration of the BRT with the existing public transport network and in the urban environment	N/A	
	A3: Modifying Abidjan's 4th bridge built as part of the PTUA	N/A	
B: Strengthening of SOTRA and the restructuring of the feeder system to mass transit lines	B1. Restructuring the public bus network and strengthening SOTRA	N/A	The AUMP ensures that feeder lines serving the BRT lines (SOTRA and artisanal transport operators) are well organized and required investment is carried out so that vehicles (incl. the new electric taxis and minibuses) can be operated efficiently. These improvements in combination with modern e-mobility are likely to be perceived as a major step towards a low-carbon, environmentally friendly and more efficient public transport. The GEF project itself will add value to the AUMP by promoting e-mobility to SOTRA.
	B2: Improvement of feeder roads and street furniture and investments for public transport	N/A	
C. Organizing the artisanal transport sector and last-mile accessibility	C1: Support for the organization of artisanal public transport service and last-mile accessibility	N/A	
	C2: Renewal of the taxi and minibus fleet	O 2.1: Feasibility study: Technically and economically feasible opportunities for the electrification of taxis and minibuses serving feeder lines along the Yopougon-Bingerville BRT corridor in Abidjan are identified, incl. the assessment of charging infrastructure investment needs. O 2.2: Support to the establishment of a pilot fleet of electric taxis and minibuses serving the Yopougon-Bingerville BRT corridor in Abidjan and charging infrastructure through CI's fleet renewal mechanism FDTR.	First of all, the significant contribution by the AUMP in terms of incentives to invest in electric public transport modes will facilitate the piloting of a very sizeable pilot fleet, creating significant visibility and opportunity to test the fleet under real-life conditions. As incentives (i.e. electrification bonus / scrapping premium) will be provided through the already existing FDTR, no new mechanism must be developed or established. This will significantly reduce the risk of failure and offers great efficiency gains.
D. Human capital development and operational support	D1: Skills development in the urban transport sector	O 2.3: Staff that will operate electric vehicles and associated charging infrastructure (i.e. drivers and mechanics) will be trained on specifics of electric mobility.	While the AUMP will train EV operators on specifics of electric mobility, it will also support the professionalization of drivers and entrepreneurs in general. Structures to

			organize trainings can be used leading to additional efficiency gains.
	D2: Implementation of a social protection scheme for workers of the artisanal public transport sector	N/A	N/A
	D3: Project management	N/A	N/A

An MDB-implemented project is the country child project of the GEF6 Sustainable Cities Integrated Approach Pilot (IAP) Program (Abidjan Integrated Sustainable Urban Planning and Management) which is implemented by the African Development Bank (AfDB). This project is already progressed in the implementation and associated with a larger AfDB loan that is used for infrastructure improvements in Abidjan. While the direct potential for synergistic implementation is low, AfDB's headquarters are in Abidjan so that coordination and collaboration with AfDB can be ensured in a highly efficient manner. The GEF 7 child project might contribute to the air quality objectives of the GEF 6 project and might benefit from any improvements in the infrastructure that is in place.

Intricately linked to the AUMP is the Abidjan Urban Transport Project (AUTP) which is also funded by the African Development Bank (AfDB). Here, AfDB invests in urban transport infrastructure, mainly urban expressways, intersections, a bridge, etc. The BRT line that will be implemented in the AUMP will be integrated into the Abidjan 4th bridge and expressway in Youpogon which is built by AfDB. Since the AUTP is working on infrastructure, there is no direct link to this GEF project. However, the existing links between the GEF, WB and AfDB projects ensure that the initiatives can coordinate their activities well. The PMU will monitor the AfDB funded projects very closely and ensure that there is a regular exchange on the projects' progress.

Section 2 of this paper already discusses many ongoing initiatives, including Road Maps and Master Plans on Urban Mobility for Abidjan and Sustainable Mobility in Côte d'Ivoire. The purpose of the National E-Mobility Coordination Body established in Component 1 is to provide a platform where the progress on each of these will be shared across the stakeholder groups to keep the information flow going. This will allow to harmonize and coordinate the activities. The responsibility for facilitating this harmonization of activities will lie with the Chair of that Board, supported by the PMU of this project, as well as the PMUs of the other projects.

UNEP is supporting Côte d'Ivoire, one of 40 partner countries, in introducing policies and incentives for the introduction of privately-owned light duty vehicles through the Global Fuel Economy Initiative (GFEI). The MINEDD is the Executing Agency of the GEF-funded Global Fuel Economy Initiative (GFEI) in CI. The GEI supports vehicle fuel economy activities and contributed to the development of the regulation to limit the maximum age of imported vehicles in CI. Through GFEI, cooperation between government agencies of the transport and environment sector has been established and experience in regulating the transport sector was gained. The GFEI is thus an excellent starting point to expand and deepen cooperation and to integrate e-mobility in transport sector regulation.

It is important to highlight that synergies with initiatives supporting renewable energy deployment are also of relevance. The GoCI has established a project pipeline for solar PV, biomass and hydropower projects (see the list of the most advanced renewable energy projects in section ii.2)). Financing of these projects is typically supported by development banks. One example is the International Finance Cooperation's (IFC) 'Scaling Solar' programme. This initiative aims at making "privately funded grid-connected solar projects operational within two years and at competitive tariffs." Using a "one stop shop" approach, the programme helps in project assessment, tendering, and provides fully developed templates for bankable project documents and financing at preferred costs. In October 2019, IFC was engaged by the GoCI as lead transaction advisor for a 60MW solar project.[73] The project will reach out to this and other renewable energy initiatives to identify opportunities for linking renewable energy generation with the transport sector. Through this GEF project's approach to promote renewable electricity to fuel EVs, additional demand may be created in the renewable energy market, and therefore potentially create new funding opportunities for banks and investors.

[73] Source: https://www.scalingsolar.org/

The European Union is providing financial support to the Governments Energos 2 programme which intends to build the renewable energy sector. A call for proposals for a feasibility study has been published last year which will identify renewable energy expansion options between now and 2021. This will be closely monitored by the PMU in close coordination with the Ministry of Petroleum, Energy and Renewable Energies under Component 4 to identify opportunities for the securing of renewable power supply for the electric transport sector.

Another relevant cross-cutting project is the GCF funded 'Transforming Financial Systems for Climate'. The project, which is executed by the *Agence Française de Développement* (AFD), began in October 2018 and provides loans and technical assistance in 17 developing countries, incl. Côte d'Ivoire. The project's objective is to scale up climate finance and strengthen the capacities of local partners in climate-related sectors, incl. renewable energies, energy efficiency and climate resilience. Although the project is not explicitly targeting e-mobility as investment opportunity, it has included measures in urban transport as climate change mitigation option in an indicative list that may evolve depending on local needs. The proposed project will investigate opportunities for scaling up the financing of e-mobility and renewable energies that could be offered through this GCF initiative. Furthermore, it will be verified if TA activities could complement the TA of the GEF project. Exchange can be established easily since the Bureau of Climate Change (BCC) within the Ministry of Environment and Sustainable Development is the GCF's National Designated Authority in CI.

In the scoping mission, all relevant ministries and donors were contacted and debriefed on the proposed initiative. This will be ongoing throughout implementation of the project.

7. Consistency with National Priorities

National Development Planning

The planned GEF project will reinforce national development priorities defined in the National Development Plan (PND by its French acronym) 2016-2020. Concretely, the project will contribute to the following main development pillars as defined in the PND as follows:

- The quality of the institutions and governance will be enhanced by creating new cross-sectoral institutional networks and capacity building.
- The capacities of women and men to build a wealthy emerging country will be enhanced in the public transport sector.
- Changes in modes of production and consumption to build the emergence of the country will be sustained through the switch to e-mobility which also offers opportunities to build up new industries, for instance in EV assembly, the renewables sector, etc.
- The development of strategic infrastructures as a lever of emergence and in line with the principles of environmental sustainability will be directly supported by introducing modern and clean electric public transport modes.
- The advantageous insertion in networks of regional and global exchanges will be directly leveraged by the integration of this project into the E-Mobility Global Programme and regional activities (e.g. the Africa Investment and Support Platform and working groups).

The PND translates into several national strategies related to the transport sector and energy. Theses comprise the Urban Transport Master Plan for Greater Abidjan (SDUGA), the Draft Road Map for Sustainable Mobility in Côte d'Ivoire and the National Renewable Energy Action Plan (PANER). How the project enhances these strategies has been discussed above.

Nationally Determined Contributions (NDC):

This project strengthens CI's ambitious goals defined in the Nationally Determined Contributions (NDCs) of 2015. According to the NDCs (and its underlying National Strategy for Combating Climate Change 2015-2020), Côte d'Ivoire aims at emitting about 28% (ca. 10 Gt, of which 2 Gt are coming from the transport sector) less greenhouse gases compared to a business-as-usual scenario of about 35Gt. This project directly supports the planned measures for the transport sector as proposed in the NDCs. These are i) the development of low-carbon transport offers, ii) the facilitation

of the purchase of environmentally friendly vehicles and iii) scrapping schemes for the most polluting vehicles. In the field of renewable energies, the GoCI has set a target to generate 42% of electricity from renewable energy sources (i.e. 27% hydropower + 17% biomass and solar) by 2030 through its National Renewable Energy Action Plan 2016-2020/2030 which is cited in the NDCs. By its approach to promote the development of renewable energies as main power source for e-mobility, the project will directly support this objective.

Sustainable Development Goals:
The proposed project will contribute to achieving several Sustainability Development Goals (SDG) as shown in the following table.

Goal	Goals and targets	Indicators
SDG 3 – Ensure healthy lives and promote well-being for all at all ages	3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination	3.9.1 Mortality rate attributed to household and ambient air pollution
SDG 11 – Make cities and human settlements inclusive, safe, resilient and sustainable	11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons	11.2.1 Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities
	11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management	11.6.1 Proportion of municipal solid waste collected and managed in controlled facilities out of total municipal waste generated, by cities 11.6.2 Annual mean levels of fine particulate matter (e.g.PM2.5 and PM10) in cities (population weighted)
SDG 13 – Take urgent action to combat climate change and its impacts	13.2 Integrate climate change measures into national policies, strategies and planning	13.2.1 Number of countries with nationally determined contributions, long-term strategies, national adaptation plans, strategies as reported in adaptation communications and national communications 13.2.2 Total greenhouse gas emissions per year

UNDAF:
The project is also aligned with the "Sustainable development" component of Cote d'Ivoire's UNDAF 2017-2020, which states that "By 2020, governments implement policies that ensure sustainable production and consumption, income generation and resilience to climate change for the most vulnerable populations."

8. Knowledge Management

Elaborate the "Knowledge Management Approach" for the project, including a budget, key deliverables and a timeline, and explain how it will contribute to the project's overall impact.

Building up knowledge and skills is at the core of the proposed project. The knowledge management approach encompasses the following main elements:

- Capacity building of government and private sector stakeholders through participation in events and trainings of the E-Mobility Global Programme
- Building up of knowledge among transport sector stakeholders through their active participation in the conceptual work of the project

- Using findings and lessons learned obtained through the data collection, reporting and analysis of EV operation in Abidjan to i) build know-how among fleet operators, drivers and maintenance staff and ii) disseminate information to demonstrate the technical and economic viability of the technology
- Skilling up drivers and mechanics in trainings to ensure safe, efficient and effective operation of electric taxis and/or minibuses
- Know-how and knowledge transfer to other Ivorian cities and other countries

The following table provides further details about the chosen knowledge management approach, incl. key deliverables, a timeline and budget.

Components	Objectives	Key deliverables	When?	Budget
Component 1	Capacity building of government and private sector stakeholders through participation in events and trainings of the E-Mobility Global Programme	Participation of stakeholders in: i) Africa Support and Investment Platform events ii) Africa platform meeting on financing/marketplace iii) Africa electric mobility training iv) Africa training on e-buses v) Africa platform replication event	Years 1-3	US$ 45,400
Components 2-4	Building up of knowledge among transport sector stakeholders through their active participation in the conceptual work of the project. Active participation will be achieved by involving thematic working groups (TWG) and relevant stakeholders early and throughout the conceptual works. This will require that TWG members are briefed and consulted regularly in face-to-face meetings, online conferences, bilateral calls etc. International consultants will be linked up with TWG members early to ensure adequate information flow.	Knowledge will be gained from the development of the following products: i) Technical and economic feasibility study for e-mobility in Abidjan's public transport modes serving BRT feeder lines ii) Business model and finance scheme design Preparation and implementation of the Pilot Investment in about 200-300 EV along the BRT corridor, incl. design of the scrapping and electrification premium and its integration in the fleet renewal fund FDTR; Preparation of an investment plan for electrifying SOTRA buses iii) Development of technical regulation and standards for EVs and EVSE iv) Charging infrastructure installation plan development and distribution grid analysis v) Alignment of renewable power capacity targets with e-mobility projections and development of Green Power Purchase Agreements for public transport vi) Investigation of options for 2nd life use of used EV batteries and review of e-waste management regulation	Throughout the project	Since knowledge will be gained through participation in the several activities, there is no specific budget for KM
Component 2	Use findings and lessons learned obtained through the data collection, reporting and analysis of EV operation in Abidjan to i) build know-how among fleet operators, drivers and maintenance staff and ii) disseminate information to demonstrate the technical and economic viability of the technology. Information obtained will be used not only locally	New knowledge and know-how will be gained through: i) EV monitoring system that will be integrated and operated together with fleet operators ii) At least bi-monthly analysis of the gathered data in a technical report to be shared with operators, PMU. iii) In case of encountered problems: immediate reporting to fleet operators and provision of support to solve the problem; all activities in this context will be logged, incl. information about if problems were solved or not iv) Feeding of all information into driver/mechanics training activities (see below)	Years 2-3 (in dependence of the actual purchase date of electric taxis/ minibuses)	Since knowledge will be gained through participation in the several activities, there is no specific budget for KM

	but also with the Africa Working Group and the E-Mobility Global Programme.	One intermediate and one final report on findings and lessons learned during EV monitoring to inform stakeholders about the technical/economic viability of the used equipment v) Promoting the results on the project website and through press and media work		
	Skilling up drivers and mechanics in trainings to ensure safe, efficient and effective operation of electric taxis and/or minibuses	i) Development of training material (incl. training plans, interactive hands-on exercises, presentations, etc.) for both driver and mechanics trainings ii) Training of trainers for local trainers who will train drivers and mechanics iii) Implementation of drivers and mechanics trainings iv) Evaluation of all trainings by participants and communication of findings to trainers for training revision, if required	Years 2-3 (in dependence of the actual purchase date of electric taxis/minibuses)	US$ 100,000 (executed through AUMP, co-financing by MOT)
Overall project	Know-how and knowledge transfer to other Ivorian cities and other countries	i) Transfer of all project results to UNEP and the Global Programme and the Support and Investment Platform ii) Collaboration and regular exchange with other (donor-funded) transport and energy sector initiatives in CI iii) Communicating results to the E-Mobility Global Programme and the Africa Support and Investment Platform (incl. participation in the Africa platform replication event)	i-ii) Throughout the project iii) Year 4	Included in project management

These knowledge management activities will enhance the impact of the project because they empower stakeholders to take informed decisions, create a strong sense of ownership by active participation in the conceptual work, anchor knowledge and skills in the country and ensure that best practices are shared regionally and internationally.

9. Monitoring and Evaluation

Monitoring and Evaluation (M&E) activities and related costs are presented in the costed M&E Plan (Annex J) and are fully integrated in the overall project budget.

The project will comply with UNEP standard monitoring, reporting and evaluation procedures. Reporting requirements and templates are an integral part of the legal instrument to be signed by the Executing Agency and the Implementing Agency.

The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Project Results Framework presented in Annex A includes SMART indicators for each expected outcome as well as end-of-project targets. These indicators along with the key deliverables and benchmarks included in Annex L will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification to track the indicators are summarized in Annex A.

The M&E plan will be reviewed and revised as necessary during the project Inception Workshop (IW) to ensure project stakeholders understand their roles and responsibilities vis-à-vis project monitoring and evaluation. Indicators and their means of verification may also be fine-tuned at the inception workshop. General project monitoring is the responsibility of the Project Management Unit (PMU) but other project partners could have responsibilities in collecting specific information to track the indicators. It is the responsibility of the Chief Technical Advisor to inform UNEP of any delays or difficulties faced during implementation so that the appropriate support or corrective measures can be adopted in a timely fashion.

The project Steering Committee (PSC) will receive periodic reports on progress and will make recommendations to UNEP concerning the need to revise any aspects of the Results Framework or the M&E Plan. Project oversight to ensure that the project meets UNEP and GEF policies and procedures is the responsibility of the UNEP Task Manager. The UNEP Task Manager will also review the quality of draft project outputs, provide feedback to the project partners, and establish peer review procedures to ensure adequate quality of scientific and technical outputs and publications.

Project supervision will take an adaptive management approach. The UNEP Task Manager will develop a project Supervision Plan at the inception of the project, which will be communicated to the Project Management Unit and the project partners during the Inception Workshop. The emphasis of the Task Manager's supervision will be on outcome monitoring but without neglecting project financial management and implementation monitoring.

Progress vis-à-vis delivering the agreed project global environmental benefits will be assessed with the Steering Committee at agreed intervals. Project risks and assumptions will be regularly monitored both by the Project Management Unit, the project partners and UNEP. Risk assessment and rating is an integral part of the Project Implementation Review (PIR). The PIR will be completed by the Chief Technical Advisor and ratings will be provided by UNEP's Task Manager. The quality of project monitoring and evaluation will also be reviewed and rated as part of the PIR. UNEP's Task Manager will have the responsibility of verifying the PIR and submitting it to the GEF. Key financial parameters will be monitored quarterly to ensure cost-effective use of financial resources.

Since this is a Medium-Size Project (MSP) of less than 4 years of duration, no Mid-Term Evaluation (MTE) will be undertaken. However, if the project is rated as being at risk or if deemed needed by the Task Manager, he/she may decide to conduct an optional Mid-Term Review (MTR). This review will include all parameters recommended by the GEF Evaluation Office for Terminal Evaluations (TE) and will verify information gathered through the GEF tracking tools, as relevant. The review will be carried out using a participatory approach whereby parties that may benefit or be affected by the project will be consulted. Such parties were identified during the stakeholder analysis (see section 2 above). Members of the project Steering Committee could be interviewed as part of the MTR process and the National Project Director and Chief Technical Advisor will develop a management response to the review recommendations along with an implementation plan. Results of the MTR will be presented to the Project Steering Committee. It is the responsibility of the UNEP Task Manager to monitor whether the agreed recommendations are being implemented.

In-line with the with UNEP Evaluation Policy and the GEF Evaluation requirements, the project will be subject to an independent Terminal Evaluation. The Evaluation Office will be responsible for the Terminal Evaluation (TE) and will liaise with the project manager throughout the process.

The TE will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. The project performance will be assessed against standard evaluation criteria using a six-point rating scheme. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP staff and implementing partners. The direct costs of the evaluation will be charged against the project evaluation budget. The TE will typically be initiated after the project's operational completion. If a follow-on phase of the project is envisaged, the timing of the evaluation will be discussed with the Evaluation Office to feed into the submission of the follow-on proposal.

The draft TE report will be sent by the Evaluation Office to project stakeholders for comment. Formal comments on the report will be shared by the Evaluation Office in an open and transparent manner. The final determination of project ratings will be made by the Evaluation Office when the report is finalized.

The evaluation report will be publicly disclosed and will be followed by a recommendation compliance process. The evaluation recommendations will be entered into a Recommendations Implementation Plan template by the Evaluation Office. Formal submission of the completed Recommendations Implementation Plan by the project manager is required within one month of its delivery to the project team. The Evaluation Office will monitor compliance with this plan every six months for a total period of 12 months from the finalization of the Recommendations Implementation Plan.

The GEF Core Indicator Worksheet is attached as Annex F. It will be updated at mid-term and at the end of the project and will be made available to the GEF Secretariat along with the project PIR report. As mentioned above, the TE will verify the information of the tracking tool.

The direct costs of reviews and evaluations will be charged against the project evaluation budget. A summary of M&E activities envisaged is provided in Annex J. The GEF contribution for this project's M&E activities is US$ 30,000.

10. Benefits

Describe the socio-economic benefits to be delivered by the project at the national and local levels, as appropriate. How do these benefits translate in supporting the achievement of global environment benefits (GEF Trust Fund) or adaptation benefits (LDCF/SCCF)?

The electrification of the transport sector will lead to several employment opportunities, ranging from the maintenance and repair of EVs, over the operation of charging infrastructure, to the recycling of used vehicle batteries. It will also spur the development of new areas of business, mainly related to the import of electric vehicles, batteries and other related technological equipment. Another chance lies in the possibility for setting up assembly lines for EVs in the country.
The promotion of a coordinated development of EVs and renewable power generation capacities is likely to accelerate the development of this sector, also creating new businesses and associated jobs.

Furthermore, by modernizing the public transport system in Abidjan will benefit the country's economy in general. The GEF e-mobility project together with the AUMP will enhance urban mobility services, making public transport faster, more efficient and reliable. This is important in a city like the Greater Abidjan Area which is the powerhouse of the Ivoirian economy where 60% of the country's GDP is generated. A modern public transport system makes jobs and social services more accessible and reduces transportation costs. The activities of the GEF e-mobility project and the AUMP will thus contribute to Abidjan's economic and social welfare and increase its competitiveness.

While air quality monitoring measures as well as studies on the health effects of air pollution in sub-Saharan Africa are lacking, the combustion of fuels and ambient air pollution are a cause for several health risks in the region. A summary of study outcomes suggests, that apart from respiratory outcomes (asthma, wheeze), health risks like stroke, physiological (depression) and adverse birth outcomes (low birth weight, preterm births) and higher mortality can be attributed to poor air quality in sub-Saharan Africa.[74] Old cars, poor vehicle maintenance and poor infrastructure resulting in increased traffic congestion make the main roadways hotspots of increased air pollution, harming public health and, as a consequence, economic development.[75] The introduction of electric transport modes will thus help alleviating these problems and make Abidjan a healthier and economically stronger city.

The preferred use of renewable energies to fuel new EVs rather than thermal electricity will also contribute to preserving CI's own oil and natural gas resources.

Last, but not least, the project will increase parity between women and men. Women will have a stronger say in public transport matters, more women will benefit from capacity building and training measures and new employment opportunities and they will travel safer.

[74] Source: Coker, E., Kizito, S (2018). A Narrative Review of the Human Health Effects of Ambient Air Pollution in Sub-Saharan Africa: An Urgent need for Health Effects Studies. Int. J. Environ. Res. Public Health 2018, 15(3), 427. https://www.mdpi.com/1660-4601/15/3/427
[75] Source: Sylla et al. (2017). Air Pollution Related to Traffic and Chronic Respiratory Diseases (Asthma and COPD) in Africa. Health, 9, 1378-1389. https://www.scirp.org/pdf/Health_2017092214183018.pdf

PART III: CERTIFICATION BY GEF PARTNER AGENCY(IES)

GEF Agency(ies) certification

This request has been prepared in accordance with GEF policies and procedures and meets the GEF criteria for CEO endorsement under GEF-7.

Agency Coordinator, Agency Name	Signature	Date (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Kelly West, Senior Programme Manager & Global Environment Facility Coordinator Corporate Services Division UNEP			Julien Lheureux Task Manager Climate Change Mitigation Unit UNEP	+254 20 762 5452	julien.lheureux@un.org

PART IV: ANNEXES

The CEO Endorsement Document annexes may be found in the following pages.

ANNEX A: PROJECT RESULTS FRAMEWORK

Project Objective	Objective level Indicators	Baseline	Mid-Point Target (if applicable)	End of project Target	Means of Verification	Assumptions & Risks	UNEP MTS reference
To mitigate GHG emissions in Cote d'Ivoire by accelerating the introduction of electric mobility through revision of the policy and institutional framework; training and capacity building; demonstration of electric vehicles; development of finance schemes and business models; private sector engagement; and upscaling and replication.	Indicator A: Greenhouse Gas Emissions Mitigated (metric tons of CO2e)	Baseline A: 0	Mid-point target A: n.a.	End-of-project target A: Direct emissions mitigated: 82,5574 tCO2 (Period 2021-2036). Indirect emissions mitigated: 148,944 tCO2 (Period 2021-2036)	- Calculation of GHG emissions based on actual power consumption of the electrical fleet and applicable emission factor.	- Existence of a complete and sufficiently attractive framework that enables the uptake of e-mobility in the public transport sector	UNEP MTS 2018-2021 Climate Change Objective: Countries increasingly transition to low-emission economic development and enhance their adaptation and resilience to climate change
	Indicator B: Energy saved (MJ)	Baseline B: 0	Mid-point target B: n.a.	End-of-project target A: Direct energy saved: 866,109,256 MJ (Period 2021-2036). Indirect energy saved: 1,526,900,347 MJ (Period 2021-2036)	- Calculation of saved energy based on the actual power consumption of the electrical fleet and input of primary energy for electricity generation.	- Existence of a complete and sufficiently attractive framework that enables the uptake of e-mobility in the public transport sector	

Project Outcomes	Outcome level Indicators	Baseline	Mid-Point Target (if applicable)	End of project Target	Means of Verification	Assumptions & Risks	MTS Expected Accomplishment
Outcome 1: Government of Côte d'Ivoire establishes an institutional framework and endorses a gender sensitive national strategy for the promotion of electric mobility in public transport to implement the Draft Road Map for sustainable mobility	Indicator 1.1: A national coordination body to support and promote the uptake of low-carbon electric mobility is established, formalized by GoCI and operational.	Baseline 1.1: No	Mid-point target 1.1: Yes. - The coordination body is established and includes all key institutions. It has formulated shared goals and defined roles and responsibilities of all members.	End-of-project target 1.1: Yes - The coordination body remains operational and has agreed on post-project continuation of efforts to promote e-mobility. - The national coordination body has at least 30% female members.	- Review of the body's activities (meeting summary reports) - Reports of the coordination body's querterly meetings - Gender-disaggregated member and meeting participation lists - Written agreement of cooperation - Written post-project action plan	- There is a mandate to expand ongoing national initiatives for the increase of energy efficiency in transport to e-mobility. - Members are provided with sufficient resources to participate in activities. - Willingness to cooperate.	Expected Accomplishment (b): Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies
	Indicator 1.2: # of Ministries endorsing the gender sensitive national strategy to promote low-carbon electric mobility in urban public transport	Baseline 1.2: 0	Mid-point target 1.2: The respective Ministries are discussing the draft strategy. The Gender Units (*Cellules Genre*) of each Ministry are actively involved in the discussions.	End-of-project target 1.2: 4, out of which: Ministry of Transport, Ministry of Environment, Ministry of Energy and Ministry of Finance.	- Public announcements by the respective Ministries - Public availability of the strategy - Government gazette and other publications	- Conflicting interests making it impossible to find consensus or required compromises that render the strategy and action plan too vague. - Lack of interest by the Ministries although benefits are clear. - Lack of knowledge of the subject matter.	
	Indicator 1.3: # of reports on best practices and lessons learned on low carbon electric mobility shared with the global programme by the national coordination body	Baseline 1.3: 0	Mid-point target 1.3: n.a.	End-of-project target 1.3: 1	- Lessons learned and best practices report produced by the national coordination body (deliverable 1.1.5)	- Best practices and lessons learned are generated early enough so that they can be fed into/included in the support activities by the global programme.	
Outcome 2: Demonstrations provide evidence of technical, financial and environmental sustainability of EVs and enable public and private sector stakeholders to plan for the scale-up of low-carbon electric mobility in Côte d'Ivoire	Indicator 2.1: # of new electric taxis and/or mini-buses meeting the technical regulations recommended by the project	Baseline 2.1: No electric vehicles in the public transport sector of Abidjan, except for a small fleet of 3 minibuses at the University Félix Houphouët-Boigny d'Abidjan	Mid-point target 2.1: n.a.	End-of-project target 2.1: At least 200 electric taxis and/or minubuses	- Project monitoring on the country level - Technical specifications of the purchased vehicles	- Fleet operators can be convinced and are sufficiently solvent to purchase EVs - All permissions to operate EVs granted - The scrapping and electrification premium and a soft loan for the purchase of EV has been put in place through WB AUMP project; Financial incentives are high enough to trigger investments - Charging infrastructure is available - EV costs continue to decrease - EV manufacturers actively engage in CI	Expected Accomplishment (b): Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies
	Indicator 2.2: # of up-scaling plans endorsed that incorporate lessons learned from the demonstrations	Baseline 2.2:	Mid-point target 2.2: n.a.	End-of-project target 2.2: 2, out of which: - The electrification investment plan for SOTRA feeder-line buses (to be endorsed by Ministry of Transport & SOTRA) - The charging infrastructure installation plan for large-scale introduction of EVs in Abidjan's public transport (to be endorsed by Ministry of Energy, CI-ENERGIE and CIE)	- Government gazette and other publications - Electrification investment plan document - Charging infrastructure installation plan document	- Commitment of the respective Ministries and agencies (SOTRA, CI-ENERGIE and CIE) to support the electrification of public transport modes	

Project Outcomes	Outcome level Indicators	Baseline	Mid-Point Target (if applicable)	End of project Target	Means of Verification	Assumptions & Risks	MTS Expected Accomplishment
Outcome 3: Government of Côte d'Ivoire adopts financial incentives and technical standards to promote investments in low-carbon electric mobility in public transport.	Indicator 3.1: A set of fiscal policies, financial subsidies and/or favorable electricity tariffs is adopted by the government facilitating the economically viable operation of EVs and charging infrastructure in at least two public transport sub-sectors (taxis, minibuses or buses).	Baseline 3.1: No.	Mid-point target 3.1: Draft fiscal policy/regulation and/or draft tax reforrm proposal are prepared.	End-of-project target 3.1: Yes. (to be adopted by the Ministry of Energy, the Ministry of Finance and ANARE-CI)	- Fiscal policy review; review of financial incentives; review of electricity tariffs for EV charging - Economic feasibility studies as reference point - Records of cases where the purchase of electric vehicles and charging infrastructure has received fiscal and/or financial incentives - Records of the disbursement of the scrapping and electrification premiums through the FDTR	- Viable business models for electric public transport modes could be identified and a corresponding finance scheme could be developed - National budget allows for financial incentives (incl. reduced national incomes through tax breaks)	Expected Accomplishment (b): Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies
	Indicator 3.2: The technical regulations and standards for EVs and EVSE (that are at least applicable to electric taxis, minibuses and buses) to facilitate the uptake of low carbon electric mobility are adopted	Baseline 3.2: No.	Mid-point target 3.2: Draft technical regulations and standards are prepared.	End-of-project target 3.2: Yes. (to be adopted by the by the Ministry of Transport and the Ministry of Energy)	- Government gazette and other publications - Technical regulations and standard documents	- Commitment of the respective Ministries to support the introduction of electric public transport modes	
Outcome 4: Government of Côte d'Ivoire endorses recommendations on renewable energy integration and an amendment on e-waste regulations to support long-term environmental sustainability of low-carbon electric mobility	Indicator 4.1: The recommendations on a direct offtake tariffication scheme for the integration of RE generation and EV charging are endorsed	Baseline 4.1: No	Mid-point target 4.1: No	End-of-project target 4.1: Yes (to be endorsed by the Ministry of Energy, the Ministry of Finance and ANARE-CI)	- Government gazette and other publications - Recommendations document / report	- Framework conditions for RE projects sufficiently attractive for investments	Expected Accomplishment (b): Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies
	Indicator 4.2: The amended/improved e-waste management regulations for the collection, re-use and/or environmentally sound disposal of used electric vehicle batteries is endorsed	Baseline 4.2: No	Mid-point target 4.2: No	End-of-project target 4.2: Yes (to be endorsed by the Ministry of Environment)	- Government gazette and other publications - Amended e-waste regulations document	- Insufficient interest by e-waste collection companies to collect and treat of used EV batteries remains low in the upcoming years. - Insufficient market for the re-use of used batteries.	

ANNEX B: RESPONSE TO PROJECT REVIEWS

Please refer to the separate pdf files which include all responses to the GEF's reviews:

Annex B.1 – Responses to GEF Sec reviews (on the PFD)
Annex B.2 – Responses to GEF Sec reviews (on the PFD addendum)
Annex B.3 – Responses to STAP comments
Annex B.4 – Responses to Council comments

ANNEX C: STATUS OF UTILIZATION OF PROJECT PREPARATION GRANT (PPG)

Provide detailed funding amount of the PPG activities financing status in the table below:

PPG Grant Approved at PIF: **US$ 50,000**			
Project Preparation Activities Implemented	***GETF/LDCF/SCCF Amount (US$)***		
	Budgeted Amount	***Amount Spent to date***	***Amount Committed***
Project Development Consultant	23,176	23,176.00	
UNEP Air Quality and Mobility Unit expert	14,960	13,758.16	1,201.84
Project Development Consultant travel	6,824	1,015.87	
UNEP Air Quality and Mobility Unit expert travel	5,040	1,752.74	3,287.26
Total	**50,000**	**39,702.77**	**4,489.10**

The balance of unspent and uncommitted funds (US$ 5,808.13) will be used to undertake exclusively preparation activities up to one year of CEO Endorsement/approval date. No later than one year from CEO endorsement/approval date, UNEP will report closing of PPG to Trustee in its Quarterly Report.

ANNEX D: 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) – if applicable.

Not applicable.

ANNEX E: PROJECT MAP(S) AND COORDINATES

Please attach the geographical location(s) of the project area(s), if possible.

The project intervention primarily aims at enabling pilot investments in electric public transport modes in Abidjan (5° 20’ 43’’ N; 4° 1’ 27’’ W, cf. map below). At the same time, newly created national regulation or best practices created in Abidjan are likely to stimulate the uptake of e-mobility in other cities of Côte d’Ivoire as well. In addition, the goal to accelerate renewable power deployment may trigger investments throughout the country.

Map of Côte d’Ivoire (Source: Wikimedia, © BY OCHA, CC BY 3.0)

ANNEX F: GEF 7 CORE INDICATOR WORKSHEET

Core Indicator 6	Greenhouse gas emission mitigated					
		Tons (6.2) (6.1 emissions from AFOLU do not apply)				
		Entered			Entered	
		PIF stage	Endorsement		MTR	TE
	Expected CO2e (direct)	*22,490,000*	*82,574*			
	Expected CO2e (indirect)	*13,820,000*	*148,944*			
Indicator 6.2	Emissions avoided					
		Tons				
		Expected			Achieved	
		PIF stage	Endorsement		MTR	TE
	Expected CO2e (direct)	*22,490,000*	*82,574*			
	Expected CO2e (indirect)	*13,820,000*	*148,944*			
	Anticipated Year		*2021*			
Indicator 6.3	Energy saved					
		MJ				
		Expected			Achieved	
		PIF stage	Endorsement		MTR	TE
	Expected direct	*Not provided*	*866,109,256*			
	Expected indirect	*Not provided*	*1,526,900,347*			
Core Indicator 11	Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment					
		Number				
		Expected			Achieved	
		PIF stage	Endorsement		MTR	TE
	Female	*Not provided*	*75,040*			
	Male	*Not provided*	*112,590*			
	Total		*187,630*			

ANNEX G: GEF PROJECT TAXONOMY WORKSHEET

Include the GEF 7 Taxonomy Worksheet to list down the taxonomic information required under Part I, item G by ticking the most relevant keywords/topics/themes that best describe this project.

Level 1	Level 2	Level 3	Level 4
☒**Influencing models**			
	☒**Transform policy and regulatory environments**		
	☒**Strengthen institutional capacity and decision-making**		
	☒**Convene multi-stakeholder alliances**		
	☒**Demonstrate innovative approaches**		
	☐**Deploy innovative financial instruments**		
☒**Stakeholders**			
	☐**Indigenous Peoples**		
	☒**Private Sector**		
		☒Capital providers	
		☒Financial intermediaries and market facilitators	
		☒Large corporations	
		☒SMEs	
		☒Individuals/Entrepreneurs	
		☐Non-Grant Pilot	
		☐Project Reflow	
	☐**Beneficiaries**		
	☐**Local Communities**		
	☒**Civil Society**		
		☐Community Based Organization	
		☒Non-Governmental Organization	
		☐Academia	
		☐Trade Unions and Workers Unions	
	☒**Type of Engagement**		
		☒Information Dissemination	
		☒Partnership	
		☒Consultation	
		☒Participation	
	☒**Communications**		
		☒Awareness Raising	
		☒Education	
		☐Public Campaigns	
		☒Behavior Change	
☒**Capacity, Knowledge and Research**			
	☐**Enabling Activities**		
	☒**Capacity Development**		
	☒**Knowledge Generation and Exchange**		
	☐**Targeted Research**		
	☐**Learning**		
		☐Theory of Change	
		☐Adaptive Management	
		☐Indicators to Measure Change	
	☒**Innovation**		
	☒**Knowledge and Learning**		
		☒Knowledge Management	
		☒Innovation	
		☒Capacity Development	
		☒Learning	
	☐**Stakeholder Engagement Plan**		
☒**Gender Equality**			
	☒**Gender Mainstreaming**		

Level 1	Level 2	Level 3	Level 4
		☒Beneficiaries	
		☐Women groups	
		☒Sex-disaggregated indicators	
		☒Gender-sensitive indicators	
	☒**Gender results areas**		
		☐Access and control over natural resources	
		☒Participation and leadership	
		☒Access to benefits and services	
		☒Capacity development	
		☐Awareness raising	
		☐Knowledge generation	
☒**Focal Areas/Theme**			
	☐**Integrated Programs**		
		☐Commodity Supply Chains (Good Growth Partnership)	
			☐Sustainable Commodities Production
			☐Deforestation-free Sourcing
			☐Financial Screening Tools
			☐High Conservation Value Forests
			☐High Carbon Stocks Forests
			☐Soybean Supply Chain
			☐Oil Palm Supply Chain
			☐Beef Supply Chain
			☐Smallholder Farmers
			☐Adaptive Management
		☐Food Security in Sub-Sahara Africa	
			☐Resilience (climate and shocks)
			☐Sustainable Production Systems
			☐Agroecosystems
			☐Land and Soil Health
			☐Diversified Farming
			☐Integrated Land and Water Management
			☐Smallholder Farming
			☐Small and Medium Enterprises
			☐Crop Genetic Diversity
			☐Food Value Chains
			☐Gender Dimensions
			☐Multi-stakeholder Platforms
		☐Food Systems, Land Use and Restoration	
			☐Sustainable Food Systems
			☐Landscape Restoration
			☐Sustainable Commodity Production
			☐Comprehensive Land Use Planning
			☐Integrated Landscapes
			☐Food Value Chains
			☐Deforestation-free Sourcing
			☐Smallholder Farmers
		☐Sustainable Cities	
			☐Integrated urban planning
			☐Urban sustainability framework
			☐Transport and Mobility
			☐Buildings
			☐Municipal waste management
			☐Green space
			☐Urban Biodiversity
			☐Urban Food Systems
			☐Energy efficiency
			☐Municipal Financing
			☐Global Platform for Sustainable Cities
			☐Urban Resilience
	☐**Biodiversity**		
		☐Protected Areas and Landscapes	
			☐Terrestrial Protected Areas
			☐Coastal and Marine Protected Areas
			☐Productive Landscapes
			☐Productive Seascapes
			☐Community Based Natural Resource Management

Level 1	Level 2	Level 3	Level 4
		☐Mainstreaming	
			☐Extractive Industries (oil, gas, mining)
			☐Forestry (Including HCVF and REDD+)
			☐Tourism
			☐Agriculture & agrobiodiversity
			☐Fisheries
			☐Infrastructure
			☐Certification (National Standards)
			☐Certification (International Standards)
		☐Species	
			☐Illegal Wildlife Trade
			☐Threatened Species
			☐Wildlife for Sustainable Development
			☐Crop Wild Relatives
			☐Plant Genetic Resources
			☐Animal Genetic Resources
			☐Livestock Wild Relatives
			☐Invasive Alien Species (IAS)
		☐Biomes	
			☐Mangroves
			☐Coral Reefs
			☐Sea Grasses
			☐Wetlands
			☐Rivers
			☐Lakes
			☐Tropical Rain Forests
			☐Tropical Dry Forests
			☐Temperate Forests
			☐Grasslands
			☐Paramo
			☐Desert
		☐Financial and Accounting	
			☐Payment for Ecosystem Services
			☐Natural Capital Assessment and Accounting
			☐Conservation Trust Funds
			☐Conservation Finance
		☐Supplementary Protocol to the CBD	
			☐Biosafety
			☐Access to Genetic Resources Benefit Sharing
	☐**Forests**		
		☐Forest and Landscape Restoration	
			☐REDD/REDD+
		☐Forest	
			☐Amazon
			☐Congo
			☐Drylands
	☐**Land Degradation**		
		☐Sustainable Land Management	
			☐Restoration and Rehabilitation of Degraded Lands
			☐Ecosystem Approach
			☐Integrated and Cross-sectoral approach
			☐Community-Based NRM
			☐Sustainable Livelihoods
			☐Income Generating Activities
			☐Sustainable Agriculture
			☐Sustainable Pasture Management
			☐Sustainable Forest/Woodland Management
			☐Improved Soil and Water Management Techniques
			☐Sustainable Fire Management
			☐Drought Mitigation/Early Warning
		☐Land Degradation Neutrality	
			☐Land Productivity

Level 1	Level 2	Level 3	Level 4
			☐Land Cover and Land cover change
			☐Carbon stocks above or below ground
		☐Food Security	
	☐**International Waters**		
		☐Ship	
		☐Coastal	
		☐Freshwater	
			☐Aquifer
			☐River Basin
			☐Lake Basin
		☐Learning	
		☐Fisheries	
		☐Persistent toxic substances	
		☐SIDS : Small Island Dev States	
		☐Targeted Research	
		☐Pollution	
			☐Persistent toxic substances
			☐Plastics
			☐Nutrient pollution from all sectors except wastewater
			☐Nutrient pollution from Wastewater
		☐Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		☐Strategic Action Plan Implementation	
		☐Areas Beyond National Jurisdiction	
		☐Large Marine Ecosystems	
		☐Private Sector	
		☐Aquaculture	
		☐Marine Protected Area	
		☐Biomes	
			☐Mangrove
			☐Coral Reefs
			☐Seagrasses
			☐Polar Ecosystems
			☐Constructed Wetlands
	☐**Chemicals and Waste**		
		☐Mercury	
		☐Artisanal and Scale Gold Mining	
		☐Coal Fired Power Plants	
		☐Coal Fired Industrial Boilers	
		☐Cement	
		☐Non-Ferrous Metals Production	
		☐Ozone	
		☐Persistent Organic Pollutants	
		☐Unintentional Persistent Organic Pollutants	
		☐Sound Management of chemicals and Waste	
		☐Waste Management	
			☐Hazardous Waste Management
			☐Industrial Waste
			☐e-Waste
		☐Emissions	
		☐Disposal	
		☐New Persistent Organic Pollutants	
		☐Polychlorinated Biphenyls	
		☐Plastics	
		☐Eco-Efficiency	
		☐Pesticides	
		☐–DT – Vector Management	
		☐–DT – Other	
		☐Industrial Emissions	
		☐Open Burning	
		☐Best Available Technology / Best Environmental Practices	
		☐Green Chemistry	
	☒**Climate Change**		
		☐**Climate Change Adaptation**	
			☐Climate Finance

Level 1	Level 2	Level 3	Level 4
			☐Least Developed Countries
			☐Small Island Developing States
			☐Disaster Risk Management
			☐Sea-level rise
			☐Climate Resilience
			☐Climate information
			☐Ecosystem-based Adaptation
			☐Adaptation Tech Transfer
			☐National Adaptation Programme of Action
			☐National Adaptation Plan
			☐Mainstreaming Adaptation
			☐Private Sector
			☐Innovation
			☐Complementarity
			☐Community-based Adaptation
			☐Livelihoods
		☒**Climate Change Mitigation**	
			☐Agriculture, Forestry, and other Land Use
			☐Energy Efficiency
			☒Sustainable Urban Systems and Transport
			☒Technology Transfer
			☒Renewable Energy
			☒Financing
			☐Enabling Activities
		☐**Technology Transfer**	
			☐Poznan Strategic Programme on Technology Transfer
			☐Climate Technology Centre & Network (CTCN)
			☐Endogenous technology
			☐Technology Needs Assessment
			☐Adaptation Tech Transfer
		☐**United Nations Framework on Climate Change**	
			☐Nationally Determined Contribution
		☒**Climate Finance (Rio Markers)**	☐Paris Agreement ☐Sustainable Development Goals ☐Climate Change Mitigation 1 ☒Climate Change Mitigation 2 ☐Climate Change Adaptation 1 ☐Climate Change Adaptation 2

ANNEX H: INDICATIVE TERMS OF REFERENCE FOR PROJECT PERSONNEL, CONSULTANTS AND SUBCONTRACTS

010 - Staff & Personnel (Including Consultants)

Position title:	**Chief Technical Advisor**		
Budget line number:	0101		
Duration:	42	months	(Note: CTA will be mobilized for the entire duration of the project but will likely only work part-time from Month 25 to 42)
Date required:	M-1		
Duty station:	Abidjan, Côte d'Ivoire		
Reporting structure:	The CTA will report to the National Project Director and to the Task Manager of the Lead Implementing Agency (UNEP).		
Description of duties:	Main project management duties: - Ensure that project implementation is carried out according to the project design and the ouputs are delivered and outcomes achieved to the required standard of quality within the approved timeframe and budget. - Regular communication with relevant ministries, governmental agencies, co-finance partners, project steering committee members, members of ad-hoc technical working groups and all other key stakeholders. - Support data and information retrieval and research by actively liaising national stakeholders with consultants. - Organize and facilitate the workshops, project steering committee meetings and other project meetings; prepare repots on all worksops/meetings. - Implement gender action plan. - Undertake timely reporting to the NPD and the IA as per the M&E Plan and the project cooperation agreement requirements. - Prepare annual workplan and budget revisions and update the project Procurement Plan and ToR for consultants/sub-contractors, as required. - Supervision of the staff, experts, subcontractors, and implementing partners working on the project. - Identification of risks, preparing of mitigation strategies and implementation of mitigations measures. - Track project acheivements against the Results Framework, Core Indicator worksheet. - Ensure the Gender Action Plan is implemented and monitored during project implementation. - Prepare the "Gender Representation Guidelines" document. - Undertake other activities as assigned by the Executing Agency (MINEDD).		
Expected deliverables:		The CTA contributes to all project deliverables by facilitating related activities and implementing his/her project management duties. He/she will be particularly contribute to the following deliverables:	
	1.1.1	Inter-ministerial workshop to kick-off the project and to outline the policy coordination process and work plan.	
	1.1.2	Preparation of a statement of cooperation (incl. shared goal, definition of processes, roles and responsibilities), submission to coordination body for adoption.	
	1.1.3	Quarterly coordination body meetings.	
	1.1.4	Preparation of final report incl. post project action plan to implement the national e-mobility strategy in urban public transport (supporting the implementation of the Draft Roadmap for Sustainable Transport	
	1.1.5	Report on best practices and lessons learned from the GEF project on accelerating the introduction of low-carbon electric mobility in Côte d'Ivoire (to be shared with the Global E-mobility Project)	
	1.2.1	Set-up of a national strategy development team (comprising national policymakers, relevant stakeholders and an international e-mobility policy expert)	
	1.2.2	Workshop on national e-mobility strategy.	
	1.2.3	Collection and consolidation of transport and energy sector data including vehicle fleet and current policy frameworks.	
	1.3.1-1.3.9	Coordination of the invitation of mobility / transport sector stakeholders to events offered by the Global E-Mobility Programme and the Africa Support and Investment Plaform.	

1.3.1-1.3.9	Coordination of the invitation of mobility / transport sector stakeholders to events offered by the Global E-Mobility Programme and the Africa Support and Investment Platform.
1.3.10	Implementation of outreach events for decision-makers in other cities and communes/suburbs of Abidjan.
1.3.11	Review of all capacity building events, based on evaluation forms.
2.4.1	Set-up of a technical e-mobility team comprising national stakeholders (especially representatives from fleet operators, technically oriented government agencies) and an international expert (also for
2.5.2	Consultation meeting(s) wit SOTRA representatives and experts to discuss and promote SOTRA electrification scenarios.
2.6.2	Support the International Grid Integration and Renewable Energy expert on the preparation of the Study on charging and distribution grid infrastructure investment needs for the large-scale introduction of EVs.
2.6.3	Workshop to present and discuss the results of the charging infrastructure and distribution grid development study.
3.1.1	Set-up of a policy team comprising national stakeholders (especially from government agencies responsible for fiscal policies and electricity tariff setting) and the international e-mobility policy expert.
3.1.2	Consultation meetings/workshops with government agencies and experts to develop favorable fiscal policies/regulation.
3.2.1	Support the International E-Mobility Technology and Business expert on the Consultation meetings/workshops with government agencies and experts to develop technical regulations/standards.
4.1.2	Workshop on the results of the renewable power development study.
4.2.2	Workshop with power and transport sector representatives (incl. government agencies and private sector) to discuss the results of the short study on renewable electricity pricing for the transport sector.
4.3.1	Set-up of battery re-use and recycling team, comprising national stakeholders (incl. MINEDD and subordinate agencies responsible for waste treatment, waste management/battery refurbishment companies, power sector) and an international battery/recycling expert, and evaluation of possible policy development at sub-regional level within the ECOWAS framework
4.3.2	Consultation meetings with government agencies and responsible e-waste agencies to develop amendment to e-waste regulation.
4.3.4	Support the International Battery and Waste Management Expert on the Preparation of a study on second-life use of EV batteries incl. draft action plan to implement battery refurbishment/ re-use.

Qualifications:	- Professional degree in Engineering, Economics or other discipline related to the technical, economic and regulatory dimensions of urban public transport and - ideally - renewable energies. A Master Degree in urban mobility or automotive engineering will be an added advantage. - Professional experience of at least ten (10) years in the area of urban mobility or related fields. - Extensive experience and ability to effectively manage and coordinate complex inter-sectoral and multi-stakeholder projects and lead, manage and motivate teams to achieve results. - Excellent communication (especially in French) and negotiation skills proven through successful interactions with all levels of stakeholder groups, including senior government officials, private entrepreneurs, as well as representatives from the finance sector and technical agencies. - Excellent and proven know-how in institutional and policies development and excellent capacities for strategic thinking, planning and management. - Good technical knowledge in the thematic areas of urban public transport, innovative vehicle technologies (incl. electric vehicles), renewable energies and power supply and distribution systems. - Knowledge implementation procedures of UNEP projects or projects with similar structures (incl. procurement, disbursements, and reporting and monitoring as well as the implementation of gender action plans) will be an added advantage.
Languages:	French English

Position title:	**International E-Mobility Technology and Business expert**		
Budget line number:	0104		
Duration:	28	months	(Note: Expert will be mobilized intermittently during this period.)
Date required:	M-4		
Duty station:	Global, with trips to Côte d'Ivoire		
Reporting structure:	The expert will report to MOT/Directorate General for Terrestrial Transport and Traffic (DGTTC) and CTA.		
Description of duties:	- Provide technical and business expertise on the subject of e-mobility in urban public transport - Preparation of feasibility studies, conceptualization of finance schemes and investment plans for the public transport sector - Providing consultancy on fund-raising for public e-mobility projects - Active participation as expert in workshops - Communication and promotion of results to government officials and other urban public trasnport sector stakeholders - Design and preparation of an EV operation monitoring		
Expected deliverables:	2.4.2	Development of a concept to monitor technical and economic performance data.	
	2.4.4	Analysis of monitoring data, reporting of findings and recommendations to fleet operators and PMU.	
	2.4.5	Preparation of two monitoring summary reports, incl. publishable section for dissemination.	
	2.5.1	Preparation of a pre-feasibility study for the electrification of SOTRA buses, incl. drafting of electrification scenarios.	
	2.6.2	Support the International Grid Integration and Renewable Energy expert on the Study on charging and distribution grid infrastructure investment needs for the large-scale introduction of EVs.	
	2.6.4	Support the International Grid Integration and Renewable Energy expert on the Finalization of an infrastructure development investment plan for Abidjan until 2030 and submission to national coordination body for adoption.	
	3.2.1	Consultation meetings/workshops with government agencies and experts to develop technical regulations/standards.	
	3.2.2	Preparation of draft technical regulations/standards package and submission for adoption.	
		Note: Workshops/meetings and other events will be combined so that the travel budget for two trips to Abidjan will be sufficient.	
Qualifications:	- Academic Degree in Automotive/Electronic Engineering or other relevant fields. A Master Degree in Automotive Engineering with focus on electric transport modes or post-graduation of at least 12 month in electric mobility or sustinable urban transport and/or Business Administration/Finance/Economics would be an added advantage. - Senior professional level with a minimum of ten years experience in related innovative transport system assessments. Work experience in the selection, procurement and/or operation of EV modes and charging infrastructure and/or in the public transport sector would be an added advantage. - Experience in producing technical and economic feasibility studies for the introduction of electric transport or other innovative transportation modes. - Excellent technical and economic knowledge of electric public transport modes, incl. charging infrastructure. - Excellent communication skills (especially in French) proven through successful interactions with all levels of stakeholder groups, including senior government officials, private entrepreneurs, as well as representatives from the finance sector and technical agencies. - Experience in the facilitation of workshops and meetings. - Excellent conceptualization, planning, writing and presentation skills, and pro-active behavior. - Ability to work independently on deliverables. - Willingness and readiness to travel to Côte d'Ivoire.		
Languages:	French English		

Position title:	**International Policy and Strategy expert**	
Budget line number:	0102	
Duration:	31 months	(Note: Expert will be mobilized intermittently during this period.)
Date required:	M-4	
Duty station:	Global, with trips to Côte d'Ivoire	
Reporting structure:	The expert will report to MOT/Directorate General for Terrestrial Transport and Traffic (DGTTC) for delivarables under Output 3 and CTA for all delivorables.	
Description of duties:	- Provide expertise on various policy aspects (technical and non-technical, legislation, regulation) relevant for the electrification in urban public transport modes - Drafting of national strategies and policies for incentivizing the electrification of urban public transport in both the transport and power sector - Active participation as expert in workshops - Communication and promotion of results to government officials and other urban public transport sector stakeholders	
Expected deliverables:	1.2.2	Support the Chief Technical Advisor on the Workshop on national e-mobility strategy.
	1.2.4	Draft a gender sensitive national e-mobility strategy, incluidng an action plan.
	1.2.5	Final gender sensitive national e-mobility strategy submitted for adoption.
	3.1.2	Support the Chief Technical Advisor on the Consultation meetings/workshops with government agencies and experts to develop favorable fiscal policies/regulation.
	3.1.3	Preparation of a tax reform proposal and submission for adoption.
	3.1.4	Support the International Grid Integration and Renewable Energy expert on the Preparation of proposal on preferential electricity tariffs for e-mobility and submission for adoption.
Qualifications:	- Academic Degree in Law, Political Science or other relevant fields. - Senior level experience with at least ten years experience as strategy and policy consultant to governments and authorities. Experience in the context of International Development Assistance would be an added advantage. - Proven experience in drafting policies, reports and strategies in the transport sector. - Strong ability to comprehend technical aspects of e-mobility. Proven experience in the transport/e-mobility field would be an added advantage. - Excellent communication skills (especially oral communication skills in French) proven through successful interactions with all levels of stakeholder groups, especially senior government officials. - Experience in the facilitation of workshops and meetings. - Excellent conceptualization, planning, writing and presentation skills, and pro-active behavior. - Ability to work independently on deliverables. - Willingness and readiness to travel to Côte d'Ivoire.	
Languages:	French English	

Position title:	**International Grid Integration and Renewable Energy expert**	
Budget line number:	0106	
Duration:	12 months	(Note. Expert will be mobilized intermittently during this period.)
Date required:	M-12	
Location:	Global, with trips to Côte d'Ivoire	
Reporting structure:	The expert will report to the PMU.	
Description of duties:	- Provide technical and economic expertise on the subject of the integration of e-mobility charging infrastructure in urban distribution grids and associated market development of renewable energies - Preparation of studies on the integration of charging infrastructure into distribution grids - Development of scenarios for accelerated renewable energy deployment under given e-mobility scenarios - Active participation as expert in workshops - Communication & promotion of results to government officials & other urban public trasnport sector stakeholders	
Expected deliverables:	2.6.2	Study on charging and distribution grid infrastructure investment needs for the large-scale introduction of EVs.
	2.6.3	Support the Chief Technical Advisor on the Workshop to present and discuss the results of the charging infrastructure and distribution grid development study.
	3.1.4	Preparation of proposal on preferential electricity tariffs for e-mobility and submission for adoption.
	3.2.2	Support the International E-Mobility Technology and Business expert with the Preparation of draft technical regulations/standards package and submission for adoption.
	4.1.1	Preparation of a study to estimate additional renewable power generation needs for low-carbon e-mobility.
	4.1.2	Support the Chief Technical Advisor with the Workshop on the results of the renewable power development study.
	4.2.1	Preparation of a study to estimate supply patterns and levelized costs of electricity from renewable sources (e.g. from solar, small hydropower and biomass) and demand patterns EV fleet operators as well as viable electricity price thresholds in order to develop a proposal for renewable electricity tariffs specifically for the transport sector and use of the results within the power tariff-setting process under Output 3.1
	4.2.2	Support the Chief Technical Advisor on the Workshop with power and transport sector representatives (incl. government agencies and private sector) to discuss the results of the short study on renewable electricity pricing for the transport sector
		Note: Workshops/meetings and other events will be combined so that the travel budget for two trips to Abidjan will be sufficient.
Qualifications:	- Academic Degree in Electrical/Electronic Engineering or other relevant fields. An Engineering Master Degree or post-graduation of at least 12 month with focus on power transmission and distribution systems would be an added advantage. - Senior level experience with at least 10 years of experience in the power sector, especially in distribution grid analysis, grid integration and renewable power generation and direct renewable power purchase agreements, incl. cost estimations. - Excellent technical and economic knowledge of grid integration issues and relevant standards. - Strong ability to comprehend technical aspects of e-mobility, especially charging infrastructure. Proven experience in dealing with e-mobility infrastructure would be an added advantage. - Very good knowledge of renewable energies and proven experience in the development of national renewable energy deployment scenarios. - Proven experience in drafting policies, reports and strategies in the power sector. - Excellent communication skills (especially oral communication skills in French) proven through successful interactions with all levels of stakeholder groups, especially senior government officials. - Excellent conceptualization, planning, writing and presentation skills, and pro-active behavior. - Ability to work independently on deliverables. - Willingness and readiness to travel to Côte d'Ivoire.	
Languages:	French, English	

Position title:	**International Battery/Electronic Waste Management expert**	
Budget line number:	0107	
Duration:	12.0 months	(Note: Expert will be mobilized intermittently during this period.)
Date required:	M-18	
Location:	Global, with trips to Côte d'Ivoire	
Reporting structure:	The expert will report to the PMU.	
Description of duties:	- Provide technical expertise on the subject of EV battery related e-waste management - Preparation of a study on the introduction and conceptualizatio of EV battery waste management in Côte d'Ivoire - Providing consultancy on EV battery waste management to e-waste collection points - Implementation of a pre-audit for the certification of a collection point to collect used EV batteries - Active participation as expert in workshops - Communication and promotion of results to government officials and waste management sector stakeholders	
Expected deliverables:	4.3.2	Support the Chief Technical Advisor on the Consultation meetings with government agencies and responsible e-waste agencies to develop amendment to e-waste regulation.
	4.3.3	Preparation of draft amendment to e-waste regulation for collection, recycling and disposal of used EV batteries and submission for adoption.
	4.3.4	Preparation of a study on second-life use of EV batteries incl. draft action plan to implement battery refurbishment/ re-use.
	4.3.5	Workshop on business opportunities for the re-use of EV batteries.
	4.3.6	Finalization of the action plan to implement battery refurbishment and re-use and submission for adoption
Qualifications:	- Academic Degree in Environmental Engineering/Recycling and Waste Management/Electrochemistry or other relevant fields. An Engineering Master Degree or post-graduation of at least 12 month with focus on electronic waste management would be an added advantage. - Senior level experience with at least 10 years of experience in the recycling and waste management sector. Experience in the management of lithium battery waste would be an added advantage. - Very good knowledge of current practices in recycling, reuse and disposal of used lithium batteries. - Proven experience in drafting proposals for a regulatory framework including a certification scheme for the collection of used EV batteries for re-use, recycling and safe disposal. - Excellent communication skills (especially oral communication skills in French) proven through successful interactions with all levels of stakeholder groups, especially technical agencies and private sector enterprises. - Excellent conceptualization, planning, writing and presentation skills, and pro-active behavior. - Ability to work independently on deliverables. - Willingness and readiness to travel to Côte d'Ivoire.	
Languages:	French English	

Position title:	**Local technical consultant (Support to experts: Local data research, meeting preparation, etc.)**	
Budget line number:	0105	
Duration:	30.0 months	(Note: Consultant will be mobilized intermittently during this period)
Date required:	M-6	
Location:	Abidjan, Côte d'Ivoire	
Reporting structure:	The consultant will report to the PMU and the respective experts (as assigned by the Project Manager/Technical Advisor).	
Description of duties:	- Supporting experts through the research of local data and information - Supporting experts in the preparation of workshops and meeting, incl. linguistic review of presentations and other documents provided by international experts - Participation in meetings and, if qualification allows, presentation of results	
Expected deliverables:	N/A	Can be enganged in all deliverables as required for duties described above.
	2.4.3	Quarterly collection of EV monitoring data.
	2.6.3	Support with the preparation of the Workshop to present and discuss the results of the charging infrastructure and distribution grid development study.
	4.1.2	Support with the preparation of the Workshop on the results of the renewable power development study.
	4.3.2	Support with the preparation of the Consultation meetings with government agencies and responsible e-waste agencies to develop amendment to e-waste regulation.
	4.3.5	Support with the preparation of the Workshop on business opportunities for the re-use of EV batteries.
Qualifications:	- Professional degree in Engineering, Economics or other discipline related to the technical, economic and regulatory dimensions of urban public transport and - ideally - renewable energies. - Professional experience of at least three (3) years in the area of urban mobility or related fields. - Professional experience in research in a technical field. - Excellent communication skills proven through successful interactions with experts and public entities. - Know-how in institutional and policies development. - Good technical knowledge in the thematic areas of urban public transport, innovative vehicle technologies (incl. electric vehicles), renewable energies, waste management and power supply and distribution systems.	
Languages:	French English	

Position title:	**International E-mobility Technical Support (UNEP SM Unit)**		
Budget line number:	0103		
Duration:	42.0	months	(Note: UNEP SM Unit will be available for support throughout the project, main intermittent contributions expected in Years 1-3.)
Date required:	M-1		
Location:	Nairobi (Kenya), with trips to Côte d'Ivoire		
Reporting structure:	Reports to the Chief Technical Advisor of the Cote d'Ivoire project and to UNEP's Task Manager		
Description of duties:	The Ministry of Environment and Sustainable Developement (MINEDD) and Cote d'Ivoire's GEF OFP have requested the UNEP SMU to provide execution support (refer to letter in Annex N-2) on the following: • Support the preperation of a national strategy on e-mobility • Review the monitoring system to monitor the envisaged operation of 200 electric taxis and 50 electric minibuses, including data collection and analysis • Support the development of existing e-waste regulation for EVs including facilitating discussion with ECOWAS to develop respective regulation at the sub-regional level • Facilitate discussions with EV manufacturers to introduce new EVs to Cote d'Ivoire		
Expected deliverables:	1.2.2	Faciliatates a workshop on national e-mobility strategy.	
	1.2.4	Supports drafting a gender sensitive national e-mobility strategy, incluidng an action plan.	
	2.4.2	Supports development of a concept to monitor technical and economic performance data	
	3.1.3	Supports preparation of a tax reform proposal and submission for adoption.	
	4.3.3	Supports preparation of draft amendment to e-waste regulation for collection, recycling and disposal of used EV batteries and submission for adoption.	
	4.3.4	Supports preparation of a study on second-life use of EV batteries incl. draft action plan to implement battery refurbishment/ re-use.	
Qualifications:	- Academic Degree in Automotive Engineering or other relevant fields. A Master Degree in Automotive Engineering with focus on electric transport modes or post-graduation of at least 12 month in electric mobility or sustinable urban transport and/or Business Administration/Finance/Economics would be an added advantage. - Senior professional level with a minimum of 4 years experience in related innovative transport system assessments. Work experience in the selection, procurement and/or operation of EV modes and charging infrastructure and/or in the public transport sector would be an added advantage. - Experience in producing technical and economic feasibility studies for the introduction of electric transport or other innovative transportation modes. - Excellent technical and economic knowledge of electric public transport modes, incl. charging infrastructure. - Excellent communication skills proven through successful interactions with all levels of stakeholder groups, including senior government officials, private entrepreneurs, as well as representatives from the finance sector and technical agencies. - Experience in the facilitation of workshops and meetings. - Excellent conceptualization, planning, writing and presentation skills, and pro-active behavior. - Ability to work independently on deliverables. - Willingness and readiness to travel to Cote d'Ivoire		
Languages:	French English		

ANNEX I-1 DETAILED GEF BUDGET

Project Components	Project Outputs	Umoja budget class	Budget line	Budget line description	Budget allocation per Year					Entity receiving the funds
					Year 1	Year 2	Year 3	Year 4	Total	
Component 1: Institutionalization of and strategy-setting for low-carbon electric mobility	Output 1.1: A national inter-sectoral e-mobility coordination body is established.	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	1,500	1,000	1,000	1,000	4,500	MINEDD
		120 - Contract Services	1201	Venue and catering for kick-off and final meeting of e-mobility coordination body	1,750	-	-	-	1,750	
				Sub-total Output 1.1	***3,250***	***1,000***	***1,000***	***1,000***	***6,250***	
	Output 1.2: A joint national strategy to promote low-carbon e-mobility in urban public transport is submitted for adoption.	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	1,500	1,500	-	-	3,000	MINEDD
		010 - Staff & Personnel (Including Consultants)	0102	International Policy and Strategy expert	5,500	5,500	2,750	-	13,750	
		010 - Staff & Personnel (Including Consultants)	0103	International E-mobility Technical Support (UNEP SM Unit)	3,000	3,000	3,000	-	9,000	UNEP SMU
		120 - Contract Services	1201	Venue and catering for working meetings of e-mobility coordination body	1,750	1,750	1,750	-	5,250	MINEDD
		125 - Operating & Other Costs	1251	DeepL Advanced Licence (Automated Translation of up to 20 documents/month) and other translation-related cost	1,053	1,053	-	-	2,106	
		160 - Travel	1601	Travel for the International Policy and Strategy expert	-	1,600	-	-	1,600	
		160 - Travel	1602	Travel for the International E-mobility Technical Support (UNEP SM Unit)	2,300	2,300	-	-	4,600	UNEP SMU
				Sub-total Output 1.2	***15,103***	***16,703***	***7,500***	***-***	***39,306***	
	Output 1.3: Governmental and private sector actors are trained on the benefits of e-mobility through the Global E-mobility Programme, outreach activities to inform decision makers throghout CI on project results.	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	1,500	1,500	2,000	1,500	6,500	MINEDD
		120 - Contract Services	1201	Venue and catering for events to project results to promote e-mobility to decision makers in CI (ca. 5 events within GAA, 5 in other cities of CI)	-	2,250	5,250	-	7,500	
		160 - Travel	1603	Travel to attend Africa Support & Investment Platform events	5,400	3,600	3,600	-	12,600	
		160 - Travel	1604	Travel to attend Africa platform meeting on financing/marketplace	3,600	3,600	-	-	7,200	
		160 - Travel	1605	Travel to attend Africa electric mobility training	3,600	-	-	1,800	5,400	
		160 - Travel	1606	Travel to attend Africa training on e-busses	7,200	7,200	-	-	14,400	
		160 - Travel	1607	Travel to attend Africa platform replication event	-	-	-	3,600	3,600	
		160 - Travel	1608	DSA to attend E-Mobility Global Programme launch and closing events (airfare paid by Component 3 of the Global E-mobility Project)	1,100	-	-	1,100	2,200	
		160 - Travel	1609	Travel to project result presentation events in 5 other cities in CI	-	200	800	-	1,000	
				Sub-total Output 1.3	***22,400***	***18,350***	***11,650***	***8,000***	***60,400***	
				Total Component 1	**40,753**	**36,053**	**20,150**	**9,000**	**105,956**	
Component 2: Short term barrier removal through feasibility analyses, the demonstration of electric vehicles and know-how development for a wider introduction of electric mobility in Côte d'Ivoire	Output 2.1: A feasibility study on technical/economic opportunities for the electrification of public transport modes serving feeder lines along the Yopougon-Bingerville BRT corridor is conducted.			This Output is implemented through the Abidjan Urban Mobility Project (AUMP), fully co-financed by the Ministry of Transport	-	-	-	-	-	*Co-financing from MoT*
				Sub-total Output 2.1	**-**	**-**	**-**	**-**	**-**	
	Output 2.2: A pilot fleet of electric taxis and minibuses is introduced as part of a World Bank funded fleet renewal mechanism, including an EV bonus and a Risk Sharing Facility (RSF) to support EV investments by public transport enterprises.			This Output is implemented through the Abidjan Urban Mobility Project (AUMP), fully co-financed by the Ministry of Transport	-	-	-	-	-	*Co-financing from MoT*
				Sub-total Output 2.2	**-**	**-**	**-**	**-**	**-**	
	Output 2.3: Drivers and mechanics that will operate electric vehicles and electric vehicle supply equipment (EVSE) are trained on specifics of electric mobility.			This Output is implemented through the Abidjan Urban Mobility Project (AUMP), fully co-financed by the Ministry of Transport	-	-	-	-	-	*Co-financing from MoT*
				Sub-total Output 2.3	**-**	**-**	**-**	**-**	**-**	
	Output 2.4: A system to monitor the operation of the electric pilot fleet is established, data is collected and analyzed and findings and lessons learned are disseminated to support the broader introduction of e-mobility.	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	1,000	1,000	500	-	2,500	MINEDD
		010 - Staff & Personnel (Including Consultants)	0103	International E-mobility Technical Support (UNEP SM Unit)	-	3,000	-	-	3,000	UNEP SMU
		010 - Staff & Personnel (Including Consultants)	0104	International E-Mobility Technology and Business expert	5,500	11,000	-	-	16,500	MINEDD
		010 - Staff & Personnel (Including Consultants)	0105	Local technical consultant (Support to experts: Local data research, meeting preparation, etc.)	1,500	2,250	2,250	-	6,000	
		135 - Equipment, Vehicles & Furniture	1351	Equipment to extract, collect and store EV operational data	2,800	2,800	-	-	5,600	
		160 - Travel	1610	Travel for International E-Mobility Technology and Business expert	1,600	-	-	-	1,600	
				Sub-total Output 2.4	***12,400***	***20,050***	***2,750***	***-***	***35,200***	
	Output 2.5: An electrification investment plan for SOTRA feeder-line buses is developed and submitted for adoption.	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	2,000	2,000	-	-	4,000	MINEDD
		010 - Staff & Personnel (Including Consultants)	0104	International E-Mobility Technology and Business expert	11,000	19,250	-	-	30,250	
		160 - Travel	1611	Travel for International E-Mobility Technology and Business expert (daily rates only, flight: see O 2.4)	520	-	-	-	520	
				Sub-total Output 2.5	***13,520***	***21,250***	***-***	***-***	***34,770***	
	Output 2.6: A charging infrastructure installation plan for large-scale introduction of EVs in Abidjan's public transport is developed.	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	1,000	1,000	-	-	2,000	MINEDD
		010 - Staff & Personnel (Including Consultants)	0104	International E-Mobility Technology and Business expert	-	5,500	-	-	5,500	
		010 - Staff & Personnel (Including Consultants)	0105	Local technical consultant (Support to experts: Local data research, meeting preparation, etc.)	-	4,500	-	-	4,500	
		010 - Staff & Personnel (Including Consultants)	0106	International Grid Integration and Renewable Energy expert	8,250	11,000	-	-	19,250	
		160 - Travel	1612	Travel for International E-Mobility Technology and Business expert	-	1,600	-	-	1,600	
		160 - Travel	1613	Travel for the International Grid Integration and Renewable Energy expert	-	1,900	-	-	1,900	
				Sub-total Output 2.6	***9,250***	***25,500***	***-***	***-***	***34,750***	
				Total Component 2	**35,170**	**66,800**	**2,750**	**-**	**104,720**	
	Output 3.1: Fiscal policies and regulation are developed and submitted for adoption.	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	1,000	1,000	-	-	2,000	MINEDD
		010 - Staff & Personnel (Including Consultants)	0102	International Policy and Strategy expert	8,250	8,250	-	-	16,500	
		010 - Staff & Personnel (Including Consultants)	0103	International E-mobility Technical Support (UNEP SM Unit)	1,500	3,000	-	-	4,500	UNEP SMU
		010 - Staff & Personnel (Including Consultants)	0106	International Grid Integration and Renewable Energy expert	-	5,500	-	-	5,500	MINEDD
		120 - Contract Services	1201	Venue and catering for workshop on fiscal policies	-	1,750	-	-	1,750	
		160 - Travel	1614	Travel for the International Policy and Strategy expert	1,600	-	-	-	1,600	
				Sub-total Output 3.1	***12,350***	***19,500***	***-***	***-***	***31,850***	
	Output 3.2: Technical regulations and standards for EVs and charging infrastructure are developed and submitted for adoption.	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	-	2,000	-	-	2,000	MINEDD
		010 - Staff & Personnel (Including Consultants)	0104	International E-Mobility Technology and Business expert	-	11,000	-	-	11,000	
		120 - Contract Services	1201	Venue and catering for workshop on technical regulation and standardization	-	1,750	-	-	1,750	
		160 - Travel	1615	Travel for International E-Mobility Technology and Business expert (daily rates only, flight: see O 3.1)	-	520	-	-	520	
				Sub-total Output 3.2	**-**	***15,270***	**-**	**-**	***15,270***	
				Total Component 3	**12,350**	**34,770**	**-**	**-**	**47,120**	
	Output 4.1: The interlinkage between power generation and vehicle charging is investigated to align national RE capacity targets with e-mobility projections.	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	-	1,000	1,000	-	2,000	MINEDD
		010 - Staff & Personnel (Including Consultants)	0105	Local technical consultant (Support to experts: Local data research, meeting preparation, etc.)	-	3,000	-	-	3,000	
		010 - Staff & Personnel (Including Consultants)	0106	International Grid Integration and Renewable Energy expert	-	11,000	5,500	-	16,500	
		160 - Travel	1616	Travel for the International Grid Integration and Renewable Energy expert	-	1,400	-	-	1,400	
				Sub-total Output 4.1	**-**	***16,400***	***6,500***	**-**	***22,900***	
	Output 4.2: Recommendations on a direct offtake tariffication scheme for the integration of RE generation and EV charging are prepared.	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	-	1,500	500	-	2,000	MINEDD
		010 - Staff & Personnel (Including Consultants)	0106	International Grid Integration and Renewable Energy expert	-	11,000	-	-	11,000	
		120 - Contract Services	1201	Venue and catering for the workshop on renewable power intergration	-	1,750	-	-	1,750	
		160 - Travel	1617	Travel for the International Grid Integration and Renewable Energy expert (daily rates only, flight: see O 4.1)	-	520	-	-	520	
				Sub-total Output 4.2	**-**	***14,770***	***500***	**-**	***15,270***	
	Output 4.3: An amendment to existing e-waste regulation for EV batteries is prepared and submitted for adoption; business models for the re-use of batteries are promoted.	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	-	1,000	1,000	-	2,000	MINEDD
		010 - Staff & Personnel (Including Consultants)	0103	International E-mobility Technical Support (UNEP SM Unit)	-	3,000	3,000	-	6,000	UNEP SMU
		010 - Staff & Personnel (Including Consultants)	0105	Local technical consultant (Support to experts: Local data research, meeting preparation, etc.)	-	1,500	750	-	2,250	MINEDD
		010 - Staff & Personnel (Including Consultants)	0107	International Battery/Electronic Waste Management expert	-	8,250	22,000	-	30,250	
		120 - Contract Services	1201	Venue and catering for the workshops on batteries collection, re-use and recycling	-	1,750	1,750	-	3,500	
		160 - Travel	1618	Travel for the Int. Battery/Electronic Waste Management expert	-	-	1,600	-	1,600	
				Sub-total Output 4.3	**-**	***15,500***	***30,100***	**-**	***45,600***	
				Total Component 4	**-**	**46,670**	**37,100**	**-**	**83,770**	
Monitoring and Evaluation (M&E)	Monitoring and Evaluation (M&E)	120 - Contract Services	1202	Mid-Term Review (optional)	-	10,000	-	-	10,000	UNEP EO
		120 - Contract Services	1203	Terminal Evaluation	-	-	-	20,000	20,000	
				Total M&E	**-**	**10,000**	**-**	**20,000**	**30,000**	
Project Management Costs (PMC)	Project Management Costs (PMC)	010 - Staff & Personnel (Including Consultants)	0101	Chief Technical Advisor	12,500	7,500	7,500	3,650	31,150	MINEDD
		120 - Contract Services	1204	Independent financial audits	1,500	1,500	1,500	1,500	6,000	
				Total PMC	**14,000**	**9,000**	**9,000**	**5,150**	**37,150**	
				Project Grand Total	**102,273**	**203,293**	**69,000**	**34,150**	**408,716**	

ANNEX I-2 DETAILED CO-FINANCE BUDGET

No.	Co-finance partner		Nature of co-finance		Co-finance contribution per project Component in US$					Total in US$	Description of co-finance contributions *(in line with co-finance letters received from partners)*
	Name	Source	Type	Investment Mobilized	C1	C2	C3	C4	PMC		
1	Ministry of Transport	Recipient Country Government	Public Investment	Investment mobilized		5,000,000				**5,000,000**	Supporting public transport enterprises to invest in electric transport modes by providing an electrification premium (Output 2.2). This budget will be spent as electrification bonuses to public transport enterprises in the form of a non-reimbursable grant. This bonus will be paid on top of a scrapping premium for obsolete vehicles (the scrapping premium is financed through AUMP through another budget position). Both the electrification bonus and scrapping premium will be managed through CI's fleet renewal mechanism FDTR. A small portion of this budget will be used for integrating this new electrification bonus into the FDTR.
2	Ministry of Transport	Recipient Country Government	Public Investment	Investment mobilized		190,000				**190,000**	Feasibility study on technical/economic opportunities for the electrification of public transport modes serving feeder lines along the Yopougon-Bingerville BRT corridor (Output 2.1) and trainings for drivers/mechanics on specifics of e-mobility (Output 2.3)
3	Ministry of Transport	Recipient Country Government	In-Kind	Recurrent expenditures	10,000	15,000	15,000	5,000	55,000	**100,000**	Participation in steering committee and national e-mobility coordination body meetings; Serving as focal point for the implementation of all outputs under components 2 and 3; Support the implementation of component 4; Establishing links between the GEF project and transport sector stakeholders.
4	Ministry of Environment and Sustainable Development	Recipient Country Government	In-Kind	Recurrent expenditures	15,000	15,000	15,000	47,000	210,000	**302,000**	Technical and political support for the implementation of each component; supporting general project management; Accommodation of the Project Management Unit.
5	Ministry of Petroleum, Energy and Renewable Energies	Recipient Country Government	In-Kind	Recurrent expenditures	10,000	10,000	10,000	10,000	10,000	**50,000**	Participation in steering committee and national e-mobility coordination body meetings; support the implementation of components 2, 3 and 4 with regards to the integration of energy and transport sectors; Establishing links between the GEF project and energy sector stakeholders.
6	UNEP	GEF Agency	In-Kind	Recurrent expenditures	5,000	5,000	5,000	5,000	25,000	**45,000**	Supporting the project with outreach to Ivoirian stakeholders and partners; Participating in some of the project's meetings such as the inception workshop, the PSC meetings; Maintaining effective communication with the national coordination of the project; Sharing information/ progress report with the relevant Outcome coalition of UN agencies under the United Nations Sustainable Development Cooperation Framework (UNSDCF); Disseminating information on the implementation of the project as appropriate.
Total					**40,000**	**5,235,000**	**45,000**	**67,000**	**300,000**	**5,687,000**	

ANNEX J: M&E BUDGET AND WORKPLAN

M&E Activity	Description	Responsible Parties	Timeframe	Indicative budget (US$)
Inception Workshop (IW)	Report prepared following the IW; which includes: - A detailed workplan and budget for the first year of project implementation, - An overview of the workplan for subsequent years, divided per component, output and activities. - A detailed description of the roles and responsibilities of all project partners - A detailed description of the PMU and PSC, including an organization chart - Updated Procurement Plan and a M&E Plan, Gender Action Plan - Minutes of the Inception Workshop	Execution: CTA Support: PMU	1 report to be prepared following the IW, to be shared with participants 4 weeks after the IW (latest)	GEF: 0 US$ To be co-financed by MINEDD
Steering Committee Meeting / E-mobility coordination body meeting	Prepare minutes for every Steering Committee Meeting / E-mobility coordination body meetings.	Execution: CTA Support: -	At least 3 per year, minutes to be submitted 1 week following each PSC meeting	GEF: as part of venue / catering costs under Component 1
Half-yearly progress report	Part of UNEP requirements for project monitoring. - Narrative of the activities undertaken during the considered semester - Analyzes project implementation progress over the reporting period; - Describes constraints experienced in the progress towards results and the reasons.	Execution: CTA Support: PMU	Two (2) half-yearly progress reports for any given year, submitted by July 31 and January 31 (latest)	GEF: as part of CTA budget
Quarterly expenditure reports	Detailed expenditure reports (in Excel) broken down per project component and budget line, with explanations and justification of any change	Execution: CTA Support: PMU	Four (4) quarterly expenditure reports for any given year, submitted by January 31, April 30, July 31 and October 31 (latest)	GEF: as part of CTA budget
Project Implementation Review (PIR)	Analyzes project performance over the reporting period. Describes constraints experienced in the progress towards results and the reasons. Draws lessons and makes clear recommendations for future orientation in addressing the key problems in the lack of progress. The PIRs shall be documented with the evidence of the achievement of end-of-project targets (as appendices).	Execution: CTA and Task Manager Support: PMU	1 report to be prepared on an annual basis, to be submitted by 15 July latest	GEF: as part of CTA budget

M&E Activity	Description	Responsible Parties	Timeframe	Indicative budget (US$)
Annual Inventory of Non-expendable equipment	Report with the complete and accurate records of non-expendable equipment purchased with GEF project funds	Execution: CTA Support: PMU	1 report per year as of 31 December, to be submitted by 31 January latest	GEF: as part of CTA budget
Co-financing Report	Report on co-financing (cash and/or in-kind) fulfilled contributions from all project partners that provided co-finance letters.	Execution: CTA Support: co-finance partners	1 annual report from each co-finance partner, and 1 consolidated report, to be submitted by 31 July latest	GEF: as part of CTA budget
Medium-Term Review (MTR) (optional)	The purpose of the MTR is to provide an independent assessment of project performance at mid-term, to analyze whether the project is on track, what problems and challenges the project is encountering, and which corrective actions are required so that the project can achieve its intended outcomes by project completion in the most efficient and sustainable way. It will verify information gathered through the GEF tracking tools.	Execution: Independent Evaluator / TM Support: CTA, PMU	At mid-point of project implementation if deemed needed by the Task Manager	GEF: US$ 10,000 If this budget is not used, it will be rolled over to the Terminal Evaluation budget.
Final Report	The project team will draft and submit a Project Final Report, with other docs (such as the evidence to document the achievement of end-of-project targets). Comprehensive report summarizing all outputs, achievements, lessons learned, objectives met or not achieved structures and systems implemented, etc. Lays out recommendations for any further steps to be taken to ensure the sustainability and replication of project outcomes.	Execution: CTA Support: PMU	Final report to be submitted no later than three (3) months after the technical completion date	GEF: as part of CTA budget
Terminal Evaluation (TE)	Further review the topics covered in the mid-term evaluation. Looks at the impacts and sustainability of the results, including the contribution to capacity development and the achievement of global environmental goals.	Execution: Independent Evaluator / TM Support: CTA, PMU	Can be initiated within six (6) months prior to the project's technical completion date	GEF: US$ 20,000
TOTAL M&E COST			**GEF: US$ 30,000**	

ANNEX K: PROJECT IMPLEMENTATION ARRANGEMENTS

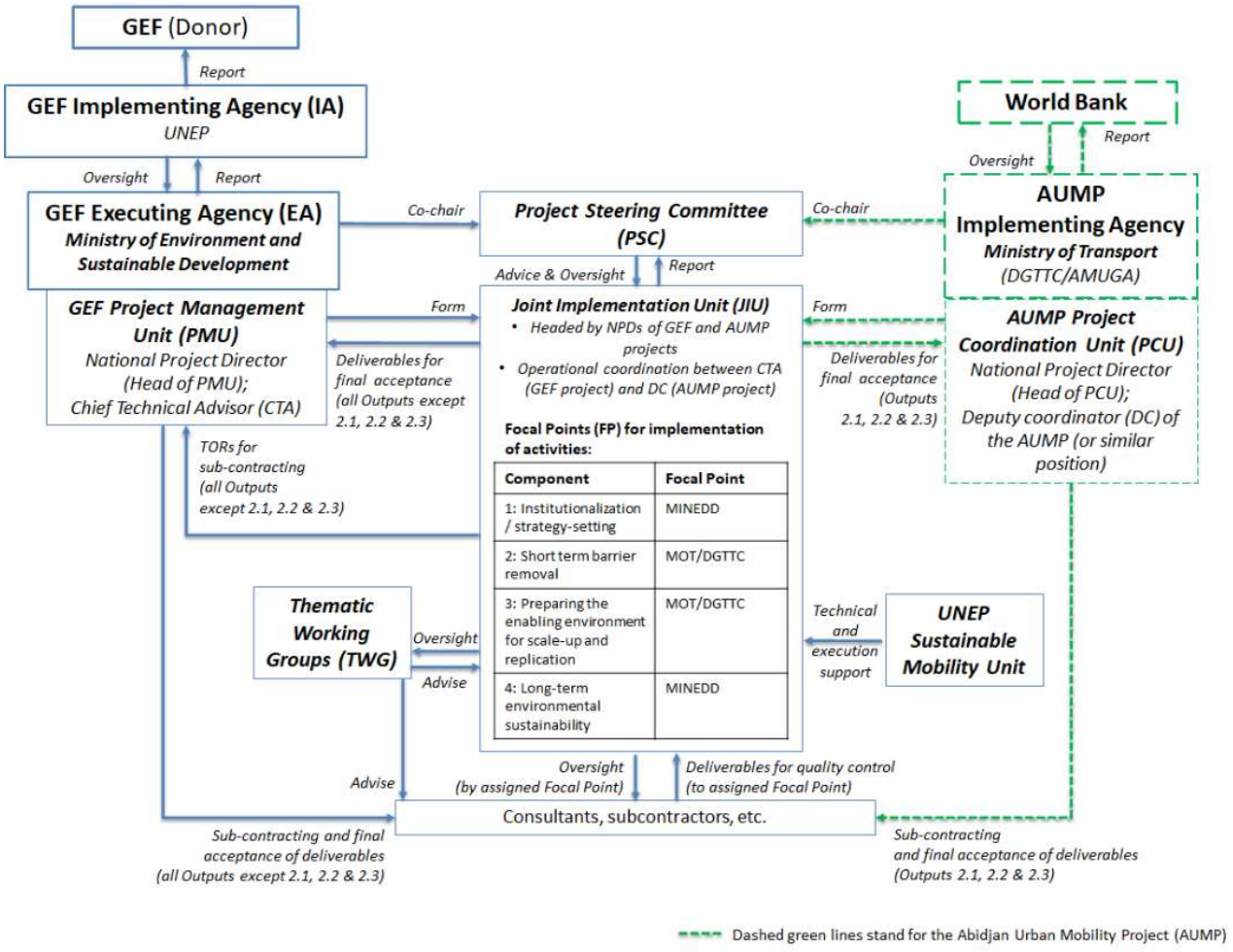
This project is funded by the GEF and co-financed by the Ministry of Environment and Sustainable Development (MINEDD), the Ministry of Transport (MOT) and the Ministry of Petroleum, Energy and Renewable Energies (MPEER). UNEP will be acting as the GEF Implementing Agency. The MINEDD will be the project's Executing Agency.

Given the double focus of the project in transport and environment, the MINEDD and MOT have agreed on a collaborative implementation arrangement. This collaboration is based on four main pillars:

1) The embedding of the support to the establishment of a pilot fleet of electric taxis and minibuses (i.e. Outputs 2.1-2.3) executed by MOT under the AUMP into the logical framework of this GEF-funded project,
2) the distribution of responsibilities for each component between both Ministries on the level of the implementation of activities (i.e. the MINEDD will lead all activities under Components 1 and 4 and the MOT all activities under Components 2 and 3),
3) the co-chairing of the Project Steering Committee (PSC), and,
4) the establishment of a Joint Implementation Unit to ensure close coordination between the two initiatives.

Once the project receives the GEF's CEO approval, UNEP, MINEDD and MOT will enter into a tripartite legal agreement to ensure proper execution of this project.

The overall implementation structure is illustrated in the organogram below. Further details about the roles and responsibilities of each body and institution are discussed further below in this Annex K.



Roles and responsibilities of each body are detailed in the following table:

Body	Composition	Role and description	Frequency of meetings
Project Steering Committee (PSC) / E-mobility coordination body	- Ministry of Environment and Sustainable Development – MINEDD (EA) - UNEP (IA) - Ministry of Transport - Ministry of Petroleum, Energy and Renewable Energies, - Ministry of Economy and Finance, - Secretary of State to the Prime Minister in charge of Budget and State Portfolio, - Autonomous District of Abidjan (DAA) - Head of the Employers Federation of Road Transport Companies (*Haut Conseil du Patronnat des Entreprises de Transports Routiers de Cote d'Ivoire*) - ANARE-CI - CI-ENERGIE - CIE - ECOWAS - Africa Support and Investment Platform Coordinator of the Global e-mobility project (virtual attendance)	• Oversight of the project progress and implementation of Outputs; • Approve workplans and budget revisions; • Approve management decisions to ensure timely delivery of quality Outputs; • Provide overall guidance and strategic direction; • Enhance and optimize the contributions of various partner organizations through coordination of all activities and inputs; • The Ministry of Environment and Sustainable Development will appoint a National Project Director (NPD) that will act as the PSC Chairperson, potentially co-chairing with a representative of the MoT; • The Chief Technical Advisor (CTA) will act as the PSC Secretary.	At least 3 times a year

Implementing GEF Agency (IA)	UNEP	• Ensure timely disbursement/sub-allotment to executing agency based on agreed legal document and in accordance with UNEP and GEF fiduciary standards; • Follow-up with Executing agency for progress, equipment, financial and audit reports; • Provide consistent and regular oversight on project execution and conduct project supervisory missions as per Supervision Plans and in doing so ensures that all UNEP and GEF criteria, rules and regulations are adhered to by project partners; • Technically assess and oversee quality of project outputs, products and deliverables – including formal publications; • Provide no-objection to main TORs and subcontracts issued by the project, including selection of the Chief Technical Advisor; • Attend and facilitate inception workshops, field visits where relevant, and selected steering committee meetings; • Asses project risks, and monitor and enforce a risk management plan; • Regularly monitor project progress and performance and rate progress towards meeting project objectives, project execution progress, quality of project monitoring and evaluation, and risk; • Monitor reporting by project executing partners and provide prompt feedback on the contents of the report; • Promptly inform the management of any significant risks or project problems and take action and follow up on decisions made; • Apply adaptive management principles to the supervision of the project; • Review of reporting, checking for consistency between execution activities and expenditures, ensuring that it respects GEF rules; • Clear cash requests, and authorization of disbursements once reporting found to be complete; • Approve budget revision, certify fund availability and transfer funds; • Ensure that GEF and UNEP quality standards are applied consistently to all projects, including branding and safeguards; • Certify project operational completion; • Link the project partners to any events organized by GEF and UNEP to disseminate information on project results and lessons; • Manage relations with GEF.	Periodic meetings (calls) with the EA's Project Management Unit (PMU), at least once per month

Executing Agency (EA)	Ministry of Environment and Sustainable Development (MINEDD)	• Ensure that the project meets its objectives and achieves expected outcomes; • Ensure technical execution according to the execution plan laid out in the project document; • Ensure technical quality of products, outputs and deliverables; • Ensure compilation and submission of progress, financial and audit reporting to IA; • Submit budget revisions to IA for approval; • Address and propose solutions to any problem or inconsistency raised by the IA; • Bring issues raised by or associated with clients to the IA for resolution; • Facilitate meetings of Steering Committees and other oversight bodies of the project; • Day to day oversight of project execution; • Submit all technical reports and completion reports to IA (realized outputs, inventories, verification of co-finance, terminal reporting, etc.); • Monitoring and evaluation of the project outputs and outcomes; • Effective use of both international and national resources • Timely availability of financing to support project execution; • Proper coordination among all project stakeholders; in particular national parties; • Timely submission of all project reports, including work plans and financial reports, • Follow-up with, or progress, procurement, financial and audit reports.	Periodic meetings (calls) with the IA's Task Manager, at least once per month
Project Management Unit (PMU)	National Project Director (NPD)	• Will be a national/governmental officer appointed by the Ministry of Environment and Sustainable Development; • Act as the PSC's Chairperson; • Report to and receive advice from the PSC; • Identify and secure partner support for the implementation of project activities; • Advise on hiring process. • Act as the project's entry point within the Government of Côte d'Ivoire	Regular meetings with the CTA, at least twice per month

	Chief Technical Advisor (CTA)	The CTA will be recruited externally, paid with GEF funds, hosted within the premises of the Ministry of Environment and Sustainable Development and have the following duties: • Take responsibility for day-to-day project operations; • Take responsibility for the execution of the project in accordance with the project objectives, activities and budget; • Deliver the outputs and demonstrate its best efforts in achieving the project outcomes; • Coordinate project execution and liaison with national counterparts (relevant ministries, national agencies, private sector, NGOs etc.); • Coordinate project execution and collaborate with the Abidjan Urban Mobility Project (AUMP); • Manage financial resources and processing all financial transaction relating to sub-allotments; • Prepare all annual/year-end project revisions; • Attend and facilitate inception workshops and national project steering committee meetings; • Assess project risks in the field, monitor risk management plan; • Ensure technical quality of products, outputs and deliverables, including final acceptance of deliverables; • Coordinate the project team of consultants and subcontractors; • Coordinate with strategic taskforces (i.e. thematic or technical working groups); • Act as Secretary of the PSC; • Plan and organize the PSC annual meetings; • Implement and monitor the project's Gender Action Plan; • Periodic reporting to UNEP and the PSC for allocation of the GEF grant according to the approved workplan and budget, in coordination with UNEP and NPD; • Notify UNEP and the PSC in writing if there is need for modification to the agreed implementation plan and budget, and to seek approval; • Address and rectify any issues or inconsistencies raised by the Implementing Agency; • Support compilation and submission of progress, financial and audit reporting to the Implementing Agency; • Prepare, at the end of the project, the project Final Report.	Regular meetings with the NPD, at least twice per month Quarterly meeting with the project's Financial Officer Ad-hoc meetings with project team members (consultants, subcontractors, etc.)
i) Implementing Agency (as per WB terminology) and ii) Project Coordination Unit of the World Bank-funded Abidjan Urban Mobility Project	i) Ministry of Transport – MOT (DGTTC/AMUGA) ii) Project Coordination Unit (PCU)	• The MOT's Directorate General of Terrestrial Transport (DGTTC) is the Implementing Agency of the AUMP. The Greater Abidjan Urban Mobility Authority (*Autorité de la Mobilité Urbaine dans le Grand Abidjan* – AMUGA) is the administrative body under the MOT which oversees improving urban transportation in the Greater Abidjan Agglomeration. It became operational in January 2020. The WB AUMP intends to transfer project management responsibility from DGTTC to AMUGA. At the time of the preparation of this proposal, this process was ongoing, and it can be expected that AMUGA will become the main contact point for this project on the operational l. • Activities of the AUMP are coordinated and managed by a Project Coordination Unit. While these entities are entirely governed under the World Bank-funded AUMP, they become key collaboration partners of this GEF-funded project and assume different roles and responsibilities. These are described in the next row of this table (Joint Implementation Unit/Focal Points for the implementation of activities).	

<table>
<tr>
<td>Joint Implementation Unit (JIU) and Focal Points for the implementation of activities (FP)</td>
<td>

National Project Director of this GEF/UNEP project (from MINEDD)
National Project Director of the WB/AUMP (from MOT/DGTTC)
Chief Technical Advisor (GEF/UNEP) (from MINEDD)
Deputy coordinator (DC) of the AUMP (or similar position) (from MOT/DGTTC)

</td>
<td>
Since this project will be implemented in parallel to and in close coordination with the AUMP, the MINEDD and the MOT will establish a Joint Implementation Unit (JIU). The JIU will be headed by the National Project Directors of both projects. On the operational level, the MOT will nominate a person (e.g. a deputy coordinator of the AUMP, or similar position) who will act as direct counterpart to MINEDD's CTA in the JIU. The JIU's main purpose is to ensure regular communication and coordination between the two projects on the level of the implementation of activities.

The implementation of Components 1 and 4 will be led by the MINEDD and Components 2 and 3 by the MOT. In this context, the MINEDD will be referred to as Focal Point (FP) for Components 1 and 4 and the MOT as Focal Point for Components 2 and 3 (The term Focal Point, or Point Focal in French, was agreed upon by both Ministries and stands for the entity that leads a Component. It shall not be confused with the GEF Operational Focal Point.). Note that MINEDD as Executing Agency for the GEF will remain accountable to GEF/UNEP for all project results, except for Outputs 2.1, 2.2 and 2.3 which will be co-financed and implemented under the full responsibility of the MOT/DGTTC under the AUMP.

The following table provides an overview of the roles of MINEDD and MOT in the various components.
<table>
<tr><th>Component</th><th>MINEDD</th><th>MOT</th></tr>
<tr><td>1 to 3</td><td colspan="2">• Regular exchange
• Joint approval of Terms of References for the sub-contracting of consultancy or similar services
• Joint coordination and oversight of activities
• Joint problem solving</td></tr>
<tr><td>1</td><td>FP for the implementation of all outputs under this component:
• Hiring of consultant and/or other sub-contractors
• Supervision of all activities und this Component
• Ensure technical quality of products, Outputs and deliverables, including final acceptance of deliverables
• Takes the initiative to consult with the AUMP PCU, communicates progress and identified risks/issues to AUMP PCU</td><td>Advisory role</td></tr>
<tr><td>2 and 3</td><td>• Support to MOT in preparing the Terms of Reference for required sub-contracts for Outputs 2.4.-3.3
• Hiring of sub-contractors for Outputs 2.4-3.3
• Verification of the completeness of services/deliverables (all Outputs)
• Final acceptance, and authorization of payments to sub-contractors (Outputs 2.4-3.3)
• Advisory role</td><td>FP for the implementation of all Outputs under this component:
• Preparation of the Terms of Reference for required sub-contracts for Outputs 2.4-3.3.
• Hiring of consultant and/or other sub-contractors for Outputs 2.1-2.3
• Supervision of all activities under Components 2 and 3
• Ensure technical quality of products, outputs and deliverables; reporting of all results to MINEDD (all Outputs)
• Final acceptance/authorization of payments to sub-contractors (Outputs 2.1-2.3)</td></tr>
<tr><td>4</td><td>Full responsibility</td><td>Not applicable</td></tr>
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Technical (or Thematic) Working Groups	TWG 'Feasibility assessment, business modeling and financing'	The objective of this TWG is to identify technically and economically feasible opportunities for electrifying taxis, minibuses and/or SOTRA buses. It will support the development of viable business models and finance schemes, propose financing opportunities and quantify potentially required financial subsidies.	The TWGs will meet regularly as required during project implementation to work on the respective topics
	TWG 'Technical regulations and standards for EVs and EVSE'	This TWG will take care of the definition of technical regulation and standards for EVs and charging infrastructure.	
	TWG 'Charging infrastructure installation planning and grid integration analysis'	This TWG will develop a plan for the setup of charging infrastructure in the city of Abidjan and support the work to identify possible distribution grid constraints.	
	TWG 'Renewable Energies'	This TWG will elaborate a proposal to amend the National Renewable Action Plan in view of the uptake of e-mobility in the public transport sector. It will also support the investigation of options for the direct purchase of renewable power for charging EVs and help identifying RE projects where RE Power Purchase Agreements could be applied.	
	TWG 'E-waste management'	This TWG will work on the integration of used EV batteries into the existing e-waste management scheme but also help identifying options for the re-use and/or recycling of batteries.	
Execution Support	UNEP's Sustainable Mobility Unit (SMU)	The Ministry of Environment and Sustainable Development (MINEDD) and Cote d'Ivoire's GEF OFP have requested the UNEP SMU to provide execution support (refer to letter in Annex N-2) on the following: • Support the preparation of a national strategy on e-mobility • Review the monitoring system to monitor the envisaged operation of 200 electric taxis and 50 electric minibuses, including data collection and analysis • Support the development of existing e-waste regulation for EVs including facilitating discussion with ECOWAS to develop respective regulation at the sub-regional level • Facilitate discussions with EV manufacturers to introduce new EVs to Cote d'Ivoire	Regular meetings between the JIU and the SMU.

ANNEX L: PROJECT WORKPLAN AND DELIVERABLES

OUTPUTS		DELIVERABLES (*)	PROJECT YEAR 1												PROJECT YEAR 2												PROJECT YEAR 3												PROJECT YEAR 4						Consultant, subcontractor or stakeholder responsible for producing the deliverable	Other stakeholders supporting deliverable production
			M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42		
Component 1: Institutionalization of and strategy-setting for low-carbon electric mobility																																												
Output 1.1: A national inter-sectoral e-mobility coordination body is established.	1.1.1	Inter-ministerial workshop to kick-off the project and to outline the policy coordination process and work plan.				*Workshop report*																																							Chief Technical Advisor	Ministries and key transport and energy sector stakeholders
	1.1.2	Preparation of a statement of cooperation (incl. shared goal, definition of processes, roles and responsibilities), submission to coordination body for adoption.				*Statement of cooperation*																																							Chief Technical Advisor	MINEDD, MOT, MPEER
	1.1.3	Quarterly coordination body meetings.					*Report*			*Report*			*Report*			*Report*			*Report*			*Report*			*Report*			*Report*			*Report*			*Report*			*Report*			*Report*				Chief Technical Advisor	MINEDD, MOT, MPEER and other relevant ministries / stakeholders
	1.1.4	Preparation of final report incl. post project action plan to implement the national e-mobility strategy in urban public transport (supporting the implementation of the Draft Roadmap for Sustainable Transport in CI) and submission for adoption.																																								*Final report*			Chief Technical Advisor	MINEDD, MOT, MPEER
	1.1.5	Report on best practices and lessons learned from the GEF project on accelerating the introduction of low-carbon electric mobility in Côte d'Ivoire *(to be shared with the Global E-mobility Project)*																																								*Best practice report*		Chief Technical Advisor	MINEDD, MOT, MPEER
Output 1.2: A joint national strategy to promote low-carbon e-mobility in urban public transport is submitted for adoption.	1.2.1	Set-up of a national strategy development team (comprising national policymakers, relevant stakeholders and an international e-mobility policy expert).									*TORs*																																		Chief Technical Advisor	N/A
	1.2.2	Workshop on national e-mobility strategy.														*Workshop report*																														Chief Technical Advisor	MINEDD, MOT, MPEER, International Policy and Strategy expert
	1.2.3	Collection and consolidation of transport and energy sector data including vehicle fleet and current policy frameworks.											*Report*																																		Chief Technical Advisor	MOT, MPEER, MINEDD, Local consultant (assisting research)
	1.2.4	Draft a gender sensitive national e-mobility strategy, incluidng an action plan.													*Working draft strategy*																														International Policy and Strategy expert	Ministries and key transport and energy sector stakeholders
	1.2.5	Final gender sensitive national e-mobility strategy submitted for adoption.																						*Draft strategy*													*Final strategy*							International Policy and Strategy expert	Ministries and key transport and energy sector stakeholders
Output 1.3: Governmental and private sector actors are trained on the benefits of e-mobility through the Global E-mobility Programme, outreach activities to inform decision makers throghout CI on project results.	1.3.1	Participation in launch of the Africa Support and Investment Platform.					*Mission report*																																					Chief Technical Advisor	Global E-Mobility Programme, Africa S&IP
	1.3.2	Participation in first regional e-mobility training.						*Mission report*																																					Chief Technical Advisor	Global E-Mobility Programme, Africa S&IP
	1.3.3	Participation in first regional training on e-buses.								*Mission report*																																			Chief Technical Advisor	Global E-Mobility Programme, Africa S&IP
	1.3.4	Participation in first meeting on e-mobility financing/marketplace.										*Mission report*																																	Chief Technical Advisor	Global E-Mobility Programme, Africa S&IP
	1.3.5	Participation in second meeting of the Africa Support and Investment Platform.															*Mission report*																													Chief Technical Advisor	Global E-Mobility Programme, Africa S&IP
	1.3.6	Participation in second regional training on e-buses.																		*Mission report*																										Chief Technical Advisor	Global E-Mobility Programme, Africa S&IP
	1.3.7	Participation in second meeting on e-mobility financing/marketplace.																						*Mission report*																					Chief Technical Advisor	Global E-Mobility Programme, Africa S&IP
	1.3.8	Participation in third meeting of the Africa Support and Investment Platform.																													*Mission report*														Chief Technical Advisor	Global E-Mobility Programme, Africa S&IP
	1.3.9	Participation in replication event.																																							*Mission report*				Chief Technical Advisor	Global E-Mobility Programme, Africa S&IP
	1.3.10	Implementation of outreach events for decision-makers in other cities and communes/suburbs of Abidjan.																		*up to 10 events within this timeframe*																	*Report on nat'l. replication opportunities*						Chief Technical Advisor	MINEDD, MOT
	1.3.11	Review of all capacity building events, based on evaluation forms.					*Eval. report*			*Eval. report*		*Eval. report*			*Eval. report*			*Eval. report*			*Eval. report*						*Eval. report*				*Eval. report*											*Eval. report*		Chief Technical Advisor	Global E-Mobility Programme
Component 2: Short term barrier removal through feasibility analyses, the demonstration of electric vehicles and know-how development for a wider introduction of electric mobility in Côte d'Ivoire																																													
Output 2.1: A feasibility study on technical/economic opportunities for the electrification of public transport modes serving feeder lines along the Yopougon-Bingerville BRT corridor is conducted.	N/A	*Output implemented / co-financed through the Abidjan Urban Mobility Project (AUMP), implemented by the Ministry of Transport. Specific deliverables will be defined in the AUMP.*	*Feasibility study expected to be concluded by end 2020, early 2021*																																										MOT (AUMP project)	MINEDD
Output 2.2: A pilot fleet of electric taxis and minibuses is introduced as part of a World Bank funded fleet renewal mechanism, including an EV bonus and a Risk Sharing Facility (RSF) to support EV investments by public transport enterprises.	N/A	*Output implemented / co-financed through the Abidjan Urban Mobility Project (AUMP), implemented by the Ministry of Transport. Specific deliverables will be defined in the AUMP.*																																										MOT (AUMP project)	MINEDD
Output 2.3: Drivers and mechanics that will operate electric vehicles and electric vehicle supply equipment (EVSE) are trained on specifics of electric mobility.	N/A	*Output implemented / co-financed through the Abidjan Urban Mobility Project (AUMP), implemented by the Ministry of Transport. Specific deliverables will be defined in the AUMP.*																																											MOT (AUMP project)	MINEDD
Output 2.4: A system to monitor the operation of the electric pilot fleet is established, data is collected and analyzed and findings and lessons learned are disseminated to support the broader introduction of e-mobility.	2.4.1	Set-up of a technical e-mobility team comprising national stakeholders (especially representatives from fleet operators, technically oriented government agencies) and an international expert (also for other technical outputs)					*TORs*																																						Chief Technical Advisor	MOT
	2.4.2	Development of a concept to monitor technical and economic performance data.						*Monitoring concept*																																						International E-Mobility Technology and Business expert	MOT, Fleet operators, Local technical consultant
	2.4.3	Quarterly collection of EV monitoring data.									*Data sets*				*Data sets*			*Data sets*			*Data sets*			*Data sets*			*Data sets*			*Data sets*														Chief Technical Advisor	MOT, Fleet operators, Local technical consultant
	2.4.4	Analysis of monitoring data, reporting of findings and recommendations to fleet operators and PMU.									*Monit. report*				*Monit. Report*			*Monit. Report*			*Monit. Report*			*Monit. Report*			*Monit. Report*			*Monit. Report*														International E-Mobility Technology and Business expert	MOT, Fleet operators
	2.4.5	Preparation of two monitoring summary reports, incl. publishable section for dissemination.																*Summary report 1*														*Summary report 2*														International E-Mobility Technology and Business expert	MOT, Fleet operators

OUTPUTS		DELIVERABLES (*)	PROJECT YEAR 1												PROJECT YEAR 2												PROJECT YEAR 3												PROJECT YEAR 4						Consultant, subcontractor or stakeholder responsible for producing the deliverable	Other stakeholders supporting deliverable production
			M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27	M28	M29	M30	M31	M32	M33	M34	M35	M36	M37	M38	M39	M40	M41	M42		
Component 2: Short term barrier removal through feasibility analyses, the demonstration of electric vehicles and know-how development for a wider introduction of electric mobility in Côte d'Ivoire																																												
Output 2.5: An electrification investment plan for SOTRA feeder-line buses is developed and submitted for adoption.	2.5.1	Preparation of a pre-feasibility study for the electrification of SOTRA buses, incl. drafting of electrification scenarios.											*Study report*																														International E-Mobility Technology and Business expert	MOT, MINEDD, SOTRA
	2.5.2	Consultation meeting(s) wit SOTRA representatives and experts to discuss and promote SOTRA electrification scenarios.														*Summary report*																												Chief Technical Advisor	MOT, MINEDD, SOTRA
	2.5.3	Drafting of an electrification investment strategy for SOTRA buses is developed and submission for adoption.																			*Draft Strategy*																						International E-Mobility Technology and Business expert	MOT, MINEDD, SOTRA
Output 2.6: A charging infrastructure installation plan for large-scale introduction of EVs in Abidjan's public transport is developed.	2.6.1	Set-up of a renewables and grid integration team comprising national energy sector stakeholders (incl. government agencies, public utilities, potentially independent power producers) and an international expert (also for other outputs)											*TORs*																														Chief Technical Advisor	MPEER, MINEDD, MOT, CIE, CI-ENERGIES
	2.6.2	Study on charging and distribution grid infrastructure investment needs for the large-scale introduction of EVs.																				*Study*																						International Grid Integration and Renewable Energy expert	MPEER, MINEDD, MOT, CIE, CI-ENERGIES, International E-Mobility Technology and Business expert
	2.6.3	Workshop to present and discuss the results of the charging infrastructure and distribution grid development study.																					*Summary report*																						Chief Technical Advisor	MPEER, MINEDD, MOT, International Grid Integration and Renewable Energy expert
	2.6.4	Finalization of an infrastructure development investment plan for Abidjan until 2030 and submission to national coordination body for adoption.																						*Investment plan*																					International Grid Integration and Renewable Energy expert	MPEER, MINEDD, MOT, CIE, CI-ENERGIES, International E-Mobility Technology and Business expert
Component 3. Preparing for scale-up and replication of low-carbon electric mobility																																												
Output 3.1: Fiscal policies and regulation are developed and submitted for adoption.	3.1.1	Set-up of a policy team comprising national stakeholders (especially from government agencies responsible for fiscal policies and electricity tariff setting) and the international e-mobility policy expert.				*TORs*																																				Chief Technical Advisor	MOT
	3.1.2	Consultation meetings/workshops with government agencies and experts to develop favorable fiscal policies/regulation.						*Summary report*																																				Chief Technical Advisor	MPMBPE, MEF, MOT, International Policy and Strategy expert
	3.1.3	Preparation of a tax reform proposal and submission for adoption.							*Reform proposal*																																			International Policy and Strategy expert	MPMBPE, MEF, MOT
	3.1.4	Preparation of proposal on preferential electricity tariffs for e-mobility and submission for adoption.																																									International Grid Integration and Renewable Energy expert	MPEER, MINEDD, International Policy and Strategy expert
Output 3.2: Technical regulations and standards for EVs and charging infrastructure are developed and submitted for adoption.	3.2.1	Consultation meetings/workshops with government agencies and experts to develop technical regulations/standards.													*Summary report*																												International E-Mobility Technology and Business expert	MOT, GIPAME, SICTA
	3.2.2	Preparation of draft technical regulations/standards package and submission for adoption.																*Draft regulation*																										International E-Mobility Technology and Business expert	MOT, GIPAME, SICTA, International Grid Integration and Renewable Energy expert
Component 4: Long-term environmental sustainability of low-carbon electric mobility																																												
Output 4.1: The interlinkage between power generation and vehicle charging is investigated to align national RE capacity targets with e-mobility projections.	4.1.1	Preparation of a study to estimate additional renewable power generation needs for low-carbon e-mobility.																				*Study*																						International Grid Integration and Renewable Energy expert	MPEER, MINEDD, MOT, CIE, CI-ENERGIES
	4.1.2	Workshop on the results of the renewable power development study.																					*Summary report*																						Chief Technical Advisor	MPEER, MINEDD, MOT, CIE, CI-ENERGIES, International Grid Integration and Renewable Energy expert
	4.1.3	Preparation of a proposal for amendments to the National Renewable Action Plan and submission for adoption.																									*Amendment proposal*																		International Grid Integration and Renewable Energy expert	MPEER, MINEDD, MOT, CIE, CI-ENERGIES
Output 4.2: Recommendations on a direct offtake tariffication scheme for the integration of RE generation and EV charging are prepared.	4.2.1	Preparation of a study to estimate supply patterns and levelized costs of electricity from renewable sources (e.g. from solar, small hydropower and biomass) and demand patterns EV fleet operators as well as viable electricity price thresholds in order to develop a proposal for renewable electricity tariffs specifically for the transport sector and use of the results within the power tariff-setting process under Output 3.1																				*Study*																						International Grid Integration and Renewable Energy expert	MINEDD, MPEER
	4.2.2	Workshop with power and transport sector representatives (incl. government agencies and private sector) to discuss the results of the short study on renewable electricity pricing for the transport sector.																					*Summary report*																						Chief Technical Advisor	MINEDD, MPEER, International Grid Integration and Renewable Energy expert
Output 4.3: An amendment to existing e-waste regulation for EV batteries is prepared and submitted for adoption; business models for the re-use of batteries are promoted.	4.3.1	Set-up of battery re-use and recycling team, comprising national stakeholders (incl. MINEDD and subordinate agencies responsible for waste treatment, waste management/battery refurbishment companies, power sector) and an international battery/recycling expert, and evaluation of possible policy development at sub-regional level within the ECOWAS framework																		*TORs*																								Chief Technical Advisor	MINEDD
	4.3.2	Consultation meetings with government agencies and responsible e-waste agencies to develop amendment to e-waste regulation.																							*Summary report*																				Chief Technical Advisor	MINEDD, SGS Renovo and Société Africaine de Recyclage - SAR, International Battery and Waste Management Expert
	4.3.3	Preparation of draft amendment to e-waste regulation for collection, recycling and disposal of used EV batteries and submission for adoption.																										*Amendment proposal*																International Battery and Waste Management Expert	MINEDD, SGS Renovo and Société Africaine de Recyclage - SAR
	4.3.4	Preparation of a study on second-life use of EV batteries incl. draft action plan to implement battery refurbishment/ re-use.																													*Study*												International Battery and Waste Management Expert	MINEDD, SGS Renovo and Société Africaine de Recyclage - SAR
	4.3.5	Workshop on business opportunities for the re-use of EV batteries.																														*Summary report*												International Battery and Waste Management Expert	MINEDD
	4.3.6	Finalization of the action plan to implement battery refurbishment and re-use and submission for adoption.																															*Action plan*										International Battery and Waste Management Expert	MINEDD

(*) Important notice: for every workshop, training or event undetaken as part of the above workplan, the project staff or consultant in charge of it needs to prepare a report (or minutes of meeting), including an attendance sheet disaggregated by gender.

ANNEX M: ESTIMATES OF DIRECT AND CONSEQUENTIAL GREENHOUSE GAS EMISSION REDUCTIONS

Total top down emission mitigation potential, tCO2	**335,636**
Thereof	
Total direct emissions mitigation 2021 - 2036, tCO2	**82,574**
Direct emission mitigation from demonstration assets 2021 - 2036, tCO2	18,741
Secondary direct emission mitigation from replication 2021 - 2036, tCO2	63,833
Indirect emission mitigation from policy 2021 -2036, tCO2	**148,944**
Total project related emissions reductions, tCO2	**231,519**

Methodology for the estimation of GHG reductions and energy savings benefits

A uniform methodology was applied in all GEF Global E-Mobility Child Projects for assessing the short, medium and long-term benefits in terms of GHG emission reductions and energy savings. The methodology compares two scenarios, the "benchmark scenario" and the "e-mobility scenario". In the benchmark scenario, the transport sector evolves assuming a "business as usual" behavior with regards to vehicle fleet growth, vehicle use, technology and fuel use. It is based on the current policy framework with no or limited incentives to buy and use clean and efficient electric vehicles. The e-mobility scenario uses the same projections with regards to vehicle fleet growth but assumes a high penetration of electric vehicles within the new vehicle market, as a consequence of the project interventions including the adoption of EV policies, the use of business models and the existence of financial mechanisms. The scenarios use a "top-down approach" targeting the national vehicle market. The Child Projects target the introduction of electric vehicles for one or multiple modes. In the latter case, calculations are performed for several modes (e.g. passenger cars, buses and 2&3 wheelers).

Projections of fleet growth, energy use and GHG emissions are based on country specific data, and country or region-specific parameters. Projection of the vehicle fleet growth is based on the elastic relationship between per capita income and vehicle fleet growth. Therefore, country specific scenarios for population growth (based on the UNDESA medium scenario) and projections for gross domestic product (GDP PPP) from the World Economic Outlook of the International Monetary Fund (IMF) are used. Vehicle fleet projections are based on vehicle sales and assumptions on technical life-time of vehicles. Historic development of the vehicle fleet is based on country specific vehicle stock and sales data.
A comprehensive set of parameters describing the technologic and economic parameters of various vehicle technologies is used to project vehicle kilometers driven and fuel used.

Country specific grid emission factors are used to estimate the emissions of the transport electricity demand. For petroleum-based fuels, well-to-wheel emission factors are used to calculate fuel-use related GHG emissions. Emission reductions which accrue during and after the project timeframe are taken into account. Therefore, GHG emission and energy use related benefits are classified as direct and indirect GHG emission reductions. This categorization follows the methodology suggested by the GEF. For the sake of simplicity and transparency, no further distinction is made to separate direct and secondary direct emission reductions.

Direct benefits correspond to the GHG emission reductions and energy savings obtained from 1.) The investments that are planned and executed during the project lifetime, i.e. the emission and energy use savings stemming from the demonstration of electric vehicles and EV supply equipment such as chargers purchased as part of the project[76]; and 2.) emission reductions and energy savings as a result of investment in replication and upscaling (secondary direct benefits).

[76] These benefits are calculated over the lifetime of the purchased assets (e.g. 15 years for cars and buses, 5 years for 2&3 wheelers and 20 years for EV supply equipment).

Direct emission reductions were calculated based on the target of introducing 200 e-taxis and 50 e-minibuses, representing 10% of the AUMP target to renew 2,000 taxis and 5% of the AUMP target to renew 1,000 minibuses. These targets were determined in consultation with the AUMP. One criterion was the budget of US$ 5 million available through the AUMP which has been reserved for bonus payments for the purchase of EVs and necessary equipment. Here, several scenarios have been calculated. Under the most conservative scenario (considering e.g. higher vehicle costs, a possible unavailability of tax waivers, high expectations by fleet operators in bonus payments, etc.) the funds for the electrification bonus would be sufficient to pay electrification bonuses for the planned 200 e-taxis and 50 e-minibuses. Other considerations were the manageability of the electrification bonus payments through the fleet renewal mechanism FDTR, assumptions about the interest for this new technology among fleet operators as well as possible constraints in the availability of staff (especially mechanics who will be trained by the AUMP) able to maintain and repair EVs and EV supply equipment (EVSE). Secondary direct emission reductions are estimated to account for one third of the indirect emission reductions and are based on the assumption of continued implementation of financial mechanisms to support the market uptake of EVs.

Indirect benefits correspond to the GHG reductions and energy savings obtained during and beyond the project as the result of outputs and outcomes of the project. This includes in particular the adoption of policies and business models which incentivize the uptake of electric mobility. Total emission reductions attributable to the project are based on the cumulative sum of annual emission reductions compared to the baseline scenario over a time frame equivalent to the lifetime of the demonstration assets purchased as part of the project or for a period of ten years after the end of the project[77].

Since the quantification of indirect benefits is based on an e-mobility scenario considering the maximum realizable electric mobility market (both in terms of size and pace of technology introduction), causality factors are used to estimate the contribution of the GEF funded project to the projected large-scale and nation-wide introduction of electric vehicles in the specific vehicle mode or sub-mode (e.g. only considering taxis). Guidelines issued by the GEF for the selection of the causality factor level are as following:

- Level 5 = “The project contribution is critical, and nothing would have happened in the benchmark scenario,” causality factor = 100%
- Level 4 = “The project contribution is dominant, but some of this reduction can be attributed to the benchmark scenario,” causality factor = 80%
- Level 3 = “The project contribution is substantial, but modest indirect emission reductions can be attributed to the benchmark scenario,” causality factor = 60%
- Level 2 = “The project contribution is modest, and substantial indirect emission reductions can be attributed to the benchmark,” causality factor = 40%
- Level 1 = “The project contribution is weak, and most indirect emission reductions can be attributed to the benchmark scenario,” GEF causality = 20%

In the case of the Cote d’Ivoire, level 3 causality factors have been applied to taxis and minibuses, and a level 5 causality factor has been used for the SOTRA bus fleet.

A selection of the parameters and variables to describe the benchmark and the e-mobility scenario is shown in Table 4, a flow diagram of the e-mob calculator is shown in Figure 14.

[77] Whichever time frame is longer is applied. E.g. if the project demonstrates e-buses with an assumed lifetime of 15 years (which are introduced in year 2 of the project) then the timeframe for the calculation of indirect emission reductions is the year 2036 (2021 plus 15 years). If electric motorcycles with a lifetime of only 5 years are demonstrated, the timeframe is 2034 (end of project 2024 plus ten years).

TABLE 4 VARIABLES AND PARAMETERS OF THE BENCHMARK AND EMOBILITY SCENARIO

	Variable	Unit
Socio – economic data	GDP PPP (2000-2018)	Billion USD PPP
	Population	Million habitants
	Annual growth of GDP	% of 2023-2030, and % 2031-2050
Vehicle fleet data	Vehicles stock (2000-2015)	Thousand vehicles
	Vehicles sales (2000-2015)	Thousand vehicles
	Technology share of stock	% share gasoline, diesel, hybrid, PHEV, BEV
Vehicle operating information	Annual Mileage	km
	Load factor	Passenger in a vehicle
	Technical lifetime	years
	Share of electric driving for PHEV	%
	Fuel economy (FE) by technology	Lge / 100 km, kWh / 100 km
	Annual FE improvement by technology	%
	FE gap (Real vs Type Approval)	%

Variable	Benchmark scenario	E-mobility scenario
Technology share of vehicle sales	%	%
Well to tank CO2 footprint Tank to wheel CO2 footprint	kg CO2/ Lge kgCO2 / kWh	kg CO2/ Lge kgCO2 / kWh
Vehicle fleet emission standards	Euro 1 to Euro 6	Euro 1 to Euro 6
Fuel quality standards	Euro 1 to Euro 6	Euro 1 to Euro 6
Vehicle price, maintenance and fuel price	USD	USD

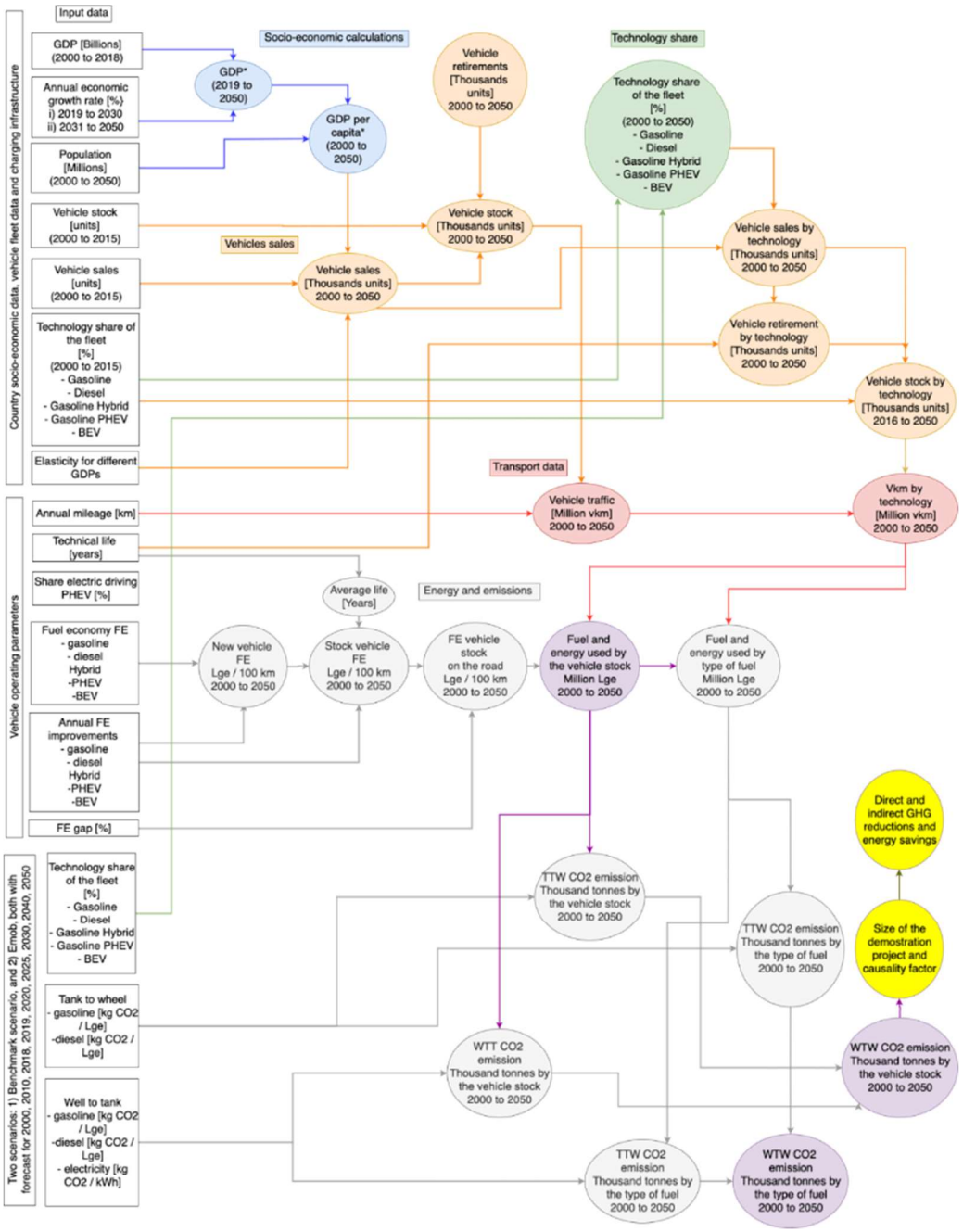

Figure 14 Flow diagram of the emob calculator

ANNEX N-1: OFP ENDORSEMENT LETTER

MINISTERE L'ECONOMIE ET DES FINANCES

SECRETARIAT PERMANENT,
COMMISSION NATIONALE DU FONDS
POUR L'ENVIRONNEMENT MONDIAL (CNFEM)
POINT FOCAL OPERATIONNEL FEM

LE SECRETARIAT PERMANENT

Ref.: 000032 MEF/SP-CNFEM/di

REPUBLIQUE DE COTE D'IVOIRE
Union Discipline Travail

Abidjan, the 22th March 2019

To: Mrs Kelly West,
UN Environment Facility
P.O Box 30552,
Nairobi 00100, Kenya

Subject: Endorsement for "Integrated, Sustainable and low Emissions Transport in the Côte d'Ivoire"

In my capacity as GEF Operational Focal Point for Côte d'Ivoire, I confirm that the above project proposal (a) is in accordance with my government's national priorities, and our commitment to the relevant global environmental conventions; and (b) was discussed with relevant stakeholders, including the global environmental focal points.

I am pleased to endorse the preparation of the above project proposal with the support of the GEF Agency (ies) listed below. If approved, the proposal will be prepared and implemented by Ministry of Environment and Sustainable Development.
I request the GEF Agency to provide a copy of the project document before it is submitted to the GEF Secretariat For CEO endorsement.

The total financing (from GEFTF) being requested for this project is US $ 500 000, inclusive of project preparation grant (PPG), if any, Agency fees for project cycle management services associated with the total GEF grant. The financing requested for Côte d'Ivoire is detailed in the table below:

Source of Funds	GEF Agency	Focal Area	Amount (in US$)			
			Project Preparation	Project	Fee	Total
GEFTF	UNEP	Climate Change	54 500	408 716 USD	36 784 USD	500 000
Total GEF Resources			54 500	408 716 USD	36 784 USD	500 000

I consent to the utilisation of Côte d'Ivoire's allocation in GEF-7 as defined in the System for Transparent Allocation of Resources (STAR)

Sincerely,

MINISTERE DE L'ECONOMIE ET DES FINANCES * COMMISSION NATIONALE DU FONDS POUR L'ENVIRONNEMENT MONDIAL * SECRETARIAT PERMANENT
POINT FOCAL OPERATIONNEL

KONE BAKAYOKO Alimata
Permanent Secretary
GEF Operational Focal Point
Côte d'Ivoire

Copy to

Ministry of Economy and Finances, GEF Operational Focal Point
Ministry of Environment and Sustainable Development,
GEF Political Focal Point
General Director of Environment, Technical Committee
GEF Commission President
Convention Focal Point for UNCCD
Convention Focal Point UNFCC
GEF Chief Executive Officer (C.E.O)

Secrétariat Permanent de la Commission Nationale du Fonds pour l'Environnement Mondial ; Point Focal Opérationnel FEM
Abidjan-Plateau-Imm. JECEDA, 3ème étage –Porte F32- 01 BP 12301 Abidjan 01 – Tél (225) 20 22 81 03

ANNEX N-2: OFP EXECUTION SUPPORT APPROVAL LETTER

MINISTERE DE L'ECONOMIE ET DES FINANCES

SECRETARIAT PERMANENT DE LA
COMMISSION NATIONALE DU FONDS
POUR L'ENVIRONNEMENT MONDIAL (CNFEM)
POINT FOCAL OPERATIONNEL

LE SECRETAIRE PERMANENT

000173

N° _____/MEF/SP-CNFEM/KBA/nny

REPUBLIQUE DE COTE D'IVOIRE
Union-Discipline-Travail

Abidjan, the 09th november 2020

To: **Mrs. Kelly West**
GEF Coordinator
UNEP
Nairobi, Kenya

Subject: **Letter of Support to request GEF Agency Execution for the "Supporting the Republic of Côte d'Ivoire with the Shift to Electric Mobility" project (GEF ID 10302)**

Dear Mrs. West,

1. In my capacity as GEF Operational Focal Point for Côte d'Ivoire, I hereby request UNEP, the GEF implementing Agency for the aforementioned project, to also carry out execution services for the above project, on an exceptional basis, for a total amount of US$ 27,100.

2. The execution services provided by UNEP's Sustainable Mobility Unit are expected to include:

- Support the preparation of a national strategy to promote low-carbon e-mobility in urban public transport.
- Review the system developed to monitor the operation of the electric pilot fleet, including data collection and analysis to support the broader introduction of e-mobility.
- Support development or review of existing e-waste regulation for EV and business models for the re-use of batteries.
- Facilitate discussions with EV manufacturers to introduce new EVs to the Cote d'ivoire vehicle market.

3. Execution activities provided by UNEP are described in detail in the GEF CEO Endorsement / Approval request and accompanying project documents, including the project budget.

Sincerely,

MINISTERE DE L'ECONOMIE ET DES FINANCES
SECRETARIAT PERMANENT DE LA COMMISSION NATIONALE DU FONDS POUR L'ENVIRONNEMENT MONDIAL
POINT FOCAL OPERATIONNEL

KONE BAKAYOKO Alimata
Permanent Secretary
GEF Operational Focal Point
Côte d'Ivoire

Copy to:
- Ministry in charge of Economics and Finances
- Ministry of Environment and Sustainable Development,
GEF Political Focal Point GEF
- General Director of Sustainable Development

Secrétariat Permanent de la Commission Nationale du Fonds pour l'Environnement Mondial, Point Focal Opérationnel FEM
Abidjan – Plateau – Imm. JECEDA 3ème Etage - Porte F32 – 01 B.P. 12301 Abidjan 01 Tél : (225) 20 22 81 03

ANNEX O: CO-FINANCING COMMITMENT LETTERS FROM PROJECT PARTNERS

MINISTERE DE L'ENVIRONNEMENT
ET DU DEVELOPPEMENT DURABLE

Le Ministre

N° FE - 00572 / MINEDD/CAB2

REPUBLIQUE DE COTE D'IVOIRE
Union - Discipline - Travail

Abidjan, le 05 MAI 2020

A

Madame. Kelly WEST, Coordonnatrice
FEM, Programme des Nations
Unies pour l'Environnement
Nairobi, KENYA.

Objet : Co-financement du Ministère de l'Environnement et du Développement Durable pour le projet 'Integrated, Sustainable and Low Emissions Transport in Côte d'Ivoire' (Identifiant FEM [10302]).

Madame la Coordonnatrice,

J'ai l'honneur de vous informer du soutien du Ministère de l'Environnement et du Développement Durable, au projet 'Integrated, Sustainable and Low Emissions Transport in Côte d'Ivoire' (Identifiant FEM [10302]). A cet effet, le Ministère de l'Environnement et du Développement Durable apportera un cofinancement équivalent à 302,000 dollars US sous la forme de contribution en nature au cours des 4 ans de mise en œuvre du projet qui démarrera en 2021.

Dans le cadre de cette contribution de cofinancement, le Ministère de l'Environnement et du Développement Durable a l'intention de soutenir les composantes suivantes dudit projet:

- Institutionnalisation et définition d'une stratégie nationale pour l'introduction de la mobilité électrique à faible teneur en carbone en Côte d'Ivoire (composante 1) ;
- Elimination des obstacles à court terme à travers des analyses de faisabilité et le développement du savoir-faire pour une introduction plus large de la mobilité électrique en Côte d'Ivoire (composante 2) ;
- Préparer un cadre favorable à la mise à l'échelle et la réplication de la mobilité électrique (composante 3) ;
- Assurer la durabilité environnementale à long terme de la mobilité électrique (composante 4).

Dans le cadre de cette contribution de cofinancement, le Ministère de l'Environnement et du Développement Durable, en tant qu'Agence d'Exécution du projet, fournira en outre un cofinancement pour l'hébergement de l'Unité de Gestion du Projet, pour soutenir la gestion globale du projet (y compris la mise en œuvre quotidienne, la gestion financière, le suivi du projet, la liaison des partenaires du projet, la communication et la diffusion des résultats, la coordination avec l'Agence FEM PNUE, etc.) et pour soutenir la réalisation technique des quatre composantes du projet.

Les contributions du Ministère de l'Environnement et du Développement Durable se matérialiseront sous plusieurs formes, telles que:

- Cofinancement en nature pour les espaces de bureau, le temps du personnel, les déplacements et le soutien opérationnel au projet ;
- Cofinancement en nature du temps du personnel pour le soutien politique et technique du projet ainsi que la gestion du projet.

Le Ministère de l'Environnement et du Développement Durable soutient fermement cet important projet du FEM et est heureux d'en faire partie. Nous attendons avec intérêt de continuer à travailler avec le PNUE pour accélérer la transition mondiale vers la mobilité électrique et en faire un succès.

Je vous prie de croire, **Madame la Coordonnatrice**, en l'assurance de ma considération distinguée.

Joseph Séka SEKA

Ministère de l'Environnement et du Développement Durable
Cité Administrative, Plateau, Tour D, 10e étage – 20 BP 650 Abidjan 20 – Tél. : (+225) 22 23 99 00

MINISTERE DES TRANSPORTS

CABINET

REPUBLIQUE DE COTE D'IVOIRE
Union – Discipline – Travail

N/Réf. : 1050 /MT/CAB/AMUGA/RK

Abidjan, le 10 JUIN 2020

A
Madame Kelly WEST,
Coordinatrice FEM,
Programme des Nations Unies
pour l'Environnement (PNUE)

Nairobi, Kenya

Objet : Cofinancement du Ministère des Transports pour le projet « **Integrated, Sustainable and Low Emissions Transport in Côte d'Ivoire** » **(Identifiant FEM [10302]**

Madame,

Dans le cadre de la préparation du projet « **Integrated, Sustainable and Low Emissions Transport in Côte d'Ivoire** » financé par le Fonds Mondial pour l'Environnement (FEM), une mission du bureau sous-régional du PNUE a séjourné à Abidjan du 22 au 25 octobre 2019 pour rencontrer toutes les parties prenantes ivoiriennes. A sa suite, des discussions ont été poursuivies notamment avec la Direction Générale de l'AMUGA et la coordination du Projet de Mobilité Urbaine d'Abidjan (PMUA) en vue de la concrétisation du projet FEM.

Aussi, ai-je l'honneur de marquer par la présente le ferme soutien du Ministère des Transports au projet FEM. Ainsi, le Ministère des Transports apportera une contribution audit projet dont les composantes sont décrites ci-après :

- **Composante 1 :** Institutionnaliser et développer de stratégies à faibles émissions de carbone de la mobilité électrique ;
- **Composante 2 :** Atténuer les obstacles à court terme par des analyses de faisabilité, l'essai de véhicules électriques et le développement de bonnes pratiques pour une introduction à grande échelle de la mobilité électrique en Côte d'Ivoire ;
- **Composante 3 :** Préparer un cadre favorable à la mise à l'échelle et la réplication de la mobilité électrique à faibles émissions de carbone en Côte d'Ivoire ;
- **Composante 4 :** Elaborer des mesures pour assurer la durabilité environnementale à long terme de la mobilité électrique à faibles émissions de carbone en Côte d'Ivoire.

Le Ministère des Transports est engagé dans la réalisation d'importants projets de transports écologiques de masse à Abidjan dont le PMUA. Ce projet cofinancé par la Banque Mondiale, l'Agence Française de Développement et le Gouvernement de Côte d'Ivoire, permettra à terme d'améliorer les conditions de mobilité urbaine sur le corridor Est-Ouest d'Abidjan, de Yopougon à Bingerville.

Ainsi, nous apprécions l'initiative financée par le FEM car elle est complémentaire au PMUA et renforcera davantage son impact. Dans le cadre du PMUA, le Ministère des Transports soutiendra la mise en place d'une flotte pilote de modes de transport public électrique, en l'occurrence de taxis et minibus urbains, desservant le corridor du « Bus Rapid Transit (BRT) » entre Yopougon et Bingerville à Abidjan. Le soutien à l'introduction de modes de transport public électrique contribuera directement à la composante 2 du projet « Integrated, Sustainable and Low Emissions Transport in Côte d'Ivoire ».

Le Ministère des Transports envisage de financer, à travers le PMUA, l'appui à la mise en place d'une flotte de transports publics électriques comme suit :

- Réalisation d'une étude de faisabilité dans laquelle seront identifiées les possibilités techniques et économiques de réalisation de l'électrification des taxis et minibus urbains desservant notamment les lignes de rabattement le long du corridor BRT Yopougon-Bingerville, y compris l'évaluation des besoins d'investissement en infrastructures de recharge pour ***un coût d'environ 90 000 dollars US*** ;
- Appui à la mise en place d'une flotte pilote de modes de transports publics électriques desservant le corridor BRT Yopougon-Bingerville à Abidjan et de l'infrastructure de recharge, par le biais du mécanisme de renouvellement de la flotte de Côte d'Ivoire, piloté par le Fonds de Développement du Transport Routier (FDTR). Ce soutien comprendra l'octroi d'une prime à l'électrification de la flotte aux opérateurs de transport public dans le cadre du programme de mise à la casse du FDTR ainsi qu'une assistance technique pour préparer le FDTR à faire face aux spécificités de la mobilité électronique pour ***un coût pouvant aller jusqu'à 5 millions de dollars US à travers la sous-composante C2 du PMUA (Renouvellement de la flotte de taxis et de minibus)*** ;
- Formations spécifiques pour le personnel (notamment les conducteurs et les mécaniciens) qui fera fonctionner les nouveaux véhicules électriques et l'infrastructure de recharge associée pour ***un coût d'environ 100 000 dollars US au titre de la sous-composante D1 du PMUA (Développement des compétences dans le secteur des transports urbains).***

Par ailleurs, le Ministère des Transports apportera au projet FEM un ***cofinancement en nature évalué à 100 000 dollars US*** matérialisé sous forme de temps de personnel et de mise à disposition de locaux du Ministère pour la mise en œuvre des tâches suivantes :

- participer au comité de pilotage et superviser l'avancement du projet FEM en apportant notamment une orientation stratégique ;
- participer aux activités de l'organe national de coordination de la mobilité électrique sur la composante 1 du projet FEM ;
- être le point focal « Transports » pour la mise en œuvre des composantes 2 et 3 ***en recrutant un expert au sein du PMUA qui travaillera en liaison avec le FDTR en moyenne 50% de son temps sur les composantes 2 et 3 pendant les trois premières années du projet FEM*** ;
- apporter un appui à l'élaboration des mesures permettant d'assurer la durabilité environnementale de la mobilité électrique au niveau de la composante 4 ;
- Assurer activement l'interface entre le projet FEM et le PMUA ;
- Etablir les liens entre le projet FEM et les acteurs du secteur des transports.

Je note enfin que le financement total s'établit à **5,29 millions de dollars US**, dont **100 000 dollars US en nature** et **5,19 millions de dollars US en investissements publics, pris en charge le projet FEM**, qui devrait démarrer en 2021 pour une durée de 4 ans.

Le Ministère des Transports accorde un intérêt à la mise en œuvre du projet FEM et entend intensifier sa coopération avec le PNUE pour accélérer la transition mondiale vers la mobilité électrique et en faire un succès en Côte d'Ivoire.

Dans l'attente de la mise en œuvre effective du projet, je vous prie d'agréer, **Madame**, l'expression de ma considération distinguée.

P/ le Ministre et par Délégation
Le Directeur de Cabinet

Ahmed DIOMANDE

MINISTERE DU PETROLE, DE L'ENERGIE
ET DES ENERGIES RENOUVELABLES

RÉPUBLIQUE DE CÔTE-D'IVOIRE
Union - Discipline-Travail

N° 1224 /MPEER/CAB/DK

Abidjan, le 05 OCT 2020

LE MINISTRE
/-)
Mme. Kelly WEST, Coordonnatrice FEM Programme des Nations Unie pour l'Environnement

Nairobi, Kenya

Objet : Co-financement du projet 'Integrated, Sustainable and Low Emissions Transport in Côte d'Ivoire' (Identifiant FEM [10302])

Madame la Coordonnatrice,

J'ai le plaisir de vous informer du soutien du Ministère du Pétrole, de l'Énergie et des Énergies Renouvelables au projet 'Integrated, Sustainable and Low Emissions Transport in Côte d'Ivoire' (Identifiant FEM [10302]). Le Ministère du Pétrole, de l'Énergie et des Énergies Renouvelables apportera un cofinancement équivalent à 50,000 dollars US sous la forme de contribution en nature au cours des 4 ans de mise en œuvre du projet qui démarrera en 2021.

Dans le cadre de cette contribution de cofinancement, le Ministère du Pétrole, de l'Énergie et des Énergies Renouvelables a l'intention de soutenir les composantes de projet suivantes :

- Institutionnalisation et définition d'une stratégie nationale pour l'introduction de la mobilité électrique à faible teneur en carbone en Côte d'Ivoire (composante 1)
- Elimination des obstacles à court terme à travers des analyses de faisabilité et le développement du savoir-faire pour une introduction plus large de la mobilité électrique en Côte d'Ivoire (composante 2)
- Préparer un cadre favorable à la mise à l'échelle et la réplication de la mobilité électrique (composante 3)
- Assurer la durabilité environnementale à long terme de la mobilité électrique (composante 4)

Le co-financement en nature du Ministère du Pétrole, de l'Énergie et des Énergies Renouvelables se matérialisera sous forme de personnel technique pour la mise en œuvre des tâches suivantes :

- Agir en tant que membre du comité de pilotage et superviser l'avancement du projet et de fournir une orientation stratégique
- Agir en tant que membre de l'organe national de coordination de la mobilité électrique (composante 1)

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- Soutenir la mise en œuvre des composantes 2, 3 et 4 en ce qui concerne l'intégration du secteur de l'énergie dans le secteur des transports, p.ex. l'analyse et planification du développement des réseaux de distribution ou le développement stratégique des énergies renouvelables pour alimenter les véhicules électriques
- Etablir les liens entre le projet et les acteurs du secteur de l'énergie

En outre, le Ministère du Pétrole, de l'Énergie et des Énergies Renouvelables est heureux de confirmer qu'il est en train de préparer et réaliser des projets solaires et de biomasse. Cela permettra de renforcer l'objectif du projet, à savoir faire fonctionner des véhicules électriques alimentés à l'électricité avec un faible facteur d'émission de dioxyde de carbone.

Le Ministère du Pétrole, de l'Énergie et des Énergies Renouvelables soutient fermement cet important projet du FEM et est heureux d'en faire partie. Nous attendons avec intérêt de continuer à travailler avec le PNUE pour accélérer la transition mondiale vers la mobilité électrique et en faire un succès.

Je vous prie de croire **Madame la Coordonnatrice,** en l'assurance de ma considération distinguée.

Le Ministre du Pétrole, de l'Énergie et des Énergies Renouvelables

Abdourahmane CISSE

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West Africa Office

UN environment programme

Date 15 August 2020

Reference UNEP/WA-SRO/2020/AL

Subject: UNEP West Africa Office co-financing towards the integrated, Sustainable and Low Emissions Transport in Côte d'Ivoire project (GEF ID 10302)

Dear Mrs. WEST,

I have the pleasure of writing to you to inform you of the Sub-regional Office of UNEP for West Africa's support to the "Integrated, Sustainable and Low Emissions Transport in Côte d'Ivoire" project (GEF ID 10302]). The UNEP West Africa Office will make a co-financing contribution worth of US$ 45,000 in the form of in-kind over the 4 years of the project's implementation, starting early 2021.

The Sub-Regional Office for West Africa is located in Cote d'Ivoire. As such, the team will be engaged in the project implementation from time to time. The sub-regional office contributions will take several forms, and involve the following:

- Supporting the project with outreach to Ivoirian stakeholders and partners
- Participating in some of the project's meetings such as the inception workshop, the PSC meetings
- Maintaining effective communication with the national coordination of the project
- Sharing information/ progress report with the relevant Outcome coalition of UN agencies under the United Nations Sustainable Development Cooperation Framework (UNSDCF)
- Disseminating information on the implementation of the project as appropriate

The West Africa Office strongly supports this important GEF project and is pleased to be part of it. We look forward to continue working together to accelerate the global transition to electric mobility, and making it a success.

Yours sincerely,

Angele Luh-Sy
Head
UNEP West Africa Office.

To: Mrs Kelly West
GEF Coordinator
UNEP
Nairobi, Kenya
E-mail : kelly.west@un.org

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ANNEX P: ENVIRONMENTAL, SOCIAL AND ECONOMIC REVIEW NOTE (ESERN)

I. Project Overview

Identification	10302
Project Title	Integrated, Sustainable and Low Emissions Transport in Côte d'Ivoire
Managing Division	Economy Division, UNEP
Type/Location	National
Region	Africa
List Countries	Côte d'Ivoire
Project Description	The project's objective is to accelerate the introduction of electric mobility in Côte d'Ivoire through revision of the policy and institutional framework; training and capacity building; demonstration of electric vehicles; development of finance schemes and business models; private sector engagement; and upscaling and replication. The project will support initial investments of Côte d'Ivoire in electric vehicles, with a focus on the public transit sector. To that end it will: - Support the country to install an inters-sectoral coordination body - Provide capacity building and international exchange opportunities for government stakeholders through working with the global child project's UNEP/IEA global platform on electric vehicles as well as UNEP's Africa EV Investment and Support Platform - Identify the economically/technically feasible opportunities for the electrification of public transport modes serving feeder lines along the Yopougon-Bingerville BRT corridor - Support taxi and minibus fleet operators in investing in and operating electric vehicles - Support Abidjan's bus operator SOTRA by developing an electrification investment plan forb electric buses - Monitor performance and operations of the newly introduced electric vehicles and communicate findings, lessons learned but also good practices to fleet operators, national stakeholders and the E-Mobility Global Programme - Provide support on the design of a charging grid - Provide support to the design of adequate e-mobility fiscal policies and regulation as well as technical regulations and standards - Provide support on the management of negative environmental impact of disposal of e-wastes from electric vehicles and the identification of opportunities for the re-use of old EV batteries in other applications (second life) - Provide tools to ensure that electric vehicles are fueled with zero-carbon renewable electricity
Estimated duration of project:	42 months
Estimated cost of the project:	$ 408,716 (GEF Funding)

II. Environmental Social and Economic Screening Determination

A. Summary of the Safeguard Risks Triggered

Safeguard Standard Triggered by the Project	Impact of Risk[78] (1-5)	Probability of Risk (1-5)	Significance of Risk (L, M, H)
SS 1: Biodiversity, natural habitat and Sustainable Management of Living Resources	1	1	L
SS 2: Resource Efficiency, Pollution Prevention and Management of Chemicals and Wastes	3	2	M
SS 3: Safety of Dams and other major infrastructure	1	1	L
SS 4: Involuntary resettlement	1	1	L
SS 5: Indigenous peoples	1	1	L
SS 6: Labor and working conditions	1	1	L
SS 7: Cultural Heritage	1	1	L
SS 8: Gender equity	1	1	L
SS 9: Economic Sustainability	2	1	L

B. ESE Screening Decision[79] (Refer to the UNEP ESES Framework (Chapter 2) and the UNEP's ESES Guidelines.)

Low risk ☐ Moderate risk ■ High risk ☐ Additional information required ☐

C. Development of ESE Review Note and Screening Decision:

Prepared by: Name: Jens Altevogt Date: 01 March 2020

Safeguard Advisor: Name: Yunae Yi Date: 15 November 2020

Task Manager: Name: Julien Lheureux Date: 16 November 2020

D. Recommended further action from the Safeguard Advisor:

The project is in the Moderate risk category. "Good practice" (which requires no additional assessment or separate safeguard management plan. However, due diligence on potential safeguard issues is recommended throughout the project) is recommended. UNEP ESSF guiding principles-- resilience and sustainability; human rights, gender equality and women empowerment, accountability and leave no one behind--are still applicable for all UNEP projects. Project level grievance mechanism (if the government does not have such venue) should be established for any complaints to be handled swiftly at the project level.

[78] Refer to UNEP Environment, Social and Economic Sustainability (ESES): Implementation Guidance Note to assign values to the Impact of Risk and the Probability of Risk to determine the overall significance of Risk (Low, Moderate or High).

[79] **Low risk**: Negative impacts negligible: no further study or impact management required.
Moderate risk: Potential negative impacts, but less significant; few if any impacts irreversible; impact amenable to management using standard mitigation measures; limited environmental or social analysis may be required to develop a ESEMP. Straightforward application of good practice may be sufficient without additional study.
High risk: Potential for significant negative impacts, possibly irreversible, ESEA including a full impact assessment may be required, followed by an effective safeguard management plan.

III. ESES Principle and Safeguard checklist

Precautionary Approach
The project will take precautionary measures even if some cause and effect relationships are not fully established scientifically and there is risk of causing harm to the people or to the environment.
Human Rights Principle
The project will make an effort to include any potentially affected stakeholders, in particular vulnerable and marginalized groups; from the decision making process that may affect them.
The project will respond to any significant concerns or disputes raised during the stakeholder engagement process.
The project will make an effort to avoid inequitable or discriminatory negative impacts on the quality of and access to resources or basic services, on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups.[80]

Screening checklist	Y/N/ Maybe	Comment
Safeguard Standard 1: Biodiversity, natural habitat and Sustainable Management of Living Resources		
Will the proposed project support directly or indirectly any activities that significantly convert or degrade biodiversity and habitat including modified habitat, natural habitat and critical natural habitat?	N	
Will the proposed project likely convert or degrade habitats that are legally protected?	N	
Will the proposed project likely convert or degrade habitats that are officially proposed for protection? (e.g.; National Park, Nature Conservancy, Indigenous Community Conserved Area, (ICCA); etc.)	N	
Will the proposed project likely convert or degrade habitats that are identified by authoritative sources for their high conservation and biodiversity value?	N	
Will the proposed project likely convert or degrade habitats that are recognized- including by authoritative sources and /or the national and local government entity, as protected and conserved by traditional local communities?	N	
Will the proposed project approach possibly not be legally permitted or inconsistent with any officially recognized management plans for the area?	N	
Will the proposed project activities result in soils deterioration and land degradation?	N	
Will the proposed project interventions cause any changes to the quality or quantity of water in rivers, ponds, lakes or other wetlands?	N	
Will the proposed project possibly introduce or utilize any invasive alien species of flora and fauna, whether accidental or intentional?	N	
Safeguard Standard 2: Resource Efficiency, Pollution Prevention and Management of Chemicals and Wastes		
Will the proposed project likely result in the significant release of pollutants to air, water or soil?	N	

[80] Prohibited grounds of discrimination include race, ethnicity, gender, age, language, disability, sexual orientation, religion, political or other opinion, national or social or geographical origin, property, birth or other status including as an indigenous person or as a member of a minority. References to "women and men" or similar is understood to include women and men, boys and girls, and other groups discriminated against based on their gender identities, such as transgender people and transsexuals.

Screening checklist	Y/N/ Maybe	Comment
Will the proposed project likely consume or cause significant consumption of water, energy or other resources through its own footprint or through the boundary of influence of the activity?	N	The project seeks to reduce fossil fuel consumption through the promotion of electric vehicles fueled by renewable energy. The project will contribute to the development of renewable energy power generation capacity (as part of Component 4) to meet increasing electricity demand from electric mobility.
Will the proposed project likely cause significant generation of Green House Gas (GHG) emissions during and/or after the project?	N	The purpose of this project is to decrease GHG emissions in the transport sector compared to the baseline situation. Please refer to section "*1.b.6) Global environmental benefits*" and Annex M for further details. Furthermore, the project will study GHG (and air pollutant) emission reduction stemming from the Abidjan electric BRT system, including electrification of selected feeder lines and considering effects of modal shift.
Will the proposed project likely generate wastes, including hazardous waste that cannot be reused, recycled or disposed in an environmentally sound and safe manner?	N	The introduction of electric vehicles will result in the generation of waste from used EV batteries. The project will address this issue by amending the existing e-waste regulatory framework for the collection, recycling and safe disposal of used EV batteries under project Component 4. The project will also promote re-use options to avoid the need to recycle or dispose batteries. The desired outcome of Component 4 is that measures are developed to ensure the long-term environmental sustainability of low-carbon electric mobility.
Will the proposed project use, cause the use of, or manage the use of, storage and disposal of hazardous chemicals, including pesticides?	N	
Will the proposed project involve the manufacturing, trade, release and/or use of hazardous materials subject to international action bans or phase-outs, such as DDT, PCBs and other chemicals listed in international conventions such as the Stockholm Convention on Persistent Organic Pollutants or the Montreal Protocol?	N	

Screening checklist	Y/N/ Maybe	Comment
Will the proposed project require the procurement of chemical pesticides that is not a component of integrated pest management (IPM)[81] or integrated vector management (IVM)[82] approaches?	N	
Will the proposed project require inclusion of chemical pesticides that are included in IPM or IVM but high in human toxicity?	N	
Will the proposed project have difficulty in abiding to FAO's International Code of Conduct[83] in terms of handling, storage, application and disposal of pesticides?	N	
Will the proposed project potentially expose the public to hazardous materials and substances and pose potentially serious risk to human health and the environment?	N	The project will address this issue by developing a regulatory framework for the collection, recycling and safe disposal of and promoting 2nd life options for used EV batteries under Component 4.
Safeguard Standard 3: Safety of Dams and other major infrastructure		
Will the proposed project involve constructing a new dam(s) or new major infrastructure?	N	Potential minor infrastructure additions co-financed alongside the GEF project. These infrastructure investments will be financed through a World Bank loan and are subject to WB safeguard procedures.
Will the proposed project involve rehabilitating an existing dam(s) or existing major infrastructure?	N	
Will the proposed project activities involve dam or other major infrastructure safety operations?	N	
Safeguard Standard 4: Involuntary resettlement		
Will the proposed project likely involve full or partial physical displacement or relocation of people?	N	
Will the proposed project involve involuntary restrictions on land use that deny a community the use of resources to which they have traditional or recognizable use rights?	N	
Will the proposed project likely cause restrictions on access to land or use of resources that are sources of livelihood?	N	
Will the proposed project likely cause or involve temporary/permanent loss of land?	N	
Will the proposed project likely cause or involve economic displacements affecting their crops, businesses, income generation sources and assets?	N	
Will the proposed project likely cause or involve forced eviction?	N	
Will the proposed project likely affect land tenure arrangements, including communal and/or customary/traditional land tenure patterns negatively?	N	
Safeguard Standard 5: Indigenous peoples[84]		

[81] "Integrated Pest Management (IPM) means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimize risks to human health and the environment. IPM emphasizes the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms http://www.fao.org/agriculture/crops/thematic-sitemap/theme/pests/ipm/en/

[82] "IVM is a rational decision-making process for the optimal use of resources for vector control. The approach seeks to improve the efficacy, cost-effectiveness, ecological soundness and sustainability of disease-vector control. The ultimate goal is to prevent the transmission of vector-borne diseases such as malaria, dengue, Japanese encephalitis, leishmaniasis, schistosomiasis and Chagas disease." (http://www.who.int/neglected_diseases/vector_ecology/ivm_concept/en/)

[83] Find more information from http://www.fao.org/fileadmin/templates/agphome/documents/Pests_Pesticides/Code/CODE_2014Sep_ENG.pdf

[84] Refer to the Toolkit for the application of the UNEP Indigenous Peoples Policy Guidance for further information.

Screening checklist	Y/N/ Maybe	Comment
Will indigenous peoples be present in the proposed project area or area of influence?	N	
Will the proposed project be located on lands and territories claimed by indigenous peoples?	N	
Will the proposed project likely affect livelihoods of indigenous peoples negatively through affecting the rights, lands and territories claimed by them?	N	
Will the proposed project involve the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	N	
Will the project negatively affect the development priorities of indigenous peoples defined by them?	N	
Will the project potentially affect the traditional livelihoods, physical and cultural survival of indigenous peoples?	N	
Will the project potentially affect the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices?	N	
Safeguard Standard 6: Labor and working conditions		
Will the proposed project involve the use of forced labor and child labor?	N	
Will the proposed project cause the increase of local or regional un-employment?	N	
Safeguard Standard 7: Cultural Heritage		
Will the proposed project potentially have negative impact on objects with historical, cultural, artistic, traditional or religious values and archeological sites that are internationally recognized or legally protected?	N	
Will the proposed project rely on or profit from tangible cultural heritage (e.g., tourism)?	N	
Will the proposed project involve land clearing or excavation with the possibility of encountering previously undetected tangible cultural heritage?	N	
Will the proposed project involve in land clearing or excavation?	N	
Safeguard Standard 8: Gender equity		
Will the proposed project likely have inequitable negative impacts on gender equality and/or the situation of women and girls?	N	The project will promote gender equality and women's empowerment into its approach and outcomes in multiple ways. Please refer to section "*3. Gender Equality and Women's Empowerment*".
Will the proposed project potentially discriminate against women or other groups based on gender, especially regarding participation in the design and implementation or access to opportunities and benefits?	N	Refer to above comment.
Will the proposed project have impacts that could negatively affect women's and men's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services?	N	
Safeguard Standard 9: Economic Sustainability		
Will the proposed project likely bring immediate or short-term net gain to the local communities or countries at the risk of generating long-term economic burden (e.g., agriculture for food vs. biofuel; mangrove vs. commercial shrimp farm in terms of fishing, forest products and protection, etc.)?	N	
Will the proposed project likely bring unequal economic benefits to a limited subset of the target group?	N	

ANNEX Q: ACRONYMS AND ABBREVIATIONS

Abbreviation	Full
AfDB	African Development Bank
AFC	African Finance Corporation
AFD	*Agence Française de Développement* (French Development Agency)
AFOLU	Agriculture, forestry and other land use
AMUGA	*Autorité de la Mobilité Urbaine dans le Grand Abidjan* (Greater Abidjan Urban Mobility Authority)
ANARE-CI	*Autorité Nationale de Régulation du secteur de l'Electricité de Côte d'Ivoire* (National Authority for the Regulation of the Electricity Sector in Côte d'Ivoire)
APR	Annual Progress Report
ARTI	*Autorité de régulation du transport intérieur* (Authority for the regulation of the interior transport)
ATP	Abidjan Transport Project
AUMP	Abidjan Urban Mobility Project
AUTP	Abidjan Urban Transport Project
AWP	Annual Work Plan
BACI	*Banque Atlantique CI* (Atlantic Bank CI)
BAU	Business-as-usual
BCC	Bureau of Climate Change
BD	Biodiversity
BEV	Battery Electric Vehicle
bn	billion
BOAD	*Banque ouest-africaine de développement* (West African Development Bank)
BRT	Bus Rapid Transit
CBD	Convention on Biological Diversity
CC	Creative Commons
CCI-CI	*Chambre de Commerce et d'Industrie de Côte d'Ivoire* (Chamber of Commerce and Industry of Côte d'Ivoire)
CCM	Climate Change Mitigation
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CFAF	West African CFA franc (Franc de la Communauté Financière d'Afrique)
CI	Côte d'Ivoire
CIAPOL	*Centre Ivoirien Antipollution* (Government Agency Ivorian Antipollution Centre)
CIE	*Compagnie Ivoirien d'Electricite* (Ivorian Electricity Company)
Cities-IAP	Sustainable Cities Integrated Approach Pilot
CNG	Compressed Natural Gas
CO_2	Carbon dioxide
Comp.	Component
CoP	Community of Practice
COP	(UNFCCC) Conference of the Parties
CSO	Civil Society Organization
CTA	Chief Technical Advisor

CTCN	Climate Technology Centre & Network
DAA	*District Autonome d'Abidjan* (Abidjan Autonomous District)
DGD	*Direction Générale des Douanes* (Directorate-General of Customs)
DGI	*Direction Générale des Impôts* (Directorate-General for Taxation)
DGTTC	*Direction Générale des Transports Terrestres et de la Circulation* (Directorate General of Road Transport and Mobility)
DSA	Daily subsistence allocation
DTMU	*Direction des Transports et de la Mobilité Urbaine (*Directorate of Transport and Urban Mobility*)*
EA	Executing Agency
e-bus	electric bus
ECOWAS	Economic Community of West African States
e-mobility	electric mobility
EOP	End of Project
EOU	Evaluation and Oversight Unit
ERBM	Enhanced Results-Based Management
ESERN	Environmental, social and economic review note
EU	European Union
EV	Electric vehicle
EVSE	Electric vehicle supply equipment
e-waste	Electronic waste
FDTR	*Fond de Développement du Transport Routier* (Road Transport Development Fund)
FP	Focal Point
GAA	Greater Abidjan Agglomeration
GDP	Gross Domestic Product
GEF	Global Environment Facility
GEFSEC	Global Environment Facility Secretariat
GEFTF	Global environmental benefits
GETF	Global Environment & Technology Foundation
GFEI	Global Fuel Economy Initiative
GGEF	Global Green Economic Forum
GGGI	Global Gender Gap Index
GHG	Greenhouse Gases
GIPAME	*Groupement Interprofessionnel Automobiles Matériels et Equipementiers (*Inter-professional Automotive Equipment and Suppliers Group*)*
GMS	General Management Support
GoCI	Government of Government of Côte d'Ivoire
Gt	Gigatonne
GWh	Gigawatt-hour
HCPETR-CI	*Haut Conseil du Patronnat des Entreprises de Transports Routiers de Cote d'Ivoire* (Employers Federation of Road Transport Companies)
HCVF	High conservation value forest
IA	Implementing Agency
Sustainable Cities IAP	Sustainable Cities Integrated Approach Pilot
IAS	Invasive alien species
ICE	Internal combustion engine

ID	Identifier
IDA	International Development Association
IEA	International Energy Agency
IFC	International Finance Cooperation
IFIs	International Financial Institutions
ILO	International Labour Organization
incl.	including
IW	Inception Workshop
JIU	Joint Implementation Unit
KfW	*Kreditanstalt für Wiederaufbau* (Reconstruction Credit Institute) Development Bank
KM	Knowledge Management
km	kilometer
ktoe	kilotonnes of oil equivalent
kWh	Kilowatt-hour
LDCF	Least Developed Country Fund
Lge	Litre gasoline equivalent
LOI	Letter of Intent
m	million
M&E	Monitoring and Evaluation
MCC	Millenium Challenge Corporation
MCLAU	*Ministère de la Construction, du Logement, de l'Assainissement et de et de l'Urbanisme* (Ministry of Construction, Housing, Sanitation and Urban Planning)
MDB	Multilateral development bank
MEER	*Ministère de l'Equipement et de l'Entretien Routier* (Ministry of Road Equipment and Maintenance)
MEF	*Ministère de l'Economie et des Finances* (Ministry of the Economy and Finance)
MINEDD	*Ministère de l'Environnement et du Développement Durable* (Ministry of Environment and Sustainable Development)
MJ	Megajoule
MOT	*Ministère des Transports* (Ministry of Transport)
MPEER	*Ministère du Pétrole, le l'Énergie et des Énergies Renouvelables* (Ministry of Petrol, Energy and Renewable Energies)
MPMBPE	*Ministère auprès du Premier Ministre, chargé du Budget et du Portefeuille de l'Etat* (Ministry attached to the Prime Minister, in charge of the Budget and the State Portfolio)
MRV	Monitoring, reporting and verification
MSP	Medium-Size Project
Mt	Megatonne
MTE	Mid-Term Evaluation
MTR	Mid-Term Review
MW	Megawatt
MWh	Megawatt-hour
n.a.	not applicable
NAMA	Nationally Appropriate Mitigation Actions
NDC	Nationally Determined Contributions
NGOs	Non-Government Organizations
NPD	National Project Director

NRM	Natural resource management
O&M	Operation and maintenance
OFP	Operational Focal Point
PAC	Project Appraisal Committee
PAMOSET	*Projet de Modernisation du Secteur des transports et facilitation du commerce sur le Corridor Abidjan-Ouagadougou* (Abidjan-Ouagadougou Corridor Transport Sector Modernization and Trade Facilitation Project)
PANER	*Plan d'Actions National des Energies Renouvelables* (National Renewable Energy Action Plan)
PB	Project Board
PFD	Program Framework Document
PIF	Project Identification Form
PIR	Project Implementation Report
PMC	Project management costs
PMU	Project Management Unit
PND	*Plan Nationale de Développement* (National Development Plan)
POPP	Programme and Operations Policies and Procedures
PPA	Power purchase agreement
PPG	Project Preparation Grant
PPP	Purchasing power parity
PRC	Project Review Committee
PSC	Project Steering Committee
PTUA	*Projet de Transport Urbain d'Abidjan* (Abidjan Urban Transport Project)
PV	Photovoltaic
QPR	Quarterly Progress Report
RCU	Regional Coordinating Unit
RE	Renewable Energies
RE	Renewable energy
REDD	Reducing Emissions from Deforestation and Forest Degradation
RET	Renewable energy technology
RFP	Request for Proposals
SAR	*Société Africaine de Recyclage* (African Society of Recycling)
SCCF	Special Climate Change Fund
SDG	Sustainability Development Goals
SDUGA	*Schéma Directeur d'Urbanisme du Grand Abidjan* (Urban Transport Master Plan for Greater Abidjan)
SGBCI	*Société Générale de Banques en CI* (General Society of Banks in CI)
SGS Renovo	*Société générale de Surveillance* (General Society of Surveillance)
SIB	*Société Ivoirienne de Banque* (Ivorian Bank Socitey)
SICTA	*Société Ivoirienne de Contrôles Techniques Automobiles (*Ivorian Society for the Technical Control of Automobiles)
SIDS	Small island development states
SMART	Specific, Measurable, Achievable, Relevant and Time-bound
SMU	UNEP Sustainable Mobility Unit
SOTRA	*Société des Transports Abidjanais* (Abidjan Transport Company)
STAP	GEF Scientific Technical Advisory Panel
TA	Technical Assistance

TE	Terminal Evaluation
TM	Task Manager
TOR	Terms of Reference
TTW	Tank-to-Wheel
TWG	Technical Working Groups
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
US$	US Dollar
WB	World Bank
WTW	Well-to-Wheel

ANNEX R: TABLE OF CONTENT