GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

Program Framework Document (PFD) entry – GEF - 8

Global Programme to Support Countries to Upscale Integrated Electric Mobility Systems

GENERAL PROGRAM INFORMATION

Program Title:	**Global Programme to Support Countries to Upscale Integrated Electric Mobility Systems**		
Country(ies):	**Global,** Azerbaijan, Fiji, Senegal, Solomon Islands, Vanuatu, Zambia, Zimbabwe	**GEF Program ID:**	**11074**
Lead GEF Agency:	**UNEP**	**GEF Agency Program ID:**	
Other GEF Agenc(ies):	**ADB** **World Bank** **EBRD**	**Submission Date :**	**4/6/2023**
Type of Trust Fund:	**GET**		
Anticipated Program Executing Entity(s):	**UNEP Sustainable Mobility Unit**	**Anticipated Program Executing Partner Type(s):**	**GEF Agency**
	GIZ		**Donor Agency**
	Centro de Movilidad Sustentable (CMS)		**CSO**
	Urban Electric Mobility Initiative (UEMI)		**CSO**
	Azerbaijan Ministry of Energy		**Government**

	Fiji Climate Change Division, Office of the Prime Minister;		Government
	Global Green Growth Institute (GGGI)		CSO
	Senegal Conseil Exécutif des Transports Urbains Durables		Government
	Zambian Environmental Management Agency (ZEMA)		Government
	Zimbabwe Ministry of Transport and Infrastructure Development		Government
	Solomon island Ministry of Environment, Climate Change, Disaster Management and Meteorology (MECDM)		Government
	Vanuatu Ministry of Climate Change Adaptation, Meteorology, Geo-hazards, Energy, Environment and Disaster Management		Government
	World Bank (WB)		GEF Agency
	European Bank for Reconstruction And Development (EBRD)		GEF Agency
Sector (only for Programs on CC):	Transport/Urban	Program Duration (Months):	60
GEF Focal Area (s):	Multi Focal Area	Program Commitment Deadline:	12/31/2024
Taxonomy:	Influencing models, Transform policy and regulatory environments, Strengthen institutional capacity and decision-making, Demonstrate innovative approache, Stakeholders, Civil Society, Community Based Organization, Non-Governmental Organization, Academia, Type of Engagement, Participation, Consultation, Information Dissemination, Private Sector, Capital providers, Financial intermediaries and market facilitators, SMEs, Large corporations, Individuals/Entrepreneurs, Gender Equality, Gender Mainstreaming, Beneficiaries, Women groups, Gender results areas, Access to benefits and services, Capacity, Knowledge and Research, Knowledge Generation, Training, Workshop, Capacity Development, Innovation, Knowledge Exchange, Peer-to-Peer, South-South, Focal Areas, Chemicals and Waste, Emissions, Disposal, Waste Management, Hazardous Waste Management, Climate Change, Climate Change Mitigation, Sustainable Urbam Systems and Transport		
GEF Program Financing: (a)	22,257,385.00	PPG Amount: (c)	500,596.00

Agency Fee(s): (b)	**2,003,165.00**	**PPG Agency Fee(s) : (d)**	**45,053.00**
Total GEF Project Financing: (a+b+c+d)	**24,806,199.00**	**Total Co-financing:**	**129,356,667.00**
Project Tags:	**CBIT: No SGP: No**		
Program:	**Other Program**		

Program Summary

Provide a brief summary description of the program, including: (i) what is the problem and issues to be addressed? (ii) what are the program objectives, and how will the program promote transformational change? iii) how will this be achieved (approach to deliver on objectives), and (iv) what are the GEBs and other key expected results. The purpose of the summary is to provide a short, coherent summary for readers. The explanation and justification of the program should be in section B "program description". (max. 250 words, approximately 1/2 page)

Increased demand for transportation of persons and goods in low and middle-income countries (LMICs[1]) is driving the growth of energy use and GHG emission from the road transport sector globally. The GEF- UNEP Global Electric Mobility Programme is targeting this issue by supporting the global shift to zero emissions electric mobility with a focus on LMICs and by addressing the mitigation of negative side effects related to the end-of-life of used electric vehicles and their batteries.

UNEP is working with partners to actively support more than 50 LMICs, implementing grants close to USD 100 million, and leveraging co-finance exceeding USD 500 million. Under this global programme, currently 32 country projects and a global support programme are funded through GEF-7 amounting to almost USD 80 million. The E-Mobility Programme is active on the global, regional and country levels, combining technical assistance, investment, outreach and awareness campaigns through Global Thematic Working Groups, Regional Support and Investment Platforms and more than 50 country projects, which are actively working on all aspects of e-mobility including institutionalization, policy, business and finance, sustainability and also the implementation of pilot projects

The GEF-8 "Global Programme to Support Countries to Upscale Integrated Electric Mobility Systems" aims to widen the set of countries working on the subject, support investment into upscaled integrated e-mobility projects and establish a global framework to address key challenges related to used electric vehicles (EVs), end-of-life electric vehicles and batteries & circularity. It will build on and continue the activities started under the GEF-7 programme and make use of the structures and institutional set-up already established. It will increase the number of countries to implement GEF funded Child Projects to introduce and upscale integrated electric mobility systems from 32 to 39, expanding UNEPs Global Programme to more than 60 Country Projects, and aiming at an additional funding provided under the GEF-8 System for Transparent Allocation of Resources (STAR) of more than USD 18 million. Many other

countries have expressed interest in joining the programme at a later stage. The programme will cooperate with leading financing institutions including the Green Climate Fund (GCF) to up-scale the activities funded by the GEF and work together with other initiatives such as the Zero Emission Vehicle Transition Council (ZEVTC) to facilitate matchmaking of funding opportunities with project proposals.

The current GEF-8 submission including 7 new country projects is expected to result in GHG emission reductions of about 11 million tons of CO2 (3 million direct and 8 million indirect), adding on the expected emissions saving of close to a 174 million tons of CO2 (47 million direct and 127 million indirect) stemming from the previous GEF-7 programme[2].

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[1] LMIC is a broad concept based on gross national income (GNI), with middle income countries having a GNI per capita of up to US$ 12,535 as per 2021 World Bank definition) and comprises countries at very different stages of development. The effort to accelerate the transition to integrated e-mobility will be adapted to country specific conditions and needs.

[2] More than 70% of the total emission reductions of the GEF-7 programme are realized in India.

Indicative Program Overview

Program Objective

The GEF-8 “Global Programme to Support Countries to Upscale Integrated Electric Mobility Systems” aims at upscaling integrated e-mobility system projects including investment and to establish a global framework to address key challenges of used electric vehicle, end-of-life electric vehicles and batteries & circularity

Program Components	Component Type	Program Outcomes	Trust Fund	GEF Program Financing($)	Co-financing($)

Component 1 Knowledge creation, capacity building, planning and institutionalization	Technical Assistance	<u>Outcome 1.1</u> Decision makers in the countries demonstrate improved capacity to set up institutions and apply national planning frameworks to upscale integrated electric mobility systems. *Indicator 1.1.1 # of new or improved national planning frameworks and/or institutions set up* *Indicator 1.1.2 # of knowledge products developed by the programme on integrated e-mobility systems used by practitioners* *Indicator 1.1.3 # of stakeholders applying training on integrated e-mobility systems at national, regional and global levels* <u>Outcome 1.2</u> Authorities at the global, regional, and national level, private sector and international & civil society organizations have built consensus and a draft policy framework through a Global Partnership on Used EVs, End-of-Life of EVs and Batteries & Circularity. *Indicator 1.2.1 # of organizations contributing to knowledge products developed by the Global Partnership on Used EVs, End-of-Life of EVs and Batteries & Circularity* *Indicator 1.2.2 # of knowledge products on Used EVs, End-of-Life of EVs and Batteries & Circularity used by practitioners*	GET	3,595,668.00	2,295,000.00

		Indicator 1.2.3 # of stakeholders applying training on Used EVs, End-of-Life of EVs and Batteries & Circularity at national, regional and global levels		
Component 1	Investment		GET	10,212,333.00

Component 2 Readiness for upscaling of integrated e-mobility systems	Technical Assistance	<u>Outcome 2.1</u> Governments and other authorities have endorsed policies, and have designed business models and financing schemes to accelerate the uptake of integrated electric mobility systems. *Indicator 2.1.1 # of countries with new or revised regulatory frameworks on integrated e-mobility systems submitted for adoption* *Indicator 2.1.2 # of countries with new and revised business models and financing schemes designed* *Indicator 2.1.3 # of new or revised regulatory frameworks on integrated e-mobility systems submitted for adoption* *Indicator 2.1.4 # of new and revised business models and financing schemes designed* <u>Outcome 2.2</u> Governments, private sector and other authorities have endorsed policy frameworks for used EV trade , end-of-life of EVs and batteries & circularity. *Indicator 2.2.1 # of countries with new or revised regulation and planning frameworks for used EV trade , EV and battery end-of-life and circularity submitted for adoption* *Indicator2.2.2 # of harmonized regulations and policies on used EVs, end-*	GET	5,196,991.00	3,595,000.00

		of-life of EVs and batteries & circularity at regional and sub-regional level submitted for adoption regionally / sub regionally *Indicator 2.2.3 # of global guidelines / voluntary agreements / standards endorsed by EV and EV supply industry* *Indicator 2.2.4 # of business models/financing instruments/private sector initiatives related to EOL EVs/batteries*			
Component 2	Investment		GET		11,262,333.00
Component 3 Investment into integrated e-mobility systems and the handling of used electric vehicle trade, electric vehicle and battery end-of-life & circularity	Technical Assistance	<u>Outcome 3</u> Countries invest in piloting and upscaling integrated e-mobility systems including the handling of EV and battery end-of-life treatment. *Indicator 3.1 # of countries generating evidence from pilots supported by the programme on the technical, financial viability and/or environmental benefits of integrated electric mobility systems and sharing with the knowledge hub* *Indicator 3.2 # of countries with concepts for integrated e-mobility system upscaling projects and battery end-of-life facilities submitted to financiers*	GET	3,981,839.00	2,402,500.00

Component 3	Investment	Outcome 3 *Indicator 3.3 amount public or private investment (in US$) leveraged as a consequence or in connection with the GEF Program* *Indicator 3.4 # of financiers/financial institutions that invest in Programme supported pilots*	GET	5,157,143.00	89,022,763.00
Component 4 Integrated electric mobility systems advocacy, coordination and communications programme	Technical Assistance	Outcome 4 Results of the programme are widely disseminated, and key developments, best practices and other lessons learned are shared to promote wider uptake of integrated electric mobility systems including used EVs, end-of-life of EVs and batteries & circularity by market actors in programme and non-programme countries. *Indicator 4.1 # of countries generating and sharing best practices and other lessons learned on low-carbon electric mobility* *Indicator 4.2 # of relevant publications using datasets to track e-mobility markets and policy frameworks generated through the country projects* *Indicator 4.3 # of non-e-mobility programme countries participating in programme events committing to up-scaling integrated electric mobility systems*	GET	2,367,560.00	1,852,500.00

Component 4	Investment		GET		1,740,334.00
M&E					
M&E	Technical Assistance	Outcome 5 Project is effectively monitored and evaluated *Indicator 5.1 # of M&E products delivered*	GET	729,724.00	300,000.00
			Sub Total ($)	**21,028,925.00**	**122,682,763.00**
Program Management Cost (PMC)					
			GET	1,228,460.00	6,673,904.00
			Sub Total($)	**1,228,460.00**	**6,673,904.00**
			Total Program Cost($)	**22,257,385.00**	**129,356,667.00**

Please provide justification

Some child country projects are Medium Size project and thus have a 10% PMC.

PROGRAM OUTLINE

A. PROGRAM RATIONALE

Briefly describe the current situation: the global environmental problems that the program will address, the key elements and underlying drivers of environmental change to be targeted, and the urgency to transform associated systems in line with the GEF-8 Programming Directions document. Describe the overall objective of the program, and the justification for it.
(Approximately 3-5 pages) see guidance here

Global Environmental Problem

The introduction to the Programme Framework Document of the GEF-7 E-Mobility Programme stated that “the transport sector is currently responsible for approximately one quarter of energy-related carbon dioxide emissions, this is expected to grow by 2050. In addition, the transport sector is a leading contributor to short-lived climate pollution such as NOx, SOx, PM and CO, and especially black carbon. The root cause of these environmental problems is the domination of fossil-fuel driven internal combustion engines in the transport sector globally. The global vehicle fleet is set to double by 2050, and almost all of this growth will take place in low- and middle-income countries. By 2050 two out of three cars will be found in today’s low and middle-income 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".

While this is still largely true, much has happened over the past five years: It is now recognized that mitigating climate change will not be possible without: 1.) focusing on the transport sector and in particular the uptake of low carbon electric mobility; and 2.) including all countries of the Global South in the effort to reduce energy use and Greenhouse Gas (GHG) emissions from transport.

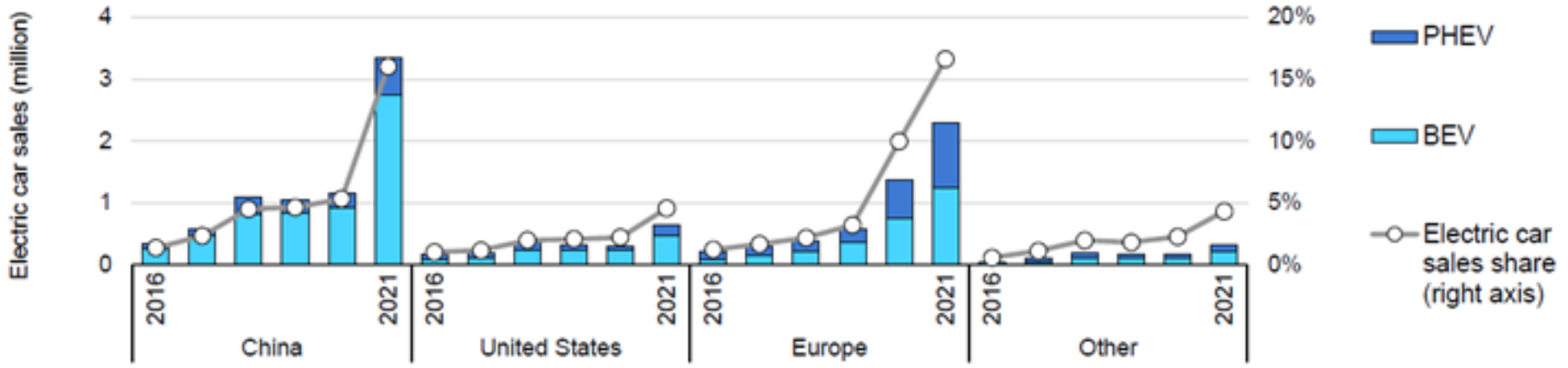

Figure 1 ELECTRIC CAR REGISTRATIONS AND SALES SHARE IN SELECTED COUNTRIES/REGIONS, 2016-2021

(PHEV: plug-in hybrid vehicle; BEV: battery electric vehicle; IEA 2022)

Progress on zero-emission mobility has been tangible: many countries in the Global North and some in the Global South have set targets and established roadmaps to reach zero emission mobility. The European Parliament has adopted the target to prohibit sales of new conventional light duty vehicles (LDVs) in the European Union after 2035. At the 26th conference of the parties (COP) of the UNFCCC, a declaration on accelerating the transition to 100% zero emission cars and vans has been signed. The COP26 Summit also launched the Zero Emission Vehicle Transition Council (ZEVTC) Action Plan. By COP 27, 30 governments in developed economies and 11 in emerging and developing economies, as well as many representatives from regions, cities, vehicle manufacturers, businesses, investors and civil society, have signed the declaration to work towards 100% zero emission vehicle sales by 2035 in leading markets, and by 2040 globally.

At COP27, the Low Carbon Transport for Urban Sustainability (L$^{c}O_2$TUS) initiative was launched. This initiative aims to work on three action areas: 1.) Scaling up investment for e-vehicles and sustainable mobility infrastructure; 2.) Empowering and investing in informal transportation; and 3.) Building capacity to develop integrated, multimodal policy frameworks in LMICs.

According to IEA's Global Electric Vehicle Outlook, in 2021, 10% of all new sold cars globally were electric (regional breakdown Figure 1), and a fleet of 16.5 million electric vehicles (EVs) populated the global roads[1]. This is a sixteen-fold increase compared to 2018, when the 1 million EV mark was just passed. However, the total fleet of 16 million EVs still only represents about 2% of the current global vehicle fleet, most of it concentrated in a few countries in the global north. International Energy Agency (IEA) notes that EV sales spiked in emerging markets in 2021, however at significantly lower scale.

Bus electrification saw an immense growth over the past five years as well, with 20% to 30% annual sales share of electric buses in China and substantial growth in Europe. The first mass transit operations including bus rapid transit (BRT) systems in LMICs are also becoming electric: for example, the Dakar BRT in Senegal, financed by World Bank (PAD2209, US$ 300 M), will be the first fully electric BRT in Africa, with 140 articulated electric buses envisaged to take-up operation by end of year 2023.

Electrification of 2&3wheelers has seen much interest over the past five years, with many start-ups emerging in Asia, Africa and Latin America. IEA's 2022 Global Electric Vehicle Outlook summarizes that "China dominates the market, reaching nearly 9.5 million electric two/three-wheeler new registrations in 2021 out of a global total of just over 10 million[2]." The African continent also saw a strong growth in interest, and it is estimated that more than 6,000[3] electric

2&3wheelers are populating the continents' roads by now. Some countries such as Kenya, Rwanda, Tanzania, Uganda are leading the development and are home to companies such as Ampersand, Roam, Stima Boda, Zembo and many more.

While virtually no electric mobility projects and programmes existed at national and city level in LMICs in 2018, today many LMICs have projects on electric mobility. UNEP's Global Electric Mobility Programme contributed significantly to this boost in e-mobility in LMICs and is working with partners to actively support more than 50 LMICs, implementing grants close to USD 100 million, and leveraging co-finance exceeding USD 500 million. However, much more work needs to be done to upscale this development and to finance the transition to sizeable integrated e-mobility fleets, the expansion of the charging network and the coupling of the transport with the power sector. Hundreds of thousands of electric buses, e-2&3wheelers, e-light duty vehicles and e-freight trucks will need to be brought on the road over the next 5 years in passenger and freight transport fleets in LMICs around the world, alongside significant roll-out of charging infrastructure. Targeted financial products internalizing the higher upfront costs but also the much lower operational costs of EVs need to be developed and brought to market. And major investment will be needed for renewable power integration and upgrades to the power transmission and distribution network.

The transition of the global vehicle fleet to electric has taken off and countries in the Global South are already part of it. With the decision of many countries in the Global North, notably the European Union, to phase out the production of Internal Combustion Engine (ICE) vehicles and the increasing amount of EVs on the road, export of used EVs from the Global North to the Global South is likely to happen at large scale, and rather sooner than later. Similarly, large amounts of new light EVs such as electric 2&3Wheeler are expected to hit the roads of the Global South in the coming years. Import of used and purchase of new EVs will lead to large amounts of end-of-life EV lithium-ion batteries (LIBs) in LMICs in the next few years, raising the question how to collect, prepare, transport these end-of-life (EOL) batteries for reintegration into global production value chains or reuse in LMICs. This question could even be amplified in case large amounts of sub-standard used EVs with little remaining battery lifetime and range will reach LMICs at scale.

Partners and countries have started raising issues on the end-of-life of used EVs, and UNEP together with University of California, Davis has developed a study on the challenges and opportunities of end-of-life EV batteries in LMICs[4]. It finds that these batteries can be a challenge, as this e-waste is likely to be managed similarly to other e-waste flows that are sent to or are discarded in LMICs – they could be processed in informal environments that threaten the health of people and the environment, including children and other vulnerable populations. It also finds that much data is lacking on the end-of-life issue of EV LIBs and that without recycling, the alternatives for disposal including stockpiling and discarding on land will present large environmental risks. However, these used EV batteries can also be seen as a possible opportunity to create value through: 1.) Local reuse for other purposes, for example for storing excess renewable power, back-up power storage or for reassembling new battery packs for transport applications based on tested, used cells; and 2.) Recycling their raw materials for use in the production of new EV batteries and for reintegration in global value chains. In addition, the upcoming issue of used EV recycling creates an opportunity to generally improve the handling of scrapped vehicles, for example with regards to particular waste streams such as dashboards, seats etc. which contain flame retardants releasing persistent organic pollutants (POPs) to the atmosphere if treated inappropriately. Tackling the issue of used EVs, end-of-life EVs and batteries in LMICs, and to close the value chain to ensure as much material as possible is reused for battery production, therefore reducing the need for new materials extraction, is a requirement for sustainable upscaling of integrated e-mobility systems in the Global South.

The shift from ICE vehicles to EVs in LMICs will not only lead to reduced energy use and GHG emissions from reduced combustion of petroleum fuels, but will also lead to mitigation of POPs emissions (both from incomplete combustion of petroleum fuels in often old and badly maintained vehicles in the Global South, and from improved handling of end-of life vehicles and batteries), mitigation of otherwise uncontrolled and large flows of e-waste, and reduction of plastic litter. In addition to these direct pollution mitigation effects, indirect effects of reusing and recycling end-of-life EV batteries can lead to significant reduction of POPs emissions. LIBs, and particularly aged or damaged LIBs, pose a risk of fire or even explosion. These fires, which regularly occur in landfills caused by LIBs emit toxic gasses, ranging from furans and dioxins to hydrogen sulphide and SO2, mostly from other materials in the landfill that may be burned when exposed to an LIB fire.

Much need for regulation at the global, regional, sub-regional and national levels is needed to control flows of used EVs and end-of-life EVs and battery materials, and to maximize recycling of these rare metals to increase the rate of circularity and ultimately to reduce cost of battery production. Not tackling the question of circularity in EV battery production now, and leaving out LMICs, will create a risk of losing a substantial share of end-of-live EV battery materials ending up in the Global South.

Finally, raising awareness among the users of integrated e-mobility systems in LMICs and informing the public about opportunities and benefits of clean and integrated e-mobility systems is at the core of the programme to reduce negative perceptions and to increase acceptance of e-mobility solutions, and to highlight the opportunities this transition can create for improving equality with regards to gender issues and the increased participation of women in value creation in the transport sector in LMICs.

Baseline scenario or any associated baseline programme/ projects

The Programme, in combination with the success of e-mobility in the Global North has resulted in remarkable progress on e-mobility in LMICs:

1. **Countries in the Global South are more and more aware of electric mobility**, and with the support of the GEF-7 Programme, many governments and private sector entities in the Global South have recognized that EVs are a viable solution to electrify fleets for passenger and freight transportation.

2. **Many countries in the Global South have started to put in place planning and policy frameworks**, often with the support of the Global Programme, and including national strategies and roadmaps, coordination mechanisms, fiscal and regulatory policies and national and urban sustainable mobility plans.

3. **Government and private sector players have realized that e-mobility can significantly reduce dependency on costly fossil fuel importation**, very often related to great liabilities with regards to foreign exchange balances, and that electric vehicle can add significantly to local value creation.

4. **E-mobility solutions such as electric 2&3 Wheelers, cars, vans, minibuses and buses are currently being demonstrated** to prove technical, operational and economic viability in LMICs around the world and have set targets for the complete shift from ICE motorcycles to e-motorcycles (for example Rwanda), or are now developing strategies to transition the market;

5. **Many LMICs have introduced policies and incentives to attract used electric vehicles**. For example, Sri Lanka is the world leader in the import of used hybrid EVs (through progressive fiscal incentives) and while until recently Egypt had banned all imports of used vehicles, it now allows the import of used EVs;

6. **Many cities in the Global South are developing or implementing large public transport projects** often financed through multilateral development banks (MDBs), focusing on the introduction of high-capacity bus-rapid transit (BRT) systems. Electric buses are becoming a more popular option to be considered for rolling stock. In fact, by end of this year, the first fully electric BRT in Sub-Sahara Africa is envisaged to become operational in Dakar, Senegal.

7. **A large number of private sector players** being active in 1.) manufacturing and assembling of EVs; 2.) using of EVs for passenger and freight transportation services; 3.) charging of EVs 4.) financing e-mobility operations has emerged over the past five years and many start-ups have successfully managed to receive Series A Financing from venture capital firms.

8. **Institutional financiers such as the global and large regional development banks** including World Bank (WB), African Development Bank (AfDB), Asian Development Bank (ADB), European Bank for Reconstruction and Development (EBRD) have developed or are developing large programmes targeting the financing of electric mobility projects, and often including concessional loans provided by the GCF.

9. **Private financiers such as funds, investors but also foundations** etc. are increasingly interested in financing electric mobility projects.

However, in absence of further support to develop, integrate and upscale e-mobility systems in LMICs, major risks exist that:

1. **Some LMICs, which have not started working on integrated e-mobility systems** will lag behind and are at risk to becoming “dumpsites” for sub-standard used conventional vehicles;

2. **Some LMICs, and especially those importing large quantities of used cars** from Europe, the US and potentially China, will see an uncontrolled influx of used EVs, which in absence of adequate policy frameworks will result in inefficient charging markets (due to the number of different technical standards for EV charging), large quantities of EVs close to end-of-life and risks and cost burden associated to this;

3. **Some LMICs, which have already advanced integrated e-mobility systems will lose momentum** in the effort to bring these systems to scale as they lack the capacity to develop bankable projects and investments in developing e-mobility systems will not lead to the effect of creating a sustainable market with no need for further incentives and subsidies;

4. **E-mobility is not integrated with other means of efficient transport** such as public transportation systems, last mile connectivity, digital means of payment and operation and active mobility / non-motorized transport, thus not fully leveraging possible efficiency gains and GHG mitigation potentials;

5. **E-mobility is not integrated with power sector** and the power sector is not ready for EV uptake. Increased demand for electricity will be covered through unsustainable short-term capacity gains such as heavy-fuel oil (HFO) power gensets, potentially increasing emissions and adding uncontrolled peak demand to already weak power generation, transmission and distribution networks;

6. **Due to lack of bankable projects, financing institutions and private investors might not be able to spend on their lending pipelines** and might not see the potential for upscaling and profitable business cases in LMICs and therefore lose interest in investing in e-mobility systems in LMICs;

7. **Large amounts of potentially substandard used EVs will hit countries in the Global South**, resulting in uncontrolled management of e-waste, potentially leading to large environmental hazards such as uncontrolled landfill fires releasing large quantities of POPs, GHG and other pollutants, EOL vehicles including other hazardous materials such as flame retardants in dashboards, seats etc. not being properly recycled and loss of significant quantities of materials for EV battery production.

Without additional support to LMICs on the issue of integrated e-mobility systems, risk is significant to run in some, if not all of the above-mentioned risks for many LMICs. It is therefore of utmost importance that the GEF together with partners continues supporting countries in the Global South on the matter of electric mobility to address these risks. The funds provided by the GEF, including to cover incremental costs of pilot EVs and EV supply equipment, will help remove the barriers and will contribute to accelerate upscaling of integrated e-mobility systems in LMICs. The GEF-8 Global Programme to Support Countries to Upscale Integrated Electric Mobility Systems will build on and continue the activities started under the GEF-7 programme. It will make use of the structures and institutional set-up established under the GEF-7 (see Figure 2).

The current GEF-7 programme has four workstreams:

1. **At the global level** UNEP and the International Energy Agency (IEA), are implementing four Global Thematic Working Groups: (i) electric light duty vehicles; (ii) electric 2&3 wheelers; (iii) electric heavy-duty vehicles; and (iv) charging infrastructure, batteries and renewable power integration. These Working Groups are developing and disseminating e-mobility knowledge products, facilitate networking, and contribute to global e-mobility advocacy.

2. **At the regional level**, four Support and Investment Platforms have been created: for Africa (UNEP), Asia and the Pacific (Asian Development Bank); Central & Eastern Europe, West Asia and the Middle East (EBRD); and Latin America & the Caribbean (Molina Center Chile with UNEP). These Platforms are creating communities of practice, implementing training programs and facilitating electric vehicle (EV) supply and project finance through regional e-mobility marketplaces.

3. **And at the country level**, more than 50 countries, of which 32 funded by GEF-7, are actively working on the introduction and switch over to electric mobility (see Table 1)

Table 1 overview and status of GEF-7 e-mobility projects

#	Region	Country	IA	GEF STAR	Project Cost	Status	As of
1	Africa	Burundi	UNEP	900,000	775,688	Awaits CEO endorsement	05.05.2023
2		Ivory Coast	UNEP	500,000	408,716	Under implementation	05.05.2023
3		Ivory Coast (SA)	UNIDO	1,806,713	1,607,535	CEO endorsed, implementation to start	01.02.2023
4		Madagascar	UNEP	1,300,000	1,142,661	Awaits CEO endorsement	05.05.2023
5		Seychelles	UNEP	500,000	423,716	Under implementation	05.05.2023
6		Sierra Leone	UNEP	500,000	423,716	Under implementation	05.05.2023
7		South Africa	DBSA	5,355,414	4,713,224	CEO endorsed, implementation to start	05.05.2023
8		Togo	UNEP	500,000	423,716	Under implementation	05.05.2023
9		Tunisia	UNIDO	2,000,000	1,784,862	CEO endorsed, implementation to start	05.05.2023
10	Asia & the Pacific	Bangladesh	UNDP	2,000,000	1,788,991	CEO endorsed, implementation to start	01.02.2023
11		India	UNEP / ADB	6,000,000	5,366,976	CEO endorsed, implementation to start	05.05.2023
12		Indonesia	UNDP	2,200,000	1,816,500	CEO endorsed, implementation to start	01.02.2023
13		Malaysia	UNIDO	1,990,868	1,776,484	CEO endorsed, implementation to start	01.02.2023
14		Maldives	UNEP	2,025,590	1,826,339	Under implementation	05.05.2023
15		Mauritius (SA)	UNDP	6,132,664	5,600,607	Under implementation	01.02.2023
16		Philippines	UNIDO	4,430,000	4,280,000	CEO endorsed, implementation to start	01.02.2023
17		Sri Lanka	UNEP	1,249,500	1,096,789	CEO endorsed, implementation to start	05.05.2023
18		Thailand (SA)	UNIDO	3,230,177	2,913,465	CEO endorsed, implementation to start	01.02.2023
19	Central & Eastern Europe, West Asia and Middle Eas	Albania	UNIDO	889,666	766,208	Under implementation	01.02.2023
20		Armenia	UNEP	700,000	592,202	Under implementation	05.05.2023
21		Jordan	UNIDO	1,300,000	1,142,661	Under implementation	01.02.2023

22	a and Middle East	Lebanon (SA)	UNDP	3,890,500	3,552,968	Under implementation	01.02.2023
23		Ukraine	UNEP / EBRD	1,800,000	1,601,376	CEO endorsed, implementation to start	05.05.2023
24		Uzbekistan	UNDP	4,000,000	3,569,725	Under implementation	01.02.2023
25	Latin America & the Caribbean	Antigua & Barbuda	UNEP	3,558,850	3,245,000	Under implementation	05.05.2023
26		Chile	UNEP	2,000,000	1,784,862	Under implementation	05.05.2023
27		Costa Rica	UNEP	1,000,000	876,712	Under implementation	05.05.2023
28		Ecuador	UNEP	1,450,000	1,280,275	CEO endorsed, implementation to start	05.05.2023
29		Grenada	UNEP	1,200,000	1,050,917	CEO endorsed, implementation to start	05.05.2023
30		Jamaica	UNDP	2,000,000	1,784,862	Under implementation	01.02.2023
31		Peru	UNDP	2,000,000	1,784,862	CEO endorsed, implementation to start	01.02.2023
32		Saint Lucia	UNEP	900,000	785,688	Under implementation	05.05.2023
	Total Country Projects			**69,309,942**	**61,988,303**		

To achieve this transition from putting in place framework conditions to start developing e-mobility in LMICs to truly sustainable integrated electric mobility systems, much work needs to be done, at the global, regional, sub-regional and national levels. The GEF-7 programme is the starting point to a major transition. The GEF-8 programme will continue this transition and will expand existing partnerships and develop new partnerships building on cooperation developed over the past years and based on the need to address the new areas of work outlined above. In specific, the GEF-8 electric mobility programme will strengthen cooperation with:

· **Multilateral Development Banks and financing institutions that support private sector finance** such as the World Bank, the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD), International Finance Cooperation of the World Bank (IFC), commercial multinational and local banks, but also private investors such as Venture Capitalists (VC), social investors etc. and their programs to support electric mobility partly financed by the Green Climate Fund (GCF) to develop programmes to finance the switch to integrated electric mobility systems. Local commercial banks will need to play a role as intermediary to implement international climate and development finance in national upscaling projects;

· **Global climate financing mechanisms and philanthropic foundations**, to finance climate change mitigation such as the Green Climate Fund (GCF), the National Appropriate Mitigation Action (NAMA) facility, Climate Works and its Drive Electric Campaign, the FIA Foundation, among others to help de-risking investments through grants and concessional loans and to support establishing the necessary policy and regulatory framework;

· **Bilateral development aid to support electric mobility** such as programmes and initiatives implemented by the German development agency Deutsche Gesellschaft für *Internationale Zusammenarbeit* (GIZ), the French *Agence Française de Développement* (AFD), UK's Foreign, Commonwealth & Development Office (FCDO), Unites States' State Department programmes, Japan's Japan International Cooperation Agency (JICA), South Korea's International Cooperation Agency (KOICA) and many more to support financing the shift to integrated electric mobility systems and help building capacity in the field;

· **Global electric mobility initiatives and networks**, including the Zero Emission Vehicle Transition Council (ZEVTC) and its ZEVTC Rapid Response Taskforce, the Glasgow Breakthrough road transport initiatives, and the World Business Council for Sustainable Development led Collective for Clean Transport Finance (CCTF). UNEP is a partner in these initiatives to help match-making the need for support to develop integrated electric mobility programmes at national and city level with offers to provide financial support and technical assistance from the international community;

· **Other substantive electric mobility programs** – the GEF-8 programme will collaborate with leading electric mobility programmes including the GIZ led Transforming Urban Mobility Initiative (TUMI), the projects implemented by the Urban Electric Mobility Initiative (UEMI), projects developed and implemented by the World Resources Institute (WRI) as well as the Institute for Transportation and Development Policy (ITDP) to provide technical assistance in developing capacity, building the policy and regulatory framework and developing financing and business models;

· **Private sector** – to develop adequate business models and to take up integrated e-mobility solutions for passenger and goods transportation, to build and operate profitable EV charging infrastructure networks, to develop EV and EV supply equipment assembly and manufacturing businesses in LMICs, to invest in, build and operate renewable power generation capacity and to divert into financing integrated e-mobility systems operations in LMICs;

· **Multinational, regional and local EV and EV supply equipment manufacturers** to provide adequate and affordable e-mobility and charging solutions in LMICs around the world and to support with capacity building of operators of electric vehicles and charging infrastructure and to agree on minimum standards for used EV export from Global North to Global South and to work on global frameworks for the collection, preparation and transport of EOL LIBs for local re-use or integration in global battery value chains;

· **Global, regional and national authorities in the Global North and South, international and civil society organizations, and academia** to work on the necessary policy frameworks at all levels to build conducive e-mobility ecosystems and to allow for controlled used of minimum quality EV flows from global north to south and for circularity of EOL battery materials;

· **Utilities** – power generation, transmission and distribution companies, both publicly and privately owned are at the core of ensuring the availability sufficient clean power for the e-mobility transition and will need to play an active role with regards to energy policy framework development as well as business model and financing scheme development;

· **Users of e-mobility solutions** – to build capacity and awareness and familiarize with opportunities and benefits of clean integrated e-mobility solutions to properly take advantage of e-mobility systems, educate about benefits from improved mobility offers including last mile connectivity and means of active mobility as well as from lower operational costs of EVs, and to highlight the business and investment opportunities related to integrated e-mobility systems.

Through collaboration with these partners and the general public through the institutions and structures built under the GEF-7, the GEF-8 programme will succeed in putting in place the necessary frameworks to build sustainable and integrated e-mobility systems and to address the environmental challenges in LMICs.

At the start of GEF-7, many countries were not able to join the GEF-7 electric mobility programme. Over the past years, many countries expressed interest to join a follow-up GEF-8 integrated electric mobility systems programme. At the same time the international community has prioritized the switch to zero emissions vehicles fleets as a key priority and precondition for achieving the Paris climate targets.

The GEF-8 Integrated Electric Mobility Systems programme aims at addressing the identified needs through: 1.) Supporting additional countries to start working on integrated electric mobility systems and charging infrastructure development; 2.) Supporting countries that have made progress to scale-up and integrate electric mobility and support the financing of this, in particular the building of charging infrastructure; 3.) Working on the issue of used EVs, EV and battery EOL, and 4.) Establishing a systems approach integrating active and public transport with electric mobility and supporting the integration of the transport and the energy sector.

The design of the GEF-8 programme will benefit from lessons learnt from the GEF-7 programme including at national, regional and global levels. Examples include the strengthening of national e-mobility coordination bodies developed within the country projects, as these turn out to be an effective mean of creating momentum within governments. At regional level, coordination between regional support and investment platforms and the global working groups to ensure maximum use of knowledge products developed and networks provided will need to be improved. At global level and in response to the needs

identified under GEF-7, the scope of the global support project has been widened to new areas of work including used EVs, EV and battery end-of-life, the integration of e-mobility with public transportation and active mobility and the need for innovative financing approaches.

[1] Global EV Outlook 2022: Securing supplies for an electric future, IEA 2022

[2] IEA GEVO 2022 footnote on data: Tracking sales of electric two/three-wheelers is not an easy task, as definitions vary across

countries. Often, electric bicycles are included in the statistics. The accounting here includes only vehicles that fit the UNECE definition of L2-L4. This year we have updated our data sources to

Motorcycles Data.

[3] Africa E-Mobility Country Profiles 2022, AEMDA 2022, https://aemda.org/knowledge-hub/

[4] Kendall, Alissa, Kristi Dayemo, Nadiyah Helal, Galym Iskakov, Francisco Pares, Margaret Slattery, Lewis Fulton (2023) Electric Vehicle Lithium-ion Batteries in Lower- and Middle-income Countries: Life Cycle Impacts and Issues. Institute of Transportation Studies, University of California, Davis, Research Report UCD-ITS-RR-23-09, https://escholarship.org/uc/item/7m2536mp

B. PROGRAM DESCRIPTION

Program Description

This section asks for a theory of change as part of a joined-up description of the program as a whole. The program description is expected to cover the key elements of "good project design" in an integrated way. It is also expected to meet the GEF's policy requirements on gender, stakeholders, private sector, and knowledge management and learning (see section D). This section should be a narrative that reads like a joined-up story and not independent elements that answer the guiding questions contained in the PFD guidance document. (Approximately 10-15 pages) see guidance here

Programme objective

The GEF-8 Global Programme to Support Countries to Upscale Integrated Electric Mobility Systems aims to reduce energy use and GHG emissions from the transport sector in LMICs. It furthermore targets reducing negative externalities stemming from used EVs export to LMICs as well as EV and battery end-of-life issues in the Global South. This will be achieved through widening the set of countries, supporting investment into upscaled e-mobility projects and establishing a global framework to address key challenges including the end-of-life of EVs and EV batteries. It will respond to Global Environmental Benefits (GEBs) of both the GEF Climate Change Mitigation and the GEF Chemicals and Waste Focal Area.

The specific GEF-8 programme objectives are to:

1. **Add new GEF-8 country projects** - As part of this submission, 7 new country projects will be added increasing GEF Child Projects from 32 today to

39, and the overall countries participating in UNEP's Global Electric Mobility Programme to close to about 60. Additional countries have expressed their interest to join the GEF-8 programme at a later point in time;

2. **Support for emerging issues** - including the need for systems approaches, EV and battery EOL issues, and financing;

3. **Support GEF-7&8 countries upscaling to country-wide programs** - provide support to GEF-7 & GEF-8 country projects upscaling pilots into phase II electric mobility projects;

4. **Focus on financing for larger roll out** – the Regional Support and Investment Platforms will support the upscaling of country pilot projects into country-wide large scale bankable projects. It will also help finance these;

5. **Create a global electric mobility knowledge hub** – bringing together the tools developed in the Global Thematic Working Groups of the GEF-7 and adding new Working Groups to develop tools on new emerging issues, including used EVs, EV and batteries EOL & circularity, last mile connectivity, transport-power sector integration and innovative financing models;

6. **Develop a new partnership on used EVs, EV and batteries EOL & circularity in LMICs** – to develop a global approach, with regional and local action on this issue, including disposal and circularity.

The programme will be active at the Global, Regional and National levels, building on new Global Thematic Working Groups and a Global Partnership on used EVs, EV and batteries EOL & circularity at the global level, continuing the Regional Support and Investment Platfor in Africa, Asia & the Pacific, Latin America & the Caribbean and Europe, West Asia & Middle East at the regional level and supporting additional 7 new Country Child Projects (structure see Figure 3).

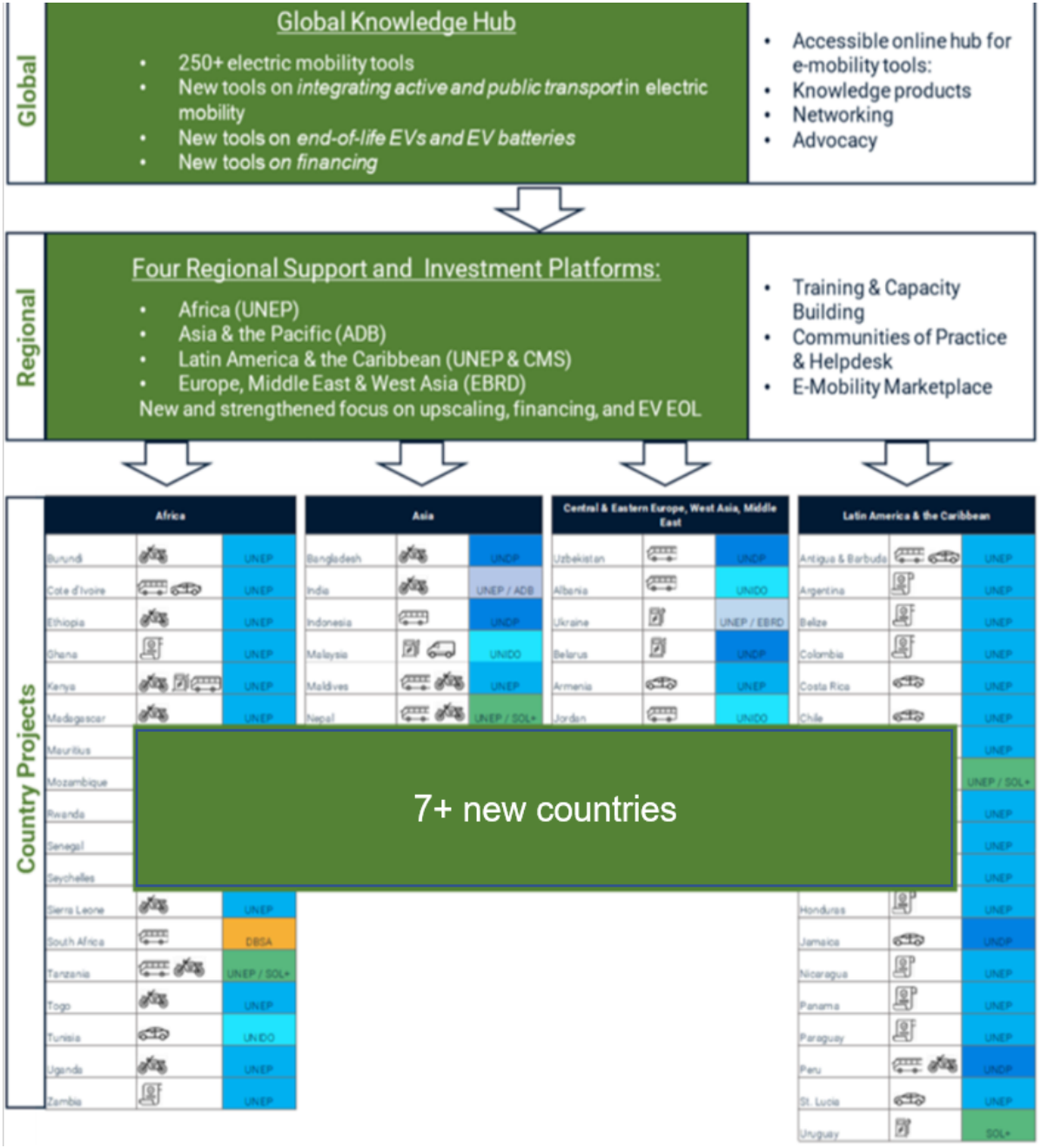

FIGURE 3 STRUCTURE OF THE GEF-8 INTEGRATED ELECTRIC MOBILITY SYSTEMS PROGRAMME

MAP OF PARTICIPATING COUNTRIES IN GEF-7 AND GEF-8 ELECTRIC MOBILITY PROGRAMMES

At the global level, the project will develop knowledge products through 3 Thematic Working Groups and one Global Partnership, all of which will be made accessible through the central knowledge hub, also integrating the current e-mobility toolbox (https://emobility.tools/). Creation of new knowledge products will take place in three areas – 1.) Integration with other transport modes including active transport for last mile connectivity, electrification of means of mass transit and digitalization contributing to transport integration and promotion of electric mobility; 2.) Innovative financing mechanism including for example based on carbon certificate generation, aggregation and trading; and 3.) Transport and power sector integration to ensure alignment of EV fleet growth with renewable power supply, and upgrades to power transmission and distribution networks including expansion of charging infrastructure. Therefore, two new Global Thematic Working Groups will be created on: 1.) Mode integration, active mobility, last mile connectivity and digitalization; and 2.) Innovative financing mechanisms including carbon emissions certificates and trade. The working group on batteries, charging infrastructure and renewable power integration already established under GEF-7 will be continued with a new focus on charging infrastructure, renewable power integration and coupling of the transport with the power sector. The work on batteries formerly part of that working group will be taken over by a new global partnership. This new Global Partnership on

Used EVs, EV and Battery End-of-Life and Circularity will also work on knowledge product development. However, the scope of the partnership will be larger than those of the working groups as this partnership is aiming at becoming the global institution to set the rules for trade of used EVs from Global North to Global South as well as to develop a global set of rules and standards to deal with collection and re-integration of end-of-life batteries into local re-use and global recycling value chains, including international trade of EV battery waste.

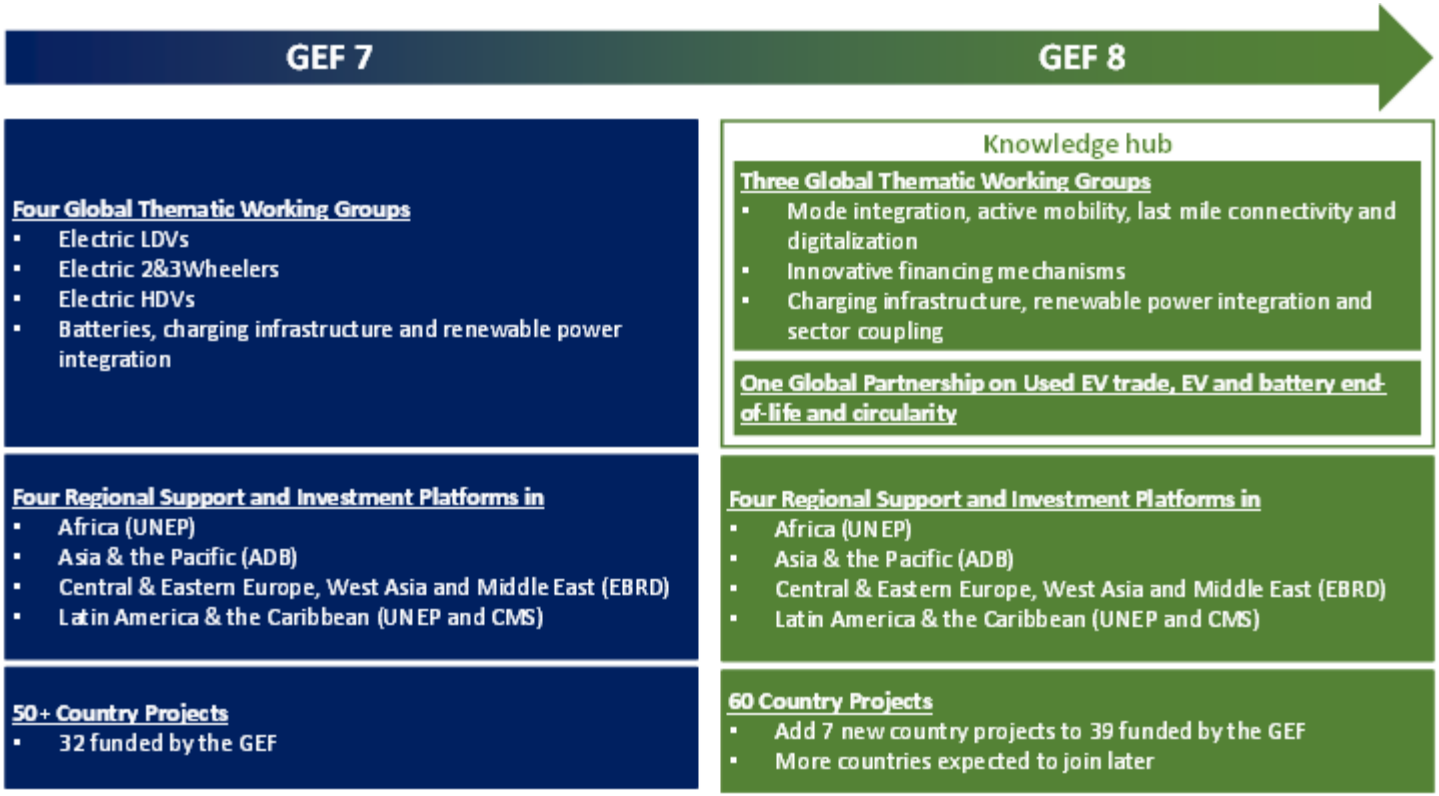

Figure 4 GEF-7 and GEF-8 Global Programme structure

At the regional level, the four Regional Support and Investments Platforms in Africa, Asia & the Pacific, Latin America & the Caribbean, and Europe, West Asia & Middle East will expand the communities of practice, provide capacity building and training programmes, and link projects with financiers and EV industry. Projects with electric mobility in their scope of work, under the Net Zero Nature Positive and Cities GEF Integrated Programmes, will also be invited to these regional events.

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Integrated electric mobility systems Child Country Projects

7 new Country Child Projects will use part of their GEF-8 STAR allocations to prepare for introduction and upscaling of integrated electric mobility systems through:

1. **Development of national planning frameworks** to support the development of national targets, roadmaps and strategies for countries to shift to

electric mobility;

2. **Institutionalization and coordination** to support inter-ministerial collaboration and to identify national leadership on integrated e-mobility systems;
3. **Development of policies frameworks** to support the development of policies, technical standards, fiscal reforms and other incentives to facilitate the uptake of electric vehicles;
4. **Pilot projects** to support the creation of local on-the-ground expertise and public awareness for the introduction of electric vehicle fleets;
5. **Large electric mobility programs** to support the upscaling from pilots to wider roll out of electric vehicles programs (phase 2 programs), for example through demonstration of electric public mass transit systems including last mile connectivity and inter-modality, also integrating active transport, development of EV charging infrastructure, coupling of the transport with the energy sector and renewable power integration;
6. **Used EVs, EV and batteries EOL component** to strengthen the integration of EOL EV/ EV batteries/ hazardous materials components in national EV projects, support the development of national policies, regulations and standards for import of used EVs, collecting and disposing of EOL EVs, EV batteries and hazardous materials, and support the development of regulations and policy frameworks for EOL EVs/ EV batteries and other hazardous wastes collection, reuse, repurpose & recycling;
7. **Financing** to support the establishment of preconditions for the financing of e-mobility projects at scale by developing and / or strengthening the institutional, policy and business framework, including the development of innovative financing mechanisms (such as emission certificate generation, aggregation & trade); and
8. **Awareness** to support the development and implementation of e-mobility campaigns and public awareness raising.

More countries have expressed their interest in developing national integrated e-mobility projects and are expected to join the Programme at a later point in time.

The GEF-8 Programme aims to achieve above objectives through work on five components:

- **Component 1:** Knowledge creation, capacity building, planning and institutionalization;
- **Component 2:** Readiness for upscaling of integrated e-mobility systems;
- **Component 3:** Investment into integrated e-mobility systems and the handling of used electric vehicles, electric vehicle and battery end-of-life & circularity;
- **Component 4:** Integrated electric mobility systems awareness, advocacy, coordination and communications programme;
- **Component 5:** Monitoring and evaluation.

Starting January 2023, UNEP has introduced a major gender component in its global electric mobility programme. A grant of EUR 2.5 million (USD ~2.6M) from the German Federal Government has allowed to develop a project titled “E-Mobility as a Driver for Change - Gender Transformative Zero Emission Mobility Systems”, which will allow UNEP to start including a wide set of gender activities in its electric mobility activities, at normative and operational level, and at global, regional and national level. For example, at global level a set of tools will be developed that will be integrated in the Global Knowledge Hub. At global level this includes the development of a methodology on how to collect and improve gender differentiated transport sector data, including on e-mobility and focusing on data concerning use patterns, accessibility but also operations and management. This methodology will be adapted to the needs and conditions of LMICs. At regional level, gender trainings will be organized and gender components will be included in other trainings. This can include training sessions on above mentioned methodology and how to apply it, but also targeted trainings on the inclusion of gender aspects in operating & managing integrated e-mobility systems, increasing accessibility for vulnerable groups, analysis of socio-economic impact of increased inclusivity etc. And at country

level gender components will be developed and supported in the electric mobility country projects through: 1) Collection and analysis of gender differentiated baseline data; 2.) Development of gender-responsive integrated e-mobility strategies also addressing socio-economic impacts of increased accessibility; 3.) Concrete improvements in the operation of public transport pilots (e.g. by allowing for women-driver-only options in mobility applications to book for rider hailing services), just to name a few. The large-scale introduction of e-mobility will bring systemic changes in the way transport systems are planned, operated and used, and will therefore provide an opportunity to integrate aspects of gender inclusiveness and just transition early on. Communications materials and events targeting this aspect will be organized by the GEF-8 programme, in cooperation with partners such as TUMI / GIZ. Other partners have provided additional resources for these gender and electric mobility activities.

The Theory of Change of the programme is outlined in Figure 5 below. It shows the intervention logic of the programme addressing outcomes, intermediary stages and impact achieved at the national, regional and global levels. It provides an overview about some of the key assumptions and drivers supporting the implementation of the programme including the Country Child Projects and the Global Support Project, and using the funds of both the GEF's Climate Change Mitigation and Chemicals and Waste programmes of work and to achieve the Global Environmental benefits estimated in programme and outlined later in this document.

Both work streams on 1.) Core indicator number 6, "GHG emission mitigation", using the funds of the countries' GEF STAR allocations and GEF's Climate Change Mitigation Global Set-Aside; and 2.) And core indicators number 8 on "Mitigation of Chemicals of global concern and their waste reduced" and number 9 on "Persistent organic pollutants to air reduced" and using the funds of the GEF Chemicals and Waste programme implemented by UNEP are fully integrated.

The programme will be led by UNEP and will be co-implemented together with the GEF Implementing Agencies (IAs) ADB (regional support and investment platform in Asia & the Pacific) and EBRD (regional support and investment platform in Europe, West Asia & Middle East) and co-executed with core programme partners including the UEMI and GIZ / TUMI.

The duration of the Global Support programme is anticipated to take 60 months, with less activities being implemented at global scale during the last 12 months. It is furthermore anticipated that the first round of Child Country project submissions for the June 2023 GEF Council meeting is joined by second round of submissions later in 2023 or 2024.

As for the GEF-7 Global Electric Mobility Programme, the GEF-8 Global Programme to Support Countries to Upscale Integrated Electric Mobility Systems is envisaged to be a multiagency programme with Country Child Project submission involving various other GEF IAs such as UNDP, UNIDO the regional MDBs and World Bank.

Similarly, the other mentioned IAs will play a key role in the planning and implementation of the Global Support Project and will be part of the project steering committee, alongside some of the core execution partners, which are not GEF IAs, and include UEMI and GIZ/ TUMI.

A detailed description of the programme intervention addressing the problem tree (Figure 4) following the logic outlined in the ToC (Figure 5) is provided in the following section.

FIGURE 4 PROBLEM TREE

Figure 5 Theory of change of the programme

The underlying problem is the increased demand for mobility and the growth of motorized transport in LMICs, which drives global increase of energy use and GHG emissions from the transport sector. Several root causes such as limited awareness, lack of capacity, absence of conducive e-mobility policy and business frameworks including for used EV import and EV and battery end-of-life, lack of longer-term planning and coordination, among others hinder the upscaling of integrated e-mobility systems in LMICs and lead to problems such as 1.) Lagging behind the e-mobility development and becoming an importer of large amounts of used ICE vehicles; 2.) Importing a high number of substandard EVs and accumulating large amounts of unregulated electronic waste / end-of-life batteries; 3.) Missing out on integration of e-mobility with public transportation and last mile connectivity; 4.) Missing out on e-mobility integration with the power sector leading to uncontrolled surge in power demand and unsustainable generation; and 5.) Not being able to scale up from EV pilots to large scale deployment resulting in underuse of financiers funding pipelines. In the absence of further support through the GEF, there is a risk of continued increase of fossil fuel use, GHG emissions and air pollution from road transport as well as accumulation of large amounts of end-of-life EVs and batteries in LMICs, with impacts on global climate change, increased pollution including hazardous materials such as POPs and increased cost of mobility, affecting overall quality of life globally, regionally and locally.

The Theory of Change (ToC) addresses the above-mentioned problems through:

1.) Continued work at the global level to advance the knowledge base and disseminate it through a knowledge hub, in particular with regards to i.) Mode integration, active mobility, last mile connectivity and digitalization; and ii.) Innovative financing mechanisms; iii) Charging infrastructure, renewable power integration and coupling of the transport with the power sector and iv.) Used EVs, EV and battery end-of-life and circularity.

2.) Continued support of country projects through the four Regional Support and Investment Platforms to: i) Build capacity and awareness; ii) Support long-term planning and coordination; iii) Develop conducive regulatory and business frameworks; iv) Coordinate technical assistance offers within the international community to provide support to build adequate e-mobility policy, business and financing frameworks; and v) develop and harmonize frameworks to regulate the import of used EVs in LMICs and tackle the issue of EV and battery end-of-life and circularity issues.

3.) Proving of concept of e-mobility technology at the national and city level through integrated e-mobility systems pilots as well as investing into systems to collect end-of-life EVs and batteries for re-purposing and safe recycling / reintegration into global value chains and to facilitate the financing of upscaling projects through matchmaking of project demand with funding opportunities.

4.) Sharing of knowledge and dissemination of results to facilitate replication of the programme's outcomes through global and regional conferences, reports such as IEAs Global Electric Vehicle Outlook, press, internet, social media and national awareness campaigns.

Key assumptions ensuring the success of the programme include: 1.) Effective coordination of all programme stakeholders through the Global Support Project; 2.) Strong political will at global, regional and national levels to develop and implement e-mobility and used EV as well as EV and battery end-of-life policies; and 3.) Strong interest in financiers to scale-up integrated e-mobility systems, among others.

A description of the programme by component is provided in the next section. It needs to be noted that the PFD provides a summary of both the envisaged Global Child Project activities and the individual Country Child Projects. However, not every Country Child Project is supposed to implement all suggested activities and requires support to each of them through the Global Project. The following section constitutes therefore an "offering menu approach" from which countries will be able to choose activities according to their priorities.

<u>Component 1 Knowledge creation, capacity building, planning and institutionalization.</u>

This component will focus on the creation of knowledge at global, regional and national levels through thematic working groups and partnerships. It will support the building of capacity through development of training programmes, which will be delivered to the country projects by the Regional Support and Investment Platforms in Africa, Asia & the Pacific, Latin America & the Caribbean and Europe, West Asia & Middle East, established under the GEF-7 and continued and strengthened under GEF-8. It will lead to the development of the necessary planning framework documents such as strategies, roadmaps and mobility plans to prepare for the development of concrete policies, and to prepare for the design of investment plans and financing mechanisms. It will assist the countries with institutionalization of integrated e-mobility systems through the development of coordination bodies, boards, steering committees etc. to oversee and guide the work in the Child Country Projects.

Component 1 is expected to result in two outcomes: 1.1) Decision makers in the countries demonstrate improved capacity to set up institutions and apply national planning frameworks to upscale integrated electric mobility systems; and 1.2) Authorities at the global, regional, and national level, private sector and international & civil society organizations have built consensus and a draft policy framework through a Global Partnership on Uses Electric Vehicles, End-of-Life of EVs and Batteries & Circularity.

Under this component a *knowledge hub* which will be the central element for knowledge management will also be stablished. It will integrate all tools, policies briefs, reports, guidelines etc. developed under the GEF-7 and GEF-8. It will expand the current e-mobility toolbox (https://emobility.tools/), which has more of a library character to become a one-stop-shop on knowledge materials for integrated e-mobility systems. The *Regional Support and Investment Platforms* established under GEF-7 and continued and strengthened under GEF-8 will play a major role in coordinating inputs from the Country Projects to the knowledge hub and in dissemination of the knowledge materials from the hub to the Country Projects.

The knowledge base on integrated e-mobility systems is expanded and centralized in a knowledge hub.

The GEF-7 and its sister programme EC Solutions+, supported by the European Commission, have developed a large set of electric mobility tools to support LMICs with developing and implementing their shift to electric mobility through four Global Thematic Working Groups. More than 200 reports, tools, policy briefs etc. have been developed and made accessible through the e-mobility toolbox (https://emobility.tools/). The new central knowledge hub will integrate these tools and will see the addition of new tools focusing on new work areas.

New tools development / knowledge expansion will focus on the following priority areas of GEF-8:

1. Integration with other transport modes and the link between electrification and active transport, for example last mile connectivity through motorized or non-motorized means of transportation, and public transport, for example the integration of electric mobility in efficient public mass transport systems. Digitalization and how it can be used to support transport integration and promotion of electric mobility will also play a role;

2. Transport and power sector integration to ensure alignment of EV fleet growth with renewable power supply, and upgrades to power transmission and distribution networks including expansion of charging infrastructure;

3. Innovative financing mechanism including for example carbon certificate trading for integrated electric mobility systems through supporting the development of methodologies for emission certificate generation and aggregation for low carbon transport projects;

4. Used EVs, EV and batteries end-of-life & circularity including the storage, handling, reuse, and recycling of EV batteries and hazardous materials.

In addition to new tools development the expansion of the knowledge base also includes strengthened tool use support – in GEF-8 emphasis will be on the use and application of the tools developed.

To build the required knowledge, two new *Global Thematic working groups* will be established: 1.) Thematic Working Group and development of a toolbox on Mode integration, active mobility, last mile connectivity and digitalization; and 2.) Thematic Working Group on innovative financing mechanism including based on carbon certificate trading for integrated electric mobility systems. Both new Thematic Working Groups will develop toolboxes, which will be centralized in the Knowledge Hub.

In addition to the above mentioned two new Working Groups, the Working Group on "Batteries, charging infrastructure and renewable power integration" already established under GEF-7 is envisaged to continues operation, although with an adjusted scope focusing on "Charging infrastructure, renewable power integration and sector coupling". The work on used EVs, EV and batteries end-of-life & circularity will be taken up by a new Global Partnership (see also Figure 4). The work on charging network expansion will emphasized under the GEF 8 Programme. Utilities (both publicly and privately owned), which have been identified as a weakness in the e-mobility transition, will be targeted through the support programme as they play a central role in ensuring adequate amounts of clean power for the e-mobility transition are available.

The GEF-7 Thematic Working groups on 1.) electric Light Delivery Vehicles (LDVs) s (IEA); 2) electric 2&3 wheelers (UNEP); and electric heavy-duty vehicles (including sub working groups on e-buses and freight) will have finished their work at the end of GEF-7 and are going to be discontinued. Since there will be overlap of the GEF-7 & 8 Global Programmes, they will however support GEF-8 country projects. All materials developed and compiled by the GEF-7 Working Groups will be centralized in the new Knowledge Hub (see also Figure 4).

Training programmes to build capacity on integrated e-mobility systems are developed and stakeholders are trained at national, regional, and global level through Regional Support and Investment Platforms.

The knowledge developed and compiled in the knowledge hub plays a central role in supporting decision makers in their efforts to establish planning frameworks and institutional set-ups to accelerate the introduction and upscaling of integrated e-mobility systems. Based on the materials, training programmes and region-specific curricula to build capacity on integrated e-mobility systems are developed and stakeholders are trained at national, regional, and global level. The main delivery mechanism to bring the support to the countries will be the four Regional Support and Investment Platforms established under GEF-7 in 1.) Africa (UNEP); 2.) Asia and the Pacific (Asian Development Bank); 3.) Central and Eastern Europe, West Asia and the Middle East (EBRD); and 4.) Latin America and the Caribbean (Molina Center Chile with UNEP). Training programmes will include coordination and support among other leading substantive electric mobility programs including the GIZ led Transforming Urban Mobility Initiative (TUMI), the projects implemented by the Urban Electric Mobility Initiative (UEMI), projects developed and implemented by the World Resources Institute (WRI) as well as the Institute for Transportation and Development Policy (ITDP). It will furthermore cooperate with programmes implemented through city networks such as C40, ICLEI and Polis, and including the training materials developed as part of projects such as the European Union (EU) funded Solutions Plus, Sustainable Energy for Southern Africa (SESA) and "ENERGy access and green transition collaboratively demonstrated in urban and rural areas in AfrICA" (ENERGICA).

At the regional level, the Support and Investment Platforms will be strengthened to:

1. Support networks to provide regional support to the country projects;

2. Provide project implementation support to GEF-7&8 Country Child Projects and beyond through training & capacity building programs using the tools, factsheets, reports etc. developed within the working groups of the GEF-7 and GEF-8 projects and now part of the Global Electric Mobility Knowledge Hub;
3. Link to wider transport decarbonization to support the integration of national electric mobility projects with wider low carbon mobility activities including decarbonization of public transportation, active mobility and digitalization;

Decision makers establish planning frameworks including strategies & roadmaps, and coordination bodies to accelerate the introduction

and upscaling of integrated e-mobility systems.

7 new Country Child Projects are joining the GEF-8 programme on integrated electric mobility systems GEF-8 to prepare for introduction and upscaling of integrated electric mobility systems now, and more expected to join later. Component 1 of the programme will support them in the:

1. Development of national planning frameworks to support the development of national targets (possibly updating Nationally Determined Contributions related to the Paris Agreement), roadmaps and strategies for countries to shift to integrated electric mobility systems;

2. Institutionalization and coordination to support inter-ministerial collaboration and to identify national leadership on integrated e-mobility systems;
3. Creation of the capacity needed to work on the development of policies frameworks to support the development of policies, technical standards, fiscal reforms and other incentives to facilitate the uptake of electric vehicles;
4. Building local capacity with stakeholders from government, private sector, finance, academia and civil society

The development of planning frameworks including strategies and roadmaps together with inter-ministerial coordination will ensure coherence of the suggested policy packages.

Activities under component 1 focus at local capacity building and planning, strategizing and preparation of policy development processes covered under component 2

A network of leading organizations to develop a global response to used EVs, EV and battery end-of-life, & circularity is established and a secretariat for the Partnership is created.

To develop the knowledge base on used EV import in LMICs, EV and battery end-of-life issues & circularity, a Global Partnership will be established. The Partnership will create a network of leading organizations to develop a global response to control used EV flows from global north to south and to work on issues related to re-use, recycling and reintegration of end-of-life EVs and batteries in local and global value chains also including the management of hazardous chemicals in dismantling and recycling EVs (including seats and dashboard with POPs flame retardants). It will contribute to the development of guidelines, tools, and other knowledge products, to advise and support individual GEF-7&8 Child Country Projects and beyond, as well as regional and global partners. A secretariat hosted with UNEP will be established.

Members of the partnership are supposed to include representatives from global North and South governments, the EV and EV supply industry, the battery manufacturers, associations (e.g. the Global Battery Alliance, GBA) academia, international organizations and civil society.

Guidance documents and a draft framework for minimum standards for the export of used EVs from the Global North to the Global South and the collection, preparation and transport of end-of-life EV batteries for local reuse and reintegration in global value chains are developed.

The partnership will focus on:

1. Expanding the knowledge base on used EVs, EV and battery end-of-life & circularity challenges, including data on EV and battery stocks and trends in the export of used EVs from Global North to Global South;

2. Developing global and regional recommendations/ guidance/ advise/ best practices on EV and battery end-of-life and circularity:
    i. Standards, agreements and guidelines for the export of used EVs from the global North to the Global South to improve the quality of used EVs exported and to prevent the accumulation of sub-standard EVs with short useful remaining lifetime in the Global South;

ii. Standards and guidelines for the collection, preparation, and transport of end-of-life EV batteries in the Global South for reuse of the EV batteries in the Global South (e.g. for energy storage or for assembly of new battery packs based on used cells);

iii. Standards and guidelines for the collection, preparation, and transport of end-of-life EV batteries in the Global South for recycling and reintegration into global EV battery value chains to not lose the valuable raw materials stranded in the Global South;

iv. Adapt the design and production of EVs and batteries to facilitate downstream reuse and recycling of end-of-life batteries in LMICs, and including minimum environmental standards for upstream material extraction;

v. Extended producer responsibility and other mechanisms for Original Equipment Manufacturers or vehicle importers for the handling of end-of-life EVs and batteries adapted to LMICs;

vi. General aspects of end-of-life vehicle, circularity of critical materials, treatment and hazardous materials (e.g. those including flame retardants such as seats, dashboards etc.) in LMICs.

It is the aim of the partnership to create momentum among UN member countries and to develop and adopt a United Nations Environment Assembly (UNEA) resolution on used EVs, EV and battery end-of-life, & circularity to provide UNEP with the mandate to lead on the development of a global set of rules and regulations to curb the negative environmental, social and economic impacts of EV adoption in LMICs and to create the peer pressure to move from an unsustainable to a sustainable trajectory.

Training programmes to build capacity on used EVs, EV and battery end-of-life & circularity are developed and stakeholders are trained at national, regional and global level.

The Global Programme will use the knowledge developed by the partnership to establish training and capacity building programmes on used EVs, EV and battery end-of-life & circularity for delivery through the Support and Investment Platforms.

Training programmes and capacity building events using the materials developed by the partnership and disseminated through the Global Knowledge Hub will be developed, and stakeholders will be trained at national, regional and global levels on used EVs, EV and battery end-of-life & circularity through the four Regional Support and Investment Platforms established under GEF-7.

These training and capacity building programme will support decision makers at national, regional and global levels to establish planning frameworks including strategies & roadmaps to prepare for activities on used EVs, EV and battery end-of-life & circularity. A group of GEF-7 and GEF-8 countries is expected to use GEF Chemicals and Waste focal area funds to work on activities on the ground, such as the development of waste collection schemes, training of staff in respective centers and preparing for local collection, transport and processing of used EV batteries.

The Partnership will develop its own website and programme of events, which will be closely linked to other global UN events targeting chemicals and waste collection, treatment and transboundary shipment of chemicals and waste. The Secretariat within UNEP will link to the work of multiple units, branches and divisions within the organization such as the work of the Sustainable Mobility Unit and its Global Electric Mobility Programme, the work of the Extractives Hub under the Resources and Markets Branch, the work of the Life-Cycle Initiative, and the conventions and agreements managed as part of UNEP's Chemicals and Waste Programme.

<u>Component 2 Readiness for upscaling of integrated e-mobility systems</u>

This component focuses on the readiness of Child Country Projects and beyond for upscaling of integrated e-mobility systems through development and adoption of policy frameworks and design of business models and financing schemes. While component 1 focuses on: i) building the required capacity in

countries; ii) developing relevant planning frameworks for example National Electric Mobility Strategies and Roadmaps to prepare for policy and business model development; and iii) establishing relevant structures to guide the development of a conducive e-mobility framework with the support of the Global Project, Component 2 focuses on the actual development of policies and regulations, business models, financing schemes etc. supported by the programme at the national level. It furthermore supports the development of a global framework addressing the import of used EVs in LMICs, and end-of-life of EVs and batteries & circularity.

Component 2 is expected to result in two outcomes, mainly through implementation of activities at the Child Country project level: 2.1) Governments and other authorities have endorsed policies, and have designed business models and financing schemes to accelerate the uptake of integrated electric mobility systems; and 2.2) Governments, private sector and other authorities have endorsed policy frameworks for used EVs, end-of-life of EVs and batteries & circularity.

Component 2 will strengthen the Regional Support and Investment Platforms to support countries with the development of conducive policy, business and financing frameworks through peer-to-peer exchange and the communities of practice. The Regional Support and Investment Platforms will continue the provision of technical support to the country projects based on the training programmes developed under component 1. Under GEF-8 new activities to support Child Country Projects through the platforms will be developed in four areas:

· Creating financing opportunities for the upscaling of electric mobility and matchmaking of demand for financing national and city projects;

· Coordinating the provision of targeted technical assistance by Global Project partners (e.g. the development banks and substantive programmes) on financing the roll out of integrated e-mobility systems and the development of bankable projects for integrated electric mobility upscaling;

· Coordinating the identification of potential areas of investment in end-of-life EVs and batteries & circularity activities and supporting the building of pilot project investment pipeline in cooperation with the Child Projects;

· Supporting a systems approach in country projects – linking active and public transport and means of digital support to electric mobility projects and integration of the transport with the power sector including expansion of charging infrastructure.

Local, national and regional authorities develop policy and regulatory frameworks for conducive integrated e-mobility ecosystems.

Authorities at all levels will be supported through the regional support an investment platforms with the development of policy frameworks. At local level, activities under this component will work on city level regulation, for example the development of low or no-emission zones or restricted access zones, regulation on important issues such as land provision for charging infrastructure, rights of access for installing, maintaining and operating the EV charging infrastructure etc. This component could also work on harmonization of policies related to procurement of EVs and EV supply equipment to achieve some level of national market integration and economies of scales when it comes to publicly owned EV fleets such as buses.

At national level, activities under component 2 will support the development and / or strengthening of policy frameworks to enable the development of integrated electric mobility systems. This includes the development of fiscal policies, e.g. the waiving or reduction of import duties and excises for EV and EV supply equipment and other tax elements such as value added tax (VAT), the development of standards and regulation for example concerning, safety, charging and other technical specifications or maximum vehicle age and minimum battery degradation for used EVs and the putting in place of other incentives such as low or zero emission zones, toll free access for EVs and so on.

In addition, activities under this component will support regulation of related sectors such as the energy sector, for example to provide access to power retail for third parties and develop differentiated pricing schemes for power used for EV charging. It also looks into regulation of the EV charging market, e.g. the development of agencies and clearing boards for the integration of different charging providers to achieve interoperability and a transparent charging market.

On the regional level, this component will support work on harmonization of legislation at the supranational level, for example at ECOWAS in Africa, ASEAN in Asia and MERCOSUR in Latin America, just to name a few. Harmonization with regards to technical specification and standards of EVs and EV supply equipment or with regards to used EV import regulation offers great benefits to streamline the market, enable economies of scale and to prevent illegal import of substandard vehicles to circumvent individual import restrictions.

At all levels, outputs developed will benefit from the policies drafted and lessons learned in countries part of the GEF-7 programme and its partnering initiatives. The Regional Support Platforms will play a central role in coordinating technical assistance to support the policy development and will be responsible for organizing the necessary exchange form North to South and Peer to Peer through physical and virtual meeting and training events.

Public and private sector stakeholders develop business models and financial schemes for integrated e-mobility and end-of-life operations.

Similarly to the policy development, public and private sector stakeholders will be supported with the development of business models and financing schemes through the regional support and investment platforms. The business models will look into defining technical specifications, developing operational and economic models for the use of EVs in fleets – to transport passengers and goods using electric 2&3wheelers, cars, mini-buses, buses, vans and trucks. Much can be learned from the models developed under GEF-7 and its partnering programmes such as the Solutions plus project. Business models already proven in other countries will be adapted and refined to fit local purposes. Under GEF-8, much emphasis will be put on bringing business models to scale, for example when it comes to electrification of entire city bus fleets on newly developed bus-rapid transit (BRT) systems and the related feeder lines and last mile connectivity.

Similarly, business models to operate charging solutions, based on fixed charging and battery swapping have already achieved a certain level of maturity, and now roll-out plans to bring them to scale, including siting of stations, network analysis needs to be developed. Again, much can be learned from the current GEF-7 and partnering initiatives and countries under GEF-8 will not need to start from scratch.

As for the business models, related financing schemes will need to be developed. For example, partnering financing institutions have in place multiple mechanisms and offers to enable local financing – through risk sharing facilities, first-loss-guarantees, blending of concessional financing, offering of long-term repayment times and many more instruments. The Global Programme will support global and regional financing partners in the identification of local partners such as commercial banks to turning international climate change and development funds into local financing support to enable end consumers to buy EVs and EV assemblers and manufacturers supply the equipment. Collaboration with UNEP's Finance Initiative will help with the identification of partners, for example those which are already part of the Net Zero Banking Alliance.

Technical assistance offers from partnering agencies are coordinated and decision makers in countries are supported with the development of integrated e-mobility system projects.

Many institutional development partners such as the World Bank, ADB, AfDB, EBRD, IDB, CAF etc. have put in place or are currently developing large investment programmes for integrated electric mobility projects. Very often, these programmes aiming at the issuance of loans for e-mobility investment also integrate sizeable budgets for targeted technical assistance, to work on policies & regulations, define operational models, identify structures to procure

and operate rolling stock and collect and share fares to cover at least part of the operational costs. There is an opportunity to align these programmes and to coordinate work streams. For example, technical assistance provided to enable investment in e-buses has often a narrow focus, working with stakeholders from ministry directorates and city authorities but often missing a more holistic approach on policy development. The Global Programme and in particular the Regional Support and Investment Platforms in cooperation with the national e-mobility coordination bodies developed in the countries as part of component 1 will play a key role in bringing loose ends together and in identifying and prioritizing investment opportunities.

The coordination effort will also rely on cooperation with other substantive programmes, such as those mentioned before and implemented by partners such as the WRI, GIZ / TUMI, ITDP, C40, Polis, ICLEI, UEMI as well as the cooperation with the ZEVTC and its Rapid Response Task Force. The Global Programme is well placed to play a coordinating role between different agencies, initiatives and programmes and can facilitate matchmaking between TA offers and TA demand.

Local, national and regional authorities develop environmental regulation and planning frameworks for used EVs, EV and battery end-of-life and circularity.

The global and regional recommendations/ guidance/ advise/ best practices/ and agreements on used EVs, EV and battery end-of-life and circularity will form the basis to develop national, sub-regional and regional regulation and planning frameworks to ensure:

1. The importation of high-quality used EVs with sufficient battery capacity and lifetime to LMICs
2. The collection of end-of-life EVs and batteries for local re-use of the batteries for example for power storage or grid stabilization services; and
3. The collection of end-of-life EVs and batteries for processing and preparation of the batteries for transport and re-integration in global battery value chains to maximize recycling of costly and rare metals and to minimize the impact of electronic waste.

The above mentioned work is of utmost importance to ensure sustainability of e-mobility in LMICs. The risk of large quantities if EV batteries, especially the smaller ones used in 2&3Wheelers being landfilled is imminent, resulting in an increased amount of landfill fires and large quantities of air pollution generated, including large quantities of POPs. Local regulation to transport end-of-life batteries or already processed products such as black mass, which is the result of crushing batteries needs to be developed all over the Global South. Similarly, pricing schemes to give EOL batteries a price tag, especially the smaller ones, to incentivize return to certified collection centers and to prevent EOL batteries draining into informal and polluting ways of recycling is crucial.

These policy frameworks are decisive to provide investors the needed planning certainty to invest into EOL battery collection and processing facilities, which will be needed all over the Global South. Much of the circularity issues of e-mobility and battery production are linked to scale: large scale EOL battery processing and refining facilities. Since battery production and material refining are only economically viable at large scale, due to the high investments, and the relatively low concentrations of rare metals in LIBs, facilities are likely to be concentrated in few countries in regions, even in the more distant future, which urgently requires local processing facilities enable transport of intermediary EOL battery products.

The structures and regulations established under this Global Programme will be a first and urgently needed step to achieve consensus among governments in the Global North and South, the EV and battery industry and other international and regional authorities to tackle the problem before it becomes a significant environmental concern.

Regional harmonization of regulations, policies or standards related to electric mobility, regulation for used EVs, end-of-life of EVs and batteries & circularity is supported.

Regional entities such as the ECOWAS in West Africa, ASEAN in Southeast Asia, MERCOSUR in Latin America and CARICOM in the Caribbean will need to

play a crucial role when it comes to regional harmonization of environmental policies, and in particular those related to used EVs, end-of-life of EVs and batteries & circularity. Often, these supranational entities have the mandate to develop directives, which then need to be transformed into national law. Already with regards to fuel quality standards and emission standards of vehicles, the regional bodies played a key role to introduce and harmonize relevant regulation. This needs to be repeated and strengthened when it comes to EV and battery EOL and used EV import regulations. Regional harmonization can avoid scattered systems which open doors to corruption and illegal cross-border trade of substandard EVs and EOL EVs and batteries.

Component 3 Investment into integrated e-mobility systems and the handling of used electric vehicles, electric vehicle and battery end-of-life & circularity

This component will focus on investment in integrated e-mobility systems and the handling of used electric vehicles, electric vehicle and battery end-of-life & circularity.

Component 3 is expected to result in one outcome: Countries invest in piloting and upscaling integrated e-mobility systems including the handling of EV and battery end-of-life treatment.

More specifically, component 3 will support cities and countries with the development and implementation of pilot projects, mostly in countries which do not have preceding experience with nationally led e-mobility projects. The development and implementation of up-scaling projects, or phase II projects, are mostly addressing countries which are currently implementing GEF-7 and partnering initiatives and programmes' e-mobility projects. The former projects will follow the example of GEF-7 Child County Projects, although having a larger scope by integrating aspects of last mile connectivity, active mobility, digitalization and sector integration already at the pilot phase. The latter projects will mostly be based on the development of up-scaling concepts for submission to partnering financing institutions and programmes.

GEF-7&8 countries demonstrate the technical, operational, and economic viability of integrated e-mobility systems and a pipeline of investments for upscaling is prepared.

As part of the GEF-7 Global E-Mobility programme and partnering projects such as the EU funded Solutions Plus project, more than 40 pilot projects in LMICs around the world are currently implemented or are being prepared for implementation. These pilot projects play an important role in bringing first-hand experience with e-mobility to countries and are a key element for raising of awareness. Under the GEF-8, pilot projects in countries which have not already implemented e-mobility programmes will primarily serve the same purpose, although starting from a different level of development: experience gained with the GEF-7 pilot projects will feed into the GEF-8 activities and emphasis will be on preparing for upscaling and financing from the onset. Focus will be less on technical and operational viability but more on business model and financing scheme development, with GEF funding more likely to target charging infrastructure.

Cooperation with development partners will be intensified. Examples of cooperation between the GEF funded e-mobility pilots and large-scale investment projects include for example: 1.) The project to "Support the Shift to Electric Mobility in Burundi" (GEF ID 10278), which will be implemented in close collaboration with World Bank's Burundi Transport Resilience Project (PID P172988). The WB project amounts to a grant of USD 120 million and aims at investing in improved road infrastructure in the center of Bujumbura. It is planned to use part of the WB project's funding to build charging infrastructure for e3wheelers, which will be piloted as part of the GEF project. Similarly, WB's project is targeting the provision of technical assistance for a number of transport sector reforms, and policy development of both the WB and GEF project will be closely aligned. 2.) In India, the project "Electrifying Mobility in Cities: Investing in the Transformation to Electric Mobility in India" (GEF ID 10276) is aiming at leveraging co-financing of about USD 160 million for investment into e3Wheelers, electric light duty vehicles and charging infrastructure in Indian cities, with the majority being implemented through Energy Efficiency Services Ltd (EESL, ~ USD 130 million), which is a government owned energy company, and the remainder (~ USD 30 million) being invested by

ADB. 3.) The UNDP implemented GEF-7 e-mobility project “Accelerating the adoption and scale-up of electric mobility for low-carbon city” (GEF ID 10609) in the Philippines is aiming at leveraging USD 15,000,000 from the Development Bank of the Philippines for investment into e-jeepneys, among others.

UNEP is currently developing a proposal for a project co-implemented with World Bank and targeting the financing of electric buses on BRTs in Africa for submission to the GCF. The proposed project is aiming at covering the incremental costs of buying electric bus fleets for operation on African BRTs, instead of using diesel buses which still today are the default option in many large-scale public transport project financed by development banks.

The GEF-7&8 Country Child Projects – with policy frameworks developed, vehicles and charging infrastructure piloted and business models and financing schemes designed – will play a crucial role in establishing a pipeline of investments for upscaling. The Regional Support and Investment Platforms will help in identifying countries ready for upscaling.

A group of GEF-7&8 country projects pilot investments in EV and battery end-of-life & circularity facilities and support the exchange of information and best practices.

The preparation of end-of-life EVs and batteries for local re-use or re-integration into global battery value chains is a recent and important topic.

Used EV batteries, which cannot serve as traction batteries anymore, can be re-used for local energy storage, e.g. in off-grid systems but also grid connected for grid balancing. They can furthermore be recycled, whereby battery packs of used EVs get disassembled, each cells gets tested, and those cells which succeed the test will be reassembled to battery packs for use in stationary or even transport applications. Multiple start-ups in India but also in Africa are currently developing battery packs based on used cells for use on e2&3wheelers. Much regulatory work to enable such operations is necessary at the national and subregional level, including for example regulation on the transport and cross-border transit of used EV batteries.

Similarly, to reintegrate end-of-life EV batteries into global value chains, many open questions remain to be clarified. As it will not be possible to transport large amounts of entire used EV batteries from Global South to global north for re-integration in cell production processes, and since cell production itself is very likely to not take place in LMICs in the Global South within the next decade or so, due to complexity of the processes and also the need for scale which asks for proximity between cell production and EV production, used batteries will need to be processed in order to be transported to refineries. These processes include for example the milling of batteries to a raw product also known as “black mass”. Such granulate is safe to transport in large quantities, however no regulatory frameworks exist for the time being, creating large barriers for interested private sector players ready to invest in end-of-life EV battery processing facilities.

Pilot projects to show the technical, operational and economic viability to collect and prepare end-of-life EV batteries in the Global South for reintegration into global value chains are very much needed.

This workstream aims at identifying a couple of GEF-7 and 8 countries, which are ready for piloting facilities either for local reuse of end-of-life EV batteries or for the collection and preparation of EV batteries for transport to global north. Such facilities will not only look into the safe reuse or recycling of end-of-life batteries but will also serve as pilots in LMICs to deal with general issues of recycling of used cars, and the mitigation of pollutants related to it. For example, many LMICs lack facilities to recycle end-of-life cars in a safe and environmentally sound way, and many potentially hazardous wastes streams such as vehicle seats, dashboards etc., which contain flame retardants with POPs when not disposed adequately. Environmentally sound recycling of such vehicle parts will be integrated in the effort to deal with battery and EV specific end-of-life issues.

The regional support and investment platforms will play a role in identifying suitable countries to integrate elements of EV and battery end-of-life & circularity to generate evidence on the life-cycle sustainability of integrated e-mobility systems.

Matchmaking of funding opportunities with project proposals from Country projects and beyond for upscaling and replication is facilitated.

The objective of this outcome is to facilitate the matchmaking of national or city -level integrated e-mobility systems projects seeking for financing. Target institutions include global, regional and sub-regional development banks, climate mitigation financing mechanisms such as the GCF or NAMA facility, bilateral development programmes, philanthropic foundations and commercial and private investors. For example, any regional development banks have already or are on the way of setting up large financing pipelines for e-mobility projects. The GEF-7&8 projects provide an ideal starting point for the development of bankable projects, based on the structures in place including local programme managers and technical advisors. The market-place function of the regional support and investment platforms already established under GEF-7 and continued under GEF-8 will be an important element in identifying potential projects and further developing investment pipelines.

Possible formats include investment roundtables bringing together e-mobility projects, financiers and EV and EV supply equipment manufacturers and the collaboration with other initiatives such as the ZEVTC and its rapid response taskforce and other substantive programmes such as GIZ TUMI. Equally, the build-up of co-implementing partners' e-mobility investment pipelines such as ADBs and EBRDs investment programmes will build on the country project funded by the GEF. Collaboration with additional MDBs such as IDB and CAF in Latin America and the Caribbean is envisaged. UNEP is currently signing an MoU with IDB outlining close collaboration when it comes to e-mobility technical assistance, development of knowledge products, and dissemination e.g. through training and capacity building events.

Aggregation of EV and EV supply equipment demand via joint target-setting/procurement across cities/countries is supported.

The market for electric public transport vehicles such as buses very much follows the example of the conventional counterpart – prices for vehicles, which are very often specified to the needs of the bus operating company strongly depend on order size. There is therefore much benefit in trying to aggregate the market, especially in early days when the number of ordered vehicles per project are still low. Many transport markets, and more specifically those in Sub-Sahara Africa, are very similar among regions and subregions. For example, in the African market there is a strong demand for 2 types of vehicles: 1.) Van type minitaxis (called Matatu / Kenya, Dalla Dalla / Tanzania, Tro Tro / Ghana, *Car Rapide* / Senegal etc.) with are often fourteen passenger seats plus drivers; and 2.) Midi-buses with up to 35 to 40 seats. While the market-offer for van type e-minitaxis is still narrow – only a couple of manufacturers such as Volkswagen, Ford offer e-vehicles in this segment, apart from purpose-built e-vans for example for Amazon or the German postal Deutsche Post, more choice is available in the midi-bus segment, mostly provided by Chinese brands such as BYD.

In addition to Chinese and European bus companies, a number of local bus manufacturers and assemblers exist. For example, Brazilian bus manufacturer and coach builder Marco Polo recently announced the production of electric buses (https://busworldlatinamerica.org/en/news/marcopolo-begins-production-its-first-100-electric-bus). Some smaller scale bus manufacturers are based in East Africa, comprising the Kenya brand Roam (https://www.roam-electric.com/electric-buses) as well as Ugandan company Kiira Motors (https://www.kiiramotors.com/kayoola-evs/).

The regional support and investment platforms will play a role in aggregating EV and EV supply equipment demand through:

· Connecting e-mobility pilots and full scale projects at the regional level to investigate possible synergies and alignment in technical specifications in order to seek for more competitive offers from EV and EV supply equipment manufacturers;

· Training stakeholder on the benefits of aligned technical specifications for EVs and EV supply equipment;
· Developing cooperations with EV and EV supply manufacturer.

Under the GEF-7, already a couple of multinational e3wheeler manufacturers including India based Mahindra and Piaggio have announced to provide

e3wheeler for piloting purposes in East Africa at reduced cost and with technical assistance including driver training, training of workshop and dealership staff etc. Similar cooperations will be developed under the GEF-7 and the GEF-8 to supply early market adopters with the needed vehicles and infrastructure.

Component 4 Integrated electric mobility systems awareness, advocacy, coordination and communications programme

This component will focus on advocacy, coordination and the communication and dissemination of programme results.

Component 4 is expected to result in one outcome: Results of the programme are widely disseminated and key developments, best practices and other lessons learned are shared to promote wider uptake of integrated electric mobility systems by market actors in programme and non-programme countries.

Under this component, results of the Country Child Projects and the Global Programme will be communicated and disseminated. It will build on some of the elements developed under the GEF-7 programme, such as the websites of the programme and Regional Support and Investment Platform and the electric mobility toolbox (https://emobility.tools/). It will comprise regional and global outreach through dedicated events, campaigns and dissemination of the project / programme materials.

Global EV Outlook and other relevant publications are expanded to additional countries, data-sets, assessments, and case studies.

The deliverables produced as part of the GEF-7 global programme and the Child Country Projects will play a major role to inform the work of the GEF-8 Child Country Projects, and it will be the task of the global project lead (UNEP) and the Regional Support and Investment Platform leads (ADB, EBRD, CMS, and UNEP) to make sure that these are widely disseminated among the Child Country Projects. Programme outputs will continue to feed into publications such as the Global Electric Vehicle Outlook (IEA) and partners knowledge and research products.

The e-mobility monitoring framework is continued, data on market and policy framework is collected and indicators and targets are tracked.

As Child Country projects under the GEF-7 are taking up implementation, discussion on data collection and analysis stemming from the country projects are gaining momentum. In many LMICs and in particular those in sub-Sahara Africa as well as a few in Asia and Central America, transport statistics are of poor quality. In many of these countries, knowledge of the actual amount of vehicles in the fleet is not accurate, due to no systems in place to account for end-of-life vehicles leaving the active fleet and cross-border trade of used vehicles. It is the aim of this component to increase the quality of transport sector, fleet, energy use and GHG emission data. With the help of the IEA and their programmes and trainings on energy balances and accounting (e.g. the energy training week), it is envisaged to build capacity in these countries and to improve transport data, for example through establishment of bottom-up versus top-down analysis on energy use and emissions from the transport sector. These data sets are of great value, can feed into improving the work under the UNFCCC, to establish better Nationally Determined Contributions (NDCs). It can link with the work funded by the GEF under the Capacity-building Initiative for Transparency (CBIT) programme.

The programme is presented at leading global and regional events both with regards to Climate Change and Chemicals and Waste with participation of programme stakeholders from the country projects.

Results stemming from the partnerships developed and projects / programs established will be featured during global and regional events such as the Conference of the Parties (COPs) of the UNFCCC, the UNEP Environment Assembly (UNEA), the UNFCCC's Regional Climate Weeks. Establishment of new initiatives to develop Integrated Electric Mobility Systems or part of it in LMICs will be supported.

The work of the Used Electric Vehicle and Battery End-of-Life & Circularity Partnership will feed into UN processes and agreements such as the Basel, and Stockholm Conventions and SAICM and will inform mandates and work programs negotiated as part of UNEA. It is the objective of this programme to start

a political process to develop and submit for adoption a UNEA resolution on used EVs, EV and battery and-of-life & circularity, to provide the secretariat of the Global Partnership on Used Electric Vehicle and Battery End-of-Life & Circularity with a mandate to lead on this global issue and to develop mandatory rules and regulations on the matter.

An awareness campaign and a website on the issue of used EVs, end-of-life EV, batteries & circularity is developed.

Under this outcome, a website and an awareness campaign on the issue of used EVs, end-of-life EV, batteries & circularity will be implemented. The website will be linked to the knowledge hub, the global programme website hosted by UNEP and the regional support and investment platforms hosted by development partners such as the ADB, EBRD and *Centro de Movilidad Sostenible* (CMS).

The website will feature the partnership and will inform of events and status of the work. It will provide knowledge products, guidelines, policy briefs, analytical tools etc. developed.

A global awareness campaign will be developed, in cooperation with the partnerships' members, to inform on the impacts of used EVs, EV and battery end-of-life and circularity in LMICs.

Component 5 Monitoring and evaluation

The content of this component will be described in the respective section below.

Monitoring and Evaluation

Describe the approach to program-level Monitoring and Evaluation, including ways to ensure coherence across Child Projects and to allow for adapting to changing conditions, consistent with GEF policies. In addition, please list results indicators that will track the Program Objective, beyond Core Indicators. (Max 1-2 pages).

The GEF-8 programme will leverage the work of the current GEF-7 programme and use the structures developed to support the Country Child Projects. A Results Framework will be established to monitor progress of the Country Projects. Indicators will be aggregated by the Global Project to monitor the success of the programme at objective and outcome levels, and including the GEBs of the GEF's Focal Area on Climate Change Mitigation as well as Chemicals and Waste. The Country Projects will be required to report to the Results Framework, including the GEBs of the GEF's Focal Area on Climate Change Mitigation as well as Chemicals and Waste, and the regional support and investment platform will play a role in aggregating the data. The set of indicators developed at PFD stage is shown in Figure 6.

The Global Project will be responsible for knowledge management, including the continued provision of a repository, which is one function of the e-mobility toolbox (https://emobility.tools/) and the further integration of the toolbox in a more contextualized knowledge hub. The country projects will be required to submit results for dissemination through the toolbox / knowledge hub to reach out to other countries for replication purposes.

The county projects will be required to provide feedback on the knowledge materials and trainings provided in order to adjust and improve quality.

UNEP as the lead agency will be responsible for the coordination among global working groups, the partnership on used EVs, EV and battery end-of-life and circularity, the regional support and investment platforms and the country projects.

Indicators of the programme results framework will be tracked as part of the annual Project Implementation Report (PIR). IAs will be responsible to ensure the indicators are reported.

Global Programme to Support Countries to Upscale Investment in Integrated Electric Mobility Systems - 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 / GEF Core Indicator 6					
Indicator B: Direct and Indirect enegy savings (MJ)					
Indicator C: Number of direct beneficiaries / GEF Core Indicator 11					
Indicator D: Chemicals of global concern and their waste reduced (metric ton of toxic chemicals reduced) / GEF Core indicator 9					
Indicator E: Persistent organic pollutants to air reduced (gram of toxic equivalent gTEQ) / GEF Core Indicator 10					
Component 1 **Knowledge creation, capacity building, planning and institutionalization**		**Component 2** **Readiness for upscaling of integrated e-mobility systems**		**Component 3** **Investment into integrated e-mobility systems and the handling of used electric vehicle trade, electric vehicle and battery end-of-life & circularity**	**Component 4** **Integrated electric mobility systems advocacy, coordination and communications programme**
Outcome 1.1 Decision makers in the countries demonstrate improved capacity to set up institutions and apply national planning frameworks to upscale integrated electric mobility systems.	**Outcome 1.2** Authorities at the global, regional, and national level, private sector and international & civil society organizations have built consensus and a draft policy framework through a Global Partnership on Used Electric Vehicles, End-of-Life of EVs and Batteries & Circularity.	**Outcome 2.1** Governments and other authorities have endorsed policies, and have designed business models and financing schemes to accelerate the uptake of integrated electric mobility systems.	**Outcome 2.2** Governments, private sector and other authorities have endorsed policy frameworks for used EV trade, end-of-life of EVs and batteries & circularity.	**Outcome 3** Countries invest in piloting and upscaling integrated e-mobility systems including the handling of EV and battery end-of-life treatment.	**Outcome 4** Results of the programme are widely disseminated and key developments, best practices and other lessons learned are shared to promote wider uptake of integrated electric mobility systems including used EVs, end-of-life of EVs and batteries & circularity by market actors in programme and non-programme countries.
Indicator 1.1.1 # of new or improved national planning frameworks and/or institutions set up	Indicator 1.2.1 # of organizations contributing to knowledge products developed by the Global Partnership on Used EVs, End-of-Life of EVs and Batteries & Circularity	Indicator 2.1.1 # of countries with new or revised regulatory frameworks on integrated e-mobility systems submitted for adoption	Indicator 2.2.1 # of countries with new or revised regulation and planning frameworks for used EV trade, EV and battery end-of-life and circularity submitted for adoption	Indicator 3.1 # of countries generating evidence from pilots supported by the programme on the technical, financial viability and/or environmental benefits of integrated electric mobility systems and sharing with the knowledge hub	Indicator 4.1 # of countries generating and sharing best practices and other lessons learned on low-carbon electric mobility
Indicator 1.1.2 # of knowledge products developed by the programme on integrated e-mobility systems used by practitioners	Indicator 1.2.2 # of knowledge products on Used EVs, End-of-Life of EVs and Batteries & Circularity used by practioners	Indicator 2.1.2 # of countries with new and revised business models and financing schemes designed	Indicator 2.2.2 # of harmonized regulations and policies on used EVs, end-of-life of EVs and batteries & circularity at regional and sub-regional level submitted for adoption	Indicator 3.2 # of countries with concepts for integrated e-mobility system upscaling projects and battery end-of-life facilities submitted to financiers	Indicator 4.2 # of relevant publications using datasets to track e-mobility markets and policy frameworks generated through the country projects
Indicator 1.1.3 # of stakeholders applying training on integrated e-mobility systems at national, regional and global levels	Indicator 1.2.3 # of stakeholders applying training on Used EVs, End-of-Life of EVs and Batteries & Circularity at national, regional and global levels	Indicator 2.1.3 # of new or revised regulatory frameworks on integrated e-mobility systems submitted for adoption	Indicator 2.2.3 # of global guidelines / voluntary agreements / standards endorsed by EV and EV supply industry	Indicator 3.3 amount of public or private investment (in US$) leveraged as a consequence or in connection with the GEF Program	Indicator 4.3 # of non-e-mobility programme countries participating in programme events committing to up-scaling integrated electric mobility systems
		Indicator 2.1.4 # of new and revised business models and financing schemes designed	Indicator 2.2.4 # of business models/financing instruments/private sector initiatives related to EOL	Indicator 3.4 # of financiers/financial institutions that invest in Programme supported pilots	

Figure 6 programme Results framework

The programme results framework is developed in such a way that all Country Child Projects will be able to report on each of the components' indicators which are to be addressed at Country Child Project level (marked in green in figure 6). As such all offered indicators addressing the Country Child Projects are mandatory. The individual Child Country Projects will have additional, project specific indicators to which the Child Country Project will report, on top of those concerning the entire programme.

Indicators include various numbers. For those referring to the Global Child Project (indicators in blue in Figure 6), relevant executing agencies (e.g. leader of a working group etc.) are asked to report the number of products developed etc. to the programme lead agency. All knowledge products will be accessible through the knowledge hub and the e-mobility toolbox. Number of material used then equals the single user download requests of these materials from the repository. Number of stakeholders applying training is based on participants list of the trainings the stakeholders participated, and subsequent questionnaires conducted with those participants on how they have used their training.

Although Country Child Projects might differ in terms of outcomes and outputs as well as their implementation structure they all target the transport sector as well as the introduction and upscaling of integrated e-mobility systems. Therefore, identical e-mobility market tracking datasets will be requested from all participating countries. Similar to the GEF 7, e-mobility market tracking data will be requested from the country projects using a standardized template by the project IA as part of annual Project Implementation Reporting (PIR). It is however not clear at this point in time, which agency will process the data. The IEA, which is responsible for country data analysis and dissemination under the GEF 7 has not joined the GEF 8 programme so far. Alternatives to IEA could be the UEMI, which is responsible for further implementation of the e-mobility toolbox, or the UC Davis Institute for Transport Studies (ITS), which has a track record of publishing transport statistics and analysis, and which is a long-standing partner of UNEP and the World Bank.

Coordination and Cooperation with Ongoing Initiatives and Programs.

Is the GEF Agency being asked to play an execution role on this program? Yes

If so, please describe that role here. Also, please add a short explanation to describe cooperation with ongoing initiatives and projects, including potential for co-location and/or sharing of expertise/staffing (max. 500 words, approximately 1 page)

The Programme is funded by the Global Environment Facility (GEF) with UNEP (Climate Change Mitigation Unit) acting as the Programme Lead Implementing Agency. UNEP, ADB, EBRD and the WB are co-implementing Agencies.

As Lead Agency, UNEP will be responsible for:

1. coordinating between the Programme and Child Projects;
2. convening Programme inception workshop to ensure all global partners and the participants countries understand their roles, responsibilities and overall purposes of the project;
3. initiating contact with national partners together with Country Child Project IAs, and convening national, regional, and global high-level meetings on behalf of the Programme;
4. initiating the annual Programme report with the Country Child Projects; the Country Child Projects will adopt a similar outcome structure to the PFD framework and adopt and report against at least one indicator for each outcome in the annual report. UNEP will compile an annual report with contributions from all partners and submit to the GEF Secretariat;
5. convening and chairing the Programme Steering Committee;
6. seeking synergies with external institutions and partners;
7. conducting the Terminal Programme evaluation.

UNEP Sustainable Mobility Unit, ADB, EBRD, WB, CMS and UEMI are co-executing Agencies of the Global Project. Ministries in each country will execute the country projects or delegate the execution to a third national or regional party.

The Programme Steering Committee (PSC) will include the GEF Secretariat, the global project co-executing agencies and Implementing Agencies working with GEF-8 and GEF-7 e-mobility country projects. The role of the PSC members will be to report on the progress of their Child Projects and advise on the

types of support they need under the Programme and promote coordination between the global project and the country projects. The PSC will meet every year, or more frequently by request of one of the steering committee members. Meetings will be virtual or face to face and where possible in conjunction with other meetings to manage costs.

The Country Child Projects will have their own governance arrangements, which the IA will define during project development. As a minimum, however, each Country Child Project will help with annual Programme reporting and ensure coherence and support coordination between the Global Platform and the Country Child Projects, as well as with the overall Programme.

The implementation structure is illustrated in the organogram below:

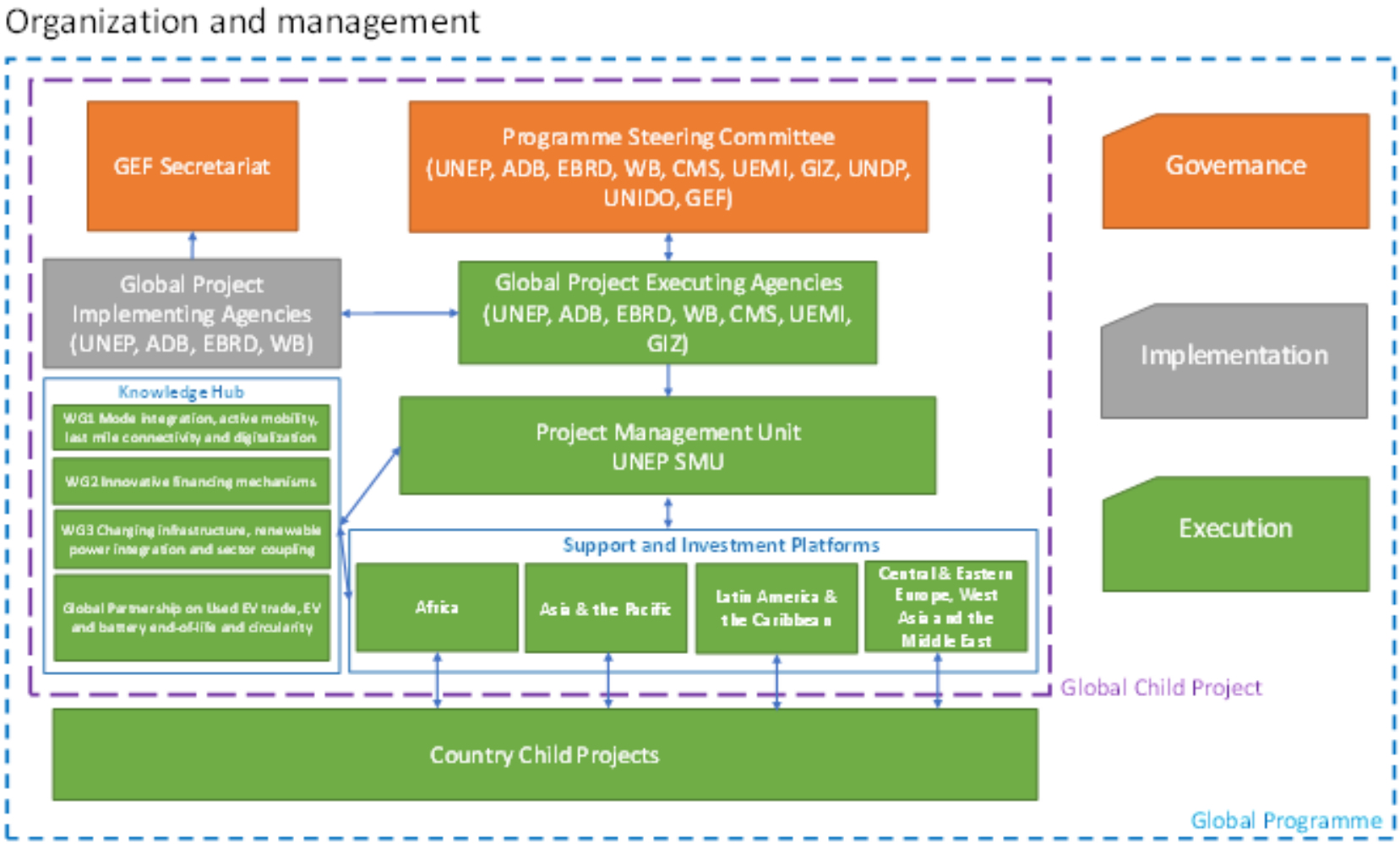

Figure 8 organization and management of the programme

Internally, the Global Programme to Support Countries to Upscale Integrated Electric Mobility Systems with projects under the UNEP Decarbonization Programme, targeting as main objective “Enhanced effectiveness and impact of UNEP’s support to reduce emission of greenhouse gases in line with the

goals of the Paris Agreement on Climate Change". The GEF-8 mobility program will contribute to the following five direct outcomes of the UNEP Mid-Term Strategy theory of change:

1.2 Carbon neutrality and resilience are integrated into climate planning and policy/regulatory frameworks at all levels

1.4 Sectoral partnerships and access to technologies for decarbonization, dematerialization and resilience are enhanced

1.5 Private and public financial flows are aligned with the goals of the Paris Agreement

1.7 Public support and political engagement for climate action are catalyzed

1.8 Societal choices shift towards lower carbon products and services and sustainable lifestyles.

The Global programme activities are aligned with the four categories of UNEP delivery model:

A) Generation and dissemination of science-policy knowledge;

B) Technical support, capacity building, and advisory services;

C) Advocacy and outreach;

D) Intergovernmental and interagency processes.

In addition, the Global Programme is partnering with many institutions and their initiatives, programmes and projects. Collaboration can be through formal involvement as co-implementation or co-execution partner of the Global Programme and / or the Child Country Projects, through collaboration e.g. to develop knowledge products, and to provide training and capacity building events, through joint provision of technical assistance or through financing / co-financing projects and project components. An overview is provided in Table 2 below.

In addition, the programme will cooperate with the following GEF initiatives:

1. Integrated Programme on Sustainable Cities
2. Net Zero Accelerator Integrated Programme
3. Islands Programme.
4. GEF funded Africa Plastic Programme

For example, project partners active in Sustainable Cities / Net Zero Accelerator Integrated Programmes focusing on sustainable transport and e-mobility will be invited to participate in all relevant Global Programme events. Collaboration with the Islands Programme will be explored with regards to training and capacity building for vehicle recycling related issues.

Table 2 PArtnering initiatives, programmes and projects

#	Institution	Partner initiatives, programmes and projects
1	World Bank	Global Programme co-implementing agency, Trustee of the Global Trust Fund to Dec arbonize Transportation (GTFDT) to fund e-mobility in LMICs
2	ADB	Global Programme co-implementing agency, Implementing Agency for Country Chil d Projects and standalone projects associated to the programme.
3	EBRD	Global Programme co-implementing agency, Implementing Agency for Country Chil d Projects and standalone projects associated to the programme
4	AFDB	AfDBs The Green Mobility Facility for Africa (GMFA) to accelerate and expand private sector investments in sustainable transport solutions in Africa through techn ical assistance and investment capital.
5	IDB	E-Mobility Program for Sustainable Cities in Latin America and the Caribbean and G CF funded programme to finance the shift to electric mobility and hydrogen in 9 cou ntries in Latin America and the Caribbean
6	CAF	Development Bank of Latin America – GCF funded project E-Motion: E-Mobility and Low Carbon Transportation
7	IFC	International Finance Corporation
8	UEMI	EU funded projects e.g. Solutions Plus, Sustainable Energy for Southern Africa (SES A), ENERGICA
9	GCF	EV Readiness in 14 countries in LAC
10	GIZ	Transforming Urban Mobility Initiative (TUMI)
11	ITDP	Institute for Transportation and Development Policy
12	WRI	Implementing agency of supported NAMA facility project on e2&3Wheelers in Kenya
13	ZEVTC	UK led initiative to coordinate international finance and assistance for e-mobility in t he Global South
14	IEA	Electric Vehicles Initiative (EVI).
15	GFEI	Global Fuel Economy Initiative (GFEI) to improve fuel efficiency and to promote elect ric mobility funded by FIA Foundation and implemented by UNEP, IEA, ICCT, UC Davi s and ITF.
16	MOVE	Electric Mobility in Latin America
17	C40	City network developing tools and support material for e-mobility projects
18	ICLEI	EU funded e-mobility projects e.g. SESA project
19	POLIS	EU funded e-mobility projects, e.g. Solutions Plus
20	UITP	E-bus training programmes, toolbox, procurement guidelines
21	UNDP	Implementing Agency for Country Child Projects and standalone projects associate d to the programme

22	UNIDO	Implementing Agency for Country Child Projects and standalone projects associated to the programme
23	Drive Electric Campaign	E-mobility programme of USD 160 million to fund e-mobility projects in the Global South
24	German Federal Government - BMZ	E-Mobility as a Driver for Change - Gender Transformative Zero Emission Mobility Systems
25	*Centro de Movilidad Sostenible* Mario Molina	Global Programme co-implementing partner
26	Clean Air Asia	Global Programme co-implementing partner
27	Sustainable Transport Africa	Global Programme co-implementing partner

The approach to develop a Stakeholder Engagement Plan during project development phase will entail consultations with the following different groups: 1.) Co-implementing and executing partners, such as ADB, EBRD, World Bank, UEMI, GIZ and CMS; 2.) Associated e-mobility initiatives and programmes including on EV and battery end-of-life such as the Zero Emission Vehicle Transition Council including its working groups and the Rapid Response Taskforce, WBCSD's E-Mobility Financing Collective, ClimateWorks' Drive Electric Campaign, IEA's Electric Vehicle Initiative, the Global Battery Alliance (GBA), UC Davis's Institute of Transport Studies, the Institute for Transportation and Developement Studies (ITDP) among others; 3.) a wider group of financing partners including the Inter-American Development Bank (IDB), the Development Bank of Latin America (CAF), the African Development Bank (AfDB), the European Investment Bank (EIB), the German development bank KfW, the French Development Agency (AFD), philanthropic foundations and private finance companies such as the Private Infrastructure Development Group (PIDG), among others; 4.) other private sector representative such as EV and EV supply equipment manufacturers and EV operators; and 5.) Civil Society Organizations including representatives from gender and reduced mobility groups and other transport and circularity related organizations.

The first group of partners will be engaged regularly, throughout consultation calls and virtual meetings, to jointly design outcomes, outputs and deliverables of the programme. Other groups of partners will be involved in the project development process through thematic virtual or in-person events. For example, it is planned to organize for a consultative meeting of the Global Partnership on Used EVs, EV and Battery End-of-Life & Circularity before start of the programme, which will include leading initiatives and research programmes, industry representatives and policy makers. Development partners active in project execution at country level (e.g. GIZ, ITDP) will be engaged bilaterally. Financing partners, which are not core partners of the programme will be consulted individually to seek for cooperation and possible co-financing. Meetings with Civil Society Organizations will also be organized during project development to tease out relevant issues to be taken up by the working group.

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Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	3293886	0	0	0
Expected metric tons of CO_2e (indirect)	7656098	0	0	0

Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)				
Expected metric tons of CO_2e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	3,293,886			
Expected metric tons of CO_2e (indirect)	7,656,098			
Anticipated start year of accounting	2029			
Duration of accounting	10			

Indicator 6.3 Energy Saved (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
Target Energy Saved (MJ)	142,178,521,844			

Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)

Indicator 9 Chemicals of global concern and their waste reduced

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
3.70	0.00	0.00	0.00

Indicator 9.1 Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)

POPs type	Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
Decabromodiphenyl ether (commercial mixture, c-decaBDE)	3.70			

Indicator 9.2 Quantity of mercury reduced (metric toms)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.3 Hydrochloroflurocarbons (HCFC) Reduced/Phased out (metric toms)

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.4 Number of countries with legislation and policy implemented to control chemicals and waste (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 9.5 Number of low-chemical/non-chemical systems implemented, particularly in food production, manufacturing and cities (Use this sub-indicator in addition to one of the sub-indicators 9.1, 9.2 and 9.3 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 9.6 POPs/Mercury containing materials and products directly avoided

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)
170.00			

Indicator 9.7 Highly Hazardous Pesticides eliminated

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 9.8 Avoided residual plastic waste

Metric Tons (Expected at PIF)	Metric Tons (Expected at CEO Endorsement)	Metric Tons (Achieved at MTR)	Metric Tons (Achieved at TE)

Indicator 10 Persistent organic pollutants to air reduced

Grams of toxic equivalent gTEQ (Expected at PIF)	Grams of toxic equivalent gTEQ (Expected at CEO Endorsement)	Grams of toxic equivalent gTEQ (Achieved at MTR)	Grams of toxic equivalent gTEQ (Achieved at TE)
0.10			

Indicator 10.1 Number of countries with legislation and policy implemented to control emissions of POPs to air (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 10.2 Number of emission control technologies/practices implemented (Use this sub-indicator in addition to Core Indicator 10 if applicable)

Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)

Indicator 11 People benefiting from GEF-financed investments

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	11,256			
Male	13,244			
Total	24500	0	0	0

Explain the methodological approach and underlying logic to justify target levels for Core and Sub-Indicators (max. 250 words, approximately 1/2 page)
The “Global Programme to Support Countries to Upscale Investment in Integrated Electric Mobility Systems” is expected to have multiple benefits and co-benefits. It is intended to result in the mitigation of significant amounts of GHG emission (metric CO_2eq emissions) and the reduction of persistent organic pollutants emitted to the air (gram of toxic equivalent gTEQ). For Climate Change Mitigation, all Global Environmental Benefits will occur at the Country Child Project level. The Global Project is not expected to lead to any GHG emissions reductions, However, the Global Project will result in direct beneficiaries benefiting from the programme. The target is estimated as follows and based on the below two groups: • 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; and 2.) emission reductions and energy savings as a result of investment in replication and upscaling (secondary direct benefits). • 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, business models and financial mechanisms, 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 period of ten years after the end of the project. Quantification of secondary direct and indirect GHG emission reduction 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. 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% Secondary direct and indirect emission reduction are based on a 30:70 split of the top-down emission reductions attributable to the project via the

application of the causality factor. The number of direct beneficiaries is estimated as follows and based on the below three groups: • Participants in workshops and trainings provided in-country as well as by the Global Programme over the duration of the project and including a 30% target for female representation, the target is based on maximum women participation rated in GEF-7 past activities; • Users of the of the knowledge materials developed and made accessible by the Global Project, assuming a 30% target for female users; and Users of the demonstration vehicles i.e. the number of unique passengers being transported by the demonstration electric vehicles throughout the project duration has been obtained based on the assumptions of total lifecycle trips, average amount of passengers as well as assumptions on trips per unique passenger, and assuming a 50% share of female users. Reduction of persistent organic pollutants is achieved through: 1.) Avoidance of import of POPs contaminated vehicles due to introduction of uncontaminated e-vehicles; 2.) Environmentally Sound Management (ESM) of end-of-life vehicles in particular with regards to treatment of materials containing flame retardants such as seats, dashboards etc.; and 3.) Mitigation of POPs emissions stemming from incomplete combustion of petroleum fuels in poorly maintained and old vehicles which are replaced by the electric vehicles. Calculations are performed as follows: • Avoidance of POPs contaminated vehicle import due to the intervention of project pilot introduction of e-vehicles. Tonnes contaminated product (in this case vehicles) avoided has been estimated based on approximate weight of various type of vehicles introduced by the project, and thus avoid the import of secondhand POPs contaminated vehicles. This links to the core indicator 9.6. Pure chemical , in this case PBDE has been estimated based on an average value of 80g of PBDE per vehicle. Based on the number of vehicles piloted, a total amount of 3.7kg of pure PBDE is reported under core indicator 9.1. • Mitigation of POPs from environmentally sound management of end-of-life vehicles is estimated based on the number of vehicles scrapped in facilities: i) in the Global South demonstrated as part of the programme; and ii) in existing facilities in the Global North based on estimates of substandard used vehicles not exported to Global South as a result of the global frameworks developed. The project also endeavors to demonstrate ESM of ELVs in the select project countries to manage the POPs contaminated parts in the vehicles. This can be done with the separation of contaminated Automotive Shredded Residue stream appropriately. The contaminated material will then be disposed as per the hazardous waste disposal protocols. • Mitigation of POPs from incomplete combustion of petroleum fuels in poorly maintained and old vehicles is based on the reduced POPs emissions according to the number of vehicles demonstrated during the project time frame. POPs emission savings are the difference in life-time POPs emissions of the demonstrated electric vehicles versus the emissions of the same number of conventional vehicles. This has been estimated (using UNEP toolkit) considering the tons of fuel use avoided due to the introduction of e-vehicles. Approx 1 million tons of regular diesel engine fuel is avoided due to the project intervention. In addition to the above-mentioned direct POPs emission reductions, indirect reduction of POPs emission may occur from mitigated landfill fires caused by Lithium Ion Batteries (LIB). If landfilled, LIBs pose a big risk to cause fires due to their still inherent energy potential which, in particular when the LIBs are damaged, can lead to fire and explosion of the LIB. The recycling and reintegration of end-of-life LIBs will significantly reduce that risk and therefore reduce the emission reduction stemming from landfill fires. In addition, the programme will generally lead to a reduction of 1.) Electronic waste, which can potentially contain hazardous materials; and plastic waste, in which will be recycled alongside other materials from end-of-life vehicles and batteries. Along with the Global Environmental Benefits, low emission, pollution-free transport has significant impacts on quality of life, health and other socio-economic benefits as described below 1) Will reduce dependency of imported fossil fuels in the participating countries. The reduced import of petroleum fuels will decrease the countries' exposure to price volatility of international market prices of these fuels and hence increase energy security and resilience of public budgets. 2) Will reduce air pollution and subsequent impacts on public health. Decreased levels of urban and rural air pollution will contribute to reduced numbers of patients with respiratory diseases and will therefore contribute to reduced public health related expenditures along with improving quality of life. 3) Will reduce pollution from POPs. Project activities in vehicles recycling and disposal will reduce contamination of soil and water. 4) Will increase road safety due to renewed public transportation fleets. New vehicles

with better safety standards which are part of captive fleets will contribute to a generally improved road safety and improved transport services. 5) Will contribute to the improvement of comfort and safety, especially for women. New vehicles which are designed in a way to cater for gender specific security and comfort measures will improve the general perception of safety and comfort for women. 6)Will support local economic development. Considered a key sector of green growth, electric mobility investments create jobs through new economic activities such as battery recycling and EV charging infrastructure. The project will engage local technology suppliers, such as manufacturers of charging equipment or vehicle assemblers to foster local development. While the sector is currently male-dominated, a special focus can be given to employ women or vulnerable groups, thus reducing their underemployment and lack of access to economic opportunities.

Risks to Achieving Program Outcomes

Describe any risks that might emerge from preparation and implementation phases of child projects under the program, and what are the mitigation strategies the child project preparation process will undertake to address these (e.g. what alternatives may be considered during child project preparation-such as in terms of consultations, role and choice of counterparts, delivery mechanisms, locations in country, flexible design elements, etc.). Identify any of the risks listed below that would call in question the viability of the child project during its implementation. Please describe any possible mitigation measures needed.

The risk rating should reflect the overall risk to program outcomes considering the global context and ambition of the program. The rating scale is: High, Substantial, Moderate, Low.

Risk Categories	Rating	Comments
Climate	Low	High impact climatic events (mainly storm surges and floods, very low probability of other extreme events) disrupt pilot or other project activities, damages electric vehicles, destroys infrastructure, and effect overall project execution. Risk Mitigation Measures: country child projects will have to conduct a full climate risk screening and adopt adequate risk management measures, including through adjustment in project design. In addition, child projects will have to follow STAP guidelines on climate risk screening for GEF projects.
Environment and Social	Moderate	Countries do not have the knowledge/capacity of how to recycle and dispose of batteries, thus there is a risk of contaminating the soil and water. Risk Mitigation Measure: The programme will create a partnership to address sound management of used batteries and vechicles. Growing demand from electric vehicles in a country can destabilize the power supply. Risk Mitigation Measure: The programme will help countries to prepare for an increase in electricity demand from growth in electric vehicles. Negative perceptions about e-mobility technology and the impacts this will bring to society and industry. Risk Mitigation Measure: Awareness raising of the benefits of electrification and capacity building and training to manage the change from ICE to EV.
Political and Governance	Moderate	Leadership change can cause change in priorities in the government. Governance fragility and political conflicts can impact country level activities. Risk Mitigation Measures: Country selection criteria prioritizes countries with political commitment to promote electric mobility and a willingness to scale up activities. The global programme will deliver outputs that will be available through a knowledge sharing platform and are intended to remain available, even in case of change in leadership and priorities in specific governments.
Macro-economic	Low	Higher upfront cost of electric vehicles and lack of financial products pose a barrier to implementation and scale up of activities and jeopardize economic viability. Risk Mitigation Measures: The programme will help countries to prioritize investment and first scale up actions towards electric mobility modes with relatively lower costs and prioritize high utilization vehicles. Involving the industry and private sector is a core element of the programme. Thematic working groups will include a finance component, allowing business models development, creating links between national governments and the industry and raising awareness of the total cost of ownership versus the upfront cost perspective.

Strategies and Policies	Low	Countries are not interested in second life and disposal of batteries so early on in market transformation to electric vehicles. Risk Mitigation Measures: This second phase of the programme is allocating a significant amount of GEF resources to work on chemicals and waste, thus highlighting the importance of addressing life cycle of batteries to minimise the potential environmental impacts related to batteries production and disposal.
Technical design of project or program	Low	With GEF-7, and GEF-8 projects coordination and information dissemination will be highly complex with many country projects at different stages of implementation. Risk Mitigation Measures: The programme governance structure includes regional support and investment platforms to work closely with all the countries.
Institutional capacity for implementation and sustainability	Low	Inadequacy of the exit strategy and lack of ownership of the programme after the end of the GEF funded activities and inability to source resources to continue the programme's activities in the medium/long term. Risk Mitigation Measure: The main programme exit strategy will be through the support and investment platforms that will be driven by banks and investment interest generated by the child projects and other market experiences. They will be able to continue to provide support and finance to an accelerated electric mobility shift.
Fiduciary: Financial Management and Procurement	Moderate	Lack of capacity to procure demonstration assets and risk due to overall insufficient management of the projects. Risk Mitigation measure: The GEF-8 programme will build upon the GEF-7 engagement with fleet manufacturers and financiers, and strengthen their involvement in the development and design of business models that may aim to reduce or spread the high upfront costs of EV fleets and allow the feasibility of bulk procurement of EV fleets. The positive and successful approaches compiled during GEF-7 will be further disseminated to local and national government. In addition, the support and investment platforms will allow the development banks and other financiers to support upscaling initiatives.
Stakeholder Engagement	Low	Lack of interest or participation from market players/private sector. Risk Mitigation measure: Manufacturers are already investing in electric mobility and produce many electric models in each segment. The programme will prepare country governments to put in place favourable e-mobility policies to attract investment. In parallel, the programme will continue engaging and working with both international and local manufacturers, striving towards common standards that allow inter-operability.
Other	Moderate	Lack of interest from financiers to engage in the upscaling of integrated electric mobility systems.
Financial Risks for NGI projects		
Overall Risk Rating	Low	

C. ALIGNMENT WITH GEF-8 PROGRAMMING STRATEGIES AND COUNTRY/REGIONAL PRIORITIES

Describe how the proposed interventions are aligned with GEF- 8 programming strategies and country and regional priorities, including how these country strategies and plans relate to the multilateral environmental agreements.

Confirm that any country policies that might contradict with intended outcomes of the project have been identified.

(approximately 2-3 pages)

The global platform will continue developing a suite of tools, policy best practices, training materials and strategies to foster large-scale market introduction of integrated electric mobility systems in LMCIs worldwide including levels including used EVs, end-of-life of EVs and batteries & circularity. The Country Child Projects will use the materials to put in place conditions enabling this transformation. As currently for the GEF-7 on-going programme, the link between the global programme and the child projects, but also between the different child projects, will be enabled by the engagement of child project countries in the work of the technical thematic working groups and through the regional support and investment platforms in Africa, Asia and the Pacific, and Latin America and the Caribbean. Thus, the project is very much geared towards the exchange of knowledge and experience on a South-to-South, North-to -South and Peer-to-Peer basis.

This programme is aligned with Pillar I: of the Climate Change Focal Area to "Promote innovation, technology development and transfer, and enabling policies for mitigation options with systemic impacts" Objective 1 "Promote through the objective "CCM1-3 Scale up zero-emission mobility of people and goods". In particular, it aligns with GEF-8 programming directions (paragraph 486) through the additional activities related to 1.) Mode integration, active mobility, last mile connectivity and digitalization; and 2.) Innovative financing mechanisms including carbon emissions certificates and trade; and 3.) Coupling of the transport with the power sector renewable power integration and charging infrastructure.

In addition, this programme is also aligned with GEF Chemicals and Waste Focal Area. Particularly with "Objective 1: Creation, strengthening and supporting the enabling environment and policy coherence to transform the manufacture, use and sound management of chemicals and to eliminate waste and chemical pollution." Indeed, half of the activities will be covered by chemicals and waste set-aside to undertake activities that contribute to minimize the environmental impact of end-of-life EVs and batteries minimized.

Finally, the programme follows GEF's advice to deliver activities that "will ensure approaches, decision-making and policies are inclusive, gender-responsive, and responsive to these differences, and aim to promote women's participation in decision-making processes and transport services" (487).

Country Projects

Most programme countries have identified the development low emission transportation as one of their key priorities for achieving their emissions reduction targets set in their NDCs, as presented in the table below:

Table 3 overview of cOuntries NDCS

Country	Nationally Determined Contribution (NDC) that correlate with zero emission mobility
Azerbaijan	Unconditional Mitigation Contribution: By 2030 the Republic of Azerbaijan targets 35% reduction in the level of greenhouse gas emissions compared to 1990/base year. As per the NDC, Azerbaijan prioritises the use of alternative and renewable energy sources, and in the transport sector, the NDC emphasises the use of environmentally friendly forms of transport, use of EVs, development of road infrastructure, etc. Azerbaijan's priorities have been reflected through its signing of the COP declaration on mobility (LOTUS), and its State Program on road safety 2019-2023 which promotes the use of ecologically clean vehicles and provides for establishment of appropriate legal and regulatory framework - stimulating the use of ecologically clean vehicles with electric motors, and taking measures to create an appropriate infrastructure for environmentally sound, electric motor vehicles.
Senegal	Unconditional Mitigation Contribution: Reduction of GHG emissions by 5% and 7% by 2025 and 2030 respectively Conditional Mitigation Contribution: Reduction of GHG emissions by 23% and 29% by 2025 and 2030 respectively The mitigation component of Senegal's NDC places emphasis on renewable energy and strengthening of energy efficiency. Existing laws, standards and achievements include orientation of land transport; standards on exhaust gas emissions from land motor vehicles, extension and updating of a road database (BDR); establishment of two vehicle assembly plants in the Thiès region to renew the vehicle fleet, evolution of the Environmental Code to strengthen the environmental component of road projects, increase in supply of urban road transport services.
Zambia	Unconditional Mitigation Contribution: Reduction of greenhouse gas emissions by 25% (at Business As Usual (BAU) level of international support prevailing in 2015). Conditional Mitigation Contribution: Reduction of emissions by 47% (with substantial international support) compared to 2010 levels. Zambia enhanced its NDC by broadening the scope of sectors under mitigation by adding transport, liquid waste and coal (production, transportation and consumption). Zambia intends to increase access to electricity across rural and urban areas by 2030 in addition to expanding the deployment and development of renewable and alternative energy sources in the country’s energy mix from less than 2 percent to 15 percent by 2030.

Zimbabwe	Conditional Mitigation Contribution: 40% reduction in economy-wide GHG emissions per capita compared to BAU by 2030, conditional on international support. The energy sector, including transport, is currently the second biggest contributor to total national GHG e missions in Zimbabwe, accounting for 33% of GHG emissions in 2017.
Fiji	Combined Mitigation Contribution: 30% of BAU CO2 emissions from the energy sector by 2030. Of the 3 0% reduction of BAU baseline CO2 emissions, 10% will be achieved “unconditionally” using available resou rces in the country and 20% achieved “conditionally”. Fiji’s 2015 NDC sets the following mitigation targets: Target 1: To reduce 30% of BAU CO2 emissions from the energy sector by 2030. Target 2: As a contribution to Target 1, to reach close to 100% renewable energy power generation (grid-c onnected) by 2030, thus reducing an expected 20% of energy sector CO2 emissions under a BAU scenari o. Target 3: As a contribution to Target 1, to reduce energy sector CO2 emissions by 10% through energy effi ciency improvements economy-wide, implicitly in the transport, industry, and electricity demand-side subs ectors. Fiji's National Communications emphasizes the need for fuel efficiency of imported motor vehicles, enforc ement of age limits for secondhand vehicles and import tax incentives. It may also include introducing ne w measures such as labelling for vehicle fuel economy of imported land transport vehicles, improvements and subsidisation of public transport.
Vanuatu	Conditional Mitigation Contribution: Sector specific target of transitioning to close to 100% renewable ene rgy in the electricity sector by 2030; this target would replace nearly all fossil fuel requirements for electric ity generation in the country and be consistent with the National Energy Road Map (NERM) target of 65% r enewable energy by 2020. In the Transport priority area, the NDC underlines the following commitments: 1. By 2030, 10% improvement in transport (land and marine) energy efficiency 2. Electric Vehicles (e-mobility): by 2030, (a) Introduce e-buses for public transportation (10% of total publi c buses) (b) Introduce e-cars in Vanuatu (10% of government fleet); and (c) 1000 electric two wheelers (e-bikes)/three wheelers (e-rickshaw). 3. By 2030, 20 % bio-diesel (bio-fuel) blending in diesel. 4. By 2030, Mileage and Emission Standards for Vehicles. Mitigation measures under Vanuatu's Long-term Vanuatu Transport Sector Support Program (VTSSP) incl ude public transportation awareness programmes, vehicle emission standards, promoting fuel efficient an d alternative fuel vehicles, improving public, transport services, introducing financial incentives to encoura ge energy efficiency and promoting non-motorized transport.

Solomon Islands	Unconditional Mitigation Contribution: Solomon Islands has committed to reduce its emissions by 14% by 2025 below 2015 and by 33% below 2015 by 2030 compared to a business-as-usual projection. Conditional Mitigation Contribution: With international assistance, Solomon Islands targets a further 27% reduction in GHG emissions by 2025, and a further 45% reduction in GHG emissions by 2030, compared to BaU projection. Further, with appropriate international assistance, Solomon Islands can achieve net zero emissions by 2050. Mitigation of emissions for transport sector: The Policy Roadmap for E-mobility in Solomon Islands by CTCN estimates to reduce CO2 emission by approximately 11.5% by 2030 under the EV adoption ambition. In order to decarbonise electricity generation, the government finalized the 'Renewable energy road map for Honiara' to achieve 100% renewable energy by 2030 and achieving 100% accessibility by 2050.

D. POLICY REQUIREMENTS

Gender Equality and Women's Empowerment

We confirm that gender dimensioms relevant to the program have been addressed as per GEF Policy and are clearly articulated in the Program Description (Section B).

Yes

Stakeholder Engagement

We confirm that key stakeholders were consulted during PFD development as required per GEF policy, their relevant roles to program outcomes and plan to develop a Stakeholder Engagement Plan in the Coordination Child Project before CEO endorsement has been clearly articulated in the Program Description (Section B).

Yes

Were the following stakeholders consulted during PFD preparation phase:

Indigenous Peoples and Local Communities:

Civil Society Organizations: Yes

Private Sector: Yes

Provide a brief summary and list of names and dates of consultations

TABLE 4 OVERVIEW OF STAKEHOLDER CONSULTATIONS

Date	Event	Institutions	Objective and Outcomes
16/03/2023	GEF8 electric mobility programme meeting, Transforming Transportation, Washington DC	World Bank, ADB, EBRD, IFC, FIA Foundation, WBCSD, IDB, GEF, UNDP, UNIDO, GIZ/TUMI, Federal Government of Germany, Government of the Netherlands, ITDP, ZEVTC, UC Davis, CAF, FAO	The objective of the meeting was to present the concept of the GEF 8 Programme and to provide more detail about scope of the Global Project and funding.
07/03/2023	Bilateral	IFC	Initial discussion on potential collaboration including GEF-8.
02/03/2023	Bilateral	Climate Works	Discussion on ongoing collaboration including GEF-8.
01/03/2023	Bilateral	UNDP	Follow-up to the PSC meeting to discuss scope and next steps of the programme concept.
13/02/2023	Bilateral	ITDP	Initial discussion on potential collaboration including GEF8.
01/02/2023	Project Steering Committee meeting of the GEF 7 Programme	ADB, EBRD, IEA, UEMI, UNDP, UNIDO, DBSA, GEF	A brief outline of the GEF-8 programme concept has been presented to receive feedback from implementing partners of the current GEF-7 programme. Potential timelines for submission of the global project and the country projects have been provide and IAs were asked to indicate countries of interest for project submission.
06/12/2022	Bilateral	GIZ/TUMI	Discussion on ongoing collaboration including GEF-8.
March 2022 to December 2022	Bilateral	UC Davis	Discussions on scope and content of the report on “Electric Vehicle Lithium-ion Batteries in Lower- and Middle-income Countries: Life Cycle Impacts and Issues”
Dec 2022 to March 2023	Bilateral	World Bank	Ongoing discussions on the development of a joint programme to finance electric buses in A

March 2023			joint programme to finance electric buses in A frica and synergies with GEF-8.
Dec 2022 to March 2023	Bilateral	UNEP Regional Offices	Regional Climate Change Coordinators have b een consulted on GEF-8 mobility programme a nd informed on the interested countries of eac h region.

(Please upload to the portal documents tab any stakeholder engagement plam or assessments that have been done during the PFD preparation phase.)

Private Sector

Will there be private sector engagement in the program?

Yes

And if so, has its role beem described and justified in the section B program description?

Yes

Environmental and Social Safeguards

We confirm that we have provided indicative information regarding Environmental and Social risks associated with the proposed program and any measures to address such risks and impacts (this information should be presented in Annex D).

Yes

Overall Project/Program Risk Classification

PIF	CEO Endorsement/Approval	MTR	TE
Low			

E. OTHER REQUIREMENTS

Knowledge management

We confirm that an approach to Knowledge Management and Learning has been clearly described in the Program Description (Section B)

Yes

ANNEX A: FINANCING TABLES

GEF Financing Table

Indicative Trust Fund Resources Requested by Agency(ies), Country(ies), Focal Area and the Programming of Funds

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	GEF Program Financing($)	Agency Fee($)	Total GEF Financing($)
UNEP	GET	Global	Climate Change	CC Global/Regional Set-Aside	2,519,725	226,775	2,746,500.00
ADB	GET	Global	Climate Change	CC Global/Regional Set-Aside	400,000	36,000	436,000.00
EBRD	GET	Global	Climate Change	CC Global/Regional Set-Aside	400,000	36,000	436,000.00
World Bank	GET	Global	Climate Change	CC Global/Regional Set-Aside	300,000	27,000	327,000.00
UNEP	GET	Global	Chemicals and Waste	POPs	3,501,376	315,124	3,816,500.00
ADB	GET	Global	Chemicals and Waste	POPs	50,000	4,500	54,500.00
EBRD	GET	Global	Chemicals and Waste	POPs	50,000	4,500	54,500.00

UNEP	GET	Azerbaijan	Climate Change	CC STAR Allocation: CCM-1-3	3,000,000	270,000	3,270,000.00
UNEP	GET	Fiji	Climate Change	CC STAR Allocation: CCM-1-3	1,787,500	160,875	1,948,375.00
UNEP	GET	Solomon Islands	Climate Change	CC STAR Allocation: CCM-1-3	1,787,500	160,875	1,948,375.00
UNEP	GET	Senegal	Climate Change	CC STAR Allocation: CCM-1-3	3,589,724	323,076	3,912,800.00
UNEP	GET	Vanuatu	Climate Change	CC STAR Allocation: CCM-1-3	871,560	78,440	950,000.00
UNEP	GET	Zambia	Climate Change	CC STAR Allocation: CCM-1-3	2,000,000	180,000	2,180,000.00
UNEP	GET	Zimbabwe	Climate Change	CC STAR Allocation: CCM-1-3	2,000,000	180,000	2,180,000.00
				Total GEF Resources($)	**22,257,385.00**	**2,003,165.00**	**24,260,550.00**

Project Preparation Grant (PPG)

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Programming of Funds	PPG($)	Agency Fee($)	Total PPG Funding($)
UNEP	GET	Global	Climate Change	CC Global/Regional Set-Aside	50,000	4,500	**54,500.00**
UNEP	GET	Global	Chemicals and Waste	POPs	50,000	4,500	**54,500.00**
UNEP	GET	Azerbaijan	Climate Change	CC STAR Allocation: CCM-1-3	80,000	7,200	**87,200.00**
UNEP	GET	Fiji	Climate Change	CC STAR Allocation: CCM-1-3	47,362	4,263	**51,625.00**
UNEP	GET	Solomon Islands	Climate Change	CC STAR Allocation: CCM-1-3	47,362	4,263	**51,625.00**
UNEP	GET	Senegal	Climate Change	CC STAR Allocation: CCM-1-3	80,000	7,200	**87,200.00**
UNEP	GET	Vanuatu	Climate Change	CC STAR Allocation: CCM-1-3	45,872	4,128	**50,000.00**
UNEP	GET	Zambia	Climate Change	CC STAR Allocation: CCM-1-3	50,000	4,500	**54,500.00**
UNEP	GET	Zimbabwe	Climate Change	CC STAR Allocation: CCM-1-3	50,000	4,499	**54,499.00**
				Total PPG Amount	**500,596.00**	**45,053.00**	**545,649.00**

Sources of Funds for Country STAR Allocation

GEF Agency	Trust Fund	Country/ Regional/ Global	Focal Area	Source of Funds	Total($)

UNEP	GET	Azerbaijan	Climate Change	CC STAR Allocation	1,998,879.00
UNEP	GET	Azerbaijan	Land Degradation	LD STAR Allocation	1,358,321.00
UNEP	GET	Fiji	Climate Change	CC STAR Allocation	2,000,000.00
UNEP	GET	Solomon Islands	Climate Change	CC STAR Allocation	2,000,000.00
UNEP	GET	Senegal	Climate Change	CC STAR Allocation	2,000,000.00
UNEP	GET	Senegal	Biodiversity	BD STAR Allocation	1,000,000.00
UNEP	GET	Senegal	Land Degradation	LD STAR Allocation	1,000,000.00
UNEP	GET	Vanuatu	Climate Change	CC STAR Allocation	1,000,000.00
UNEP	GET	Zambia	Climate Change	CC STAR Allocation	2,234,500.00
UNEP	GET	Zimbabwe	Climate Change	CC STAR Allocation	1,594,210.00
UNEP	GET	Zimbabwe	Land Degradation	LD STAR Allocation	640,289.00
				Total GEF Resources($)	**16,826,199.00**

Indicative Focal Area Elements

Programming Directions	Trust Fund	GEF Project Financing($)	Co-financing($)
CCM-1-3	GET	3,619,725.00	34,033,010.00
CW-2	GET	3,601,376.00	6,623,657.00
CCM-1-3	GET	3,000,000.00	21,600,000.00
CCM-1-3	GET	1,787,500.00	9,900,000.00
CCM-1-3	GET	1,787,500.00	11,000,000.00

CCM-1-3	GET		3,589,724.00	28,250,000.00
CCM-1-3	GET		871,560.00	5,000,000.00
CCM-1-3	GET		2,000,000.00	6,000,000.00
CCM-1-3	GET		2,000,000.00	6,950,000.00
		Total Project Cost ($)	**22,257,385.00**	**129,356,667.00**

Indicative Co-financing

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
GEF Agency	UNEP	In-kind	Recurrent expenditures	3,350,000.00
GEF Agency	UNEP	Grant	Investment mobilized	17,021,667.00
GEF Agency	Asian Development Bank (ADB)	In-kind	Recurrent expenditures	500,000.00
GEF Agency	Asian Development Bank (ADB)	Public Investment	Investment mobilized	5,500,000.00
GEF Agency	European Bank for Reconstruction and Development (EBRD)	In-kind	Recurrent expenditures	500,000.00
GEF Agency	European Bank for Reconstruction and Development (EBRD)	Public Investment	Investment mobilized	5,000,000.00
GEF Agency	World Bank	In-kind	Recurrent expenditures	400,000.00

GEF Agency	World Bank	Public Investment	Investment mobilized	2,600,000.00
Donor Agency	GIZ / Transforming Urban Mobility Initiative (TUMI)	In-kind	Recurrent expenditures	550,000.00
Donor Agency	GIZ / Transforming Urban Mobility Initiative (TUMI)	Grant	Investment mobilized	2,200,000.00
Civil Society Organization	Urban Electric Mobility Initiative (UEMI)	In-kind	Recurrent expenditures	550,000.00
Civil Society Organization	Urban Electric Mobility Initiative (UEMI)	Grant	Investment mobilized	2,485,000.00
Recipient Country Government	Ministry of Digital Transformation and Transport (Azerbaijan)	In-kind	Recurrent expenditures	300,000.00
Recipient Country Government	Ministry of Digital Transformation and Transport (Azerbaijan)	Public Investment	Investment mobilized	5,000,000.00
Recipient Country Government	Ministry of Energy (Azerbaijan)	In-kind	Recurrent expenditures	300,000.00
Recipient Country Government	Ministry of Energy (Azerbaijan)	Public Investment	Investment mobilized	13,000,000.00
Recipient Country Government	Government of Republic of Azerbaijan (Azerbaijan)	Public Investment	Investment mobilized	3,000,000.00
Recipient Country Government	Ministry of Finance (Fiji)	Public Investment	Investment mobilized	8,500,000.00
Recipient Country Government	Ministry of Finance (Fiji)	In-kind	Recurrent expenditures	500,000.00
Recipient Country Government	Climate Change Division, Office of the Prime Minister (Fiji)	In-kind	Recurrent expenditures	100,000.00

Donor Agency	Department of Foreign Affairs and Trade (DFAT) Australia (Fiji)	Grant	Investment mobilized	500,000.00
Donor Agency	GCF (Fiji)	Grant	Investment mobilized	300,000.00
Recipient Country Government	National Transport Fund (Solomon Islands)	Public Investment	Investment mobilized	10,000,000.00
Recipient Country Government	MECDM (Solomon Islands)	In-kind	Recurrent expenditures	1,000,000.00
Recipient Country Government	Conseil Exécutif des Transports Urbains Durables (CETUD) (Senegal)	In-kind	Recurrent expenditures	500,000.00
Recipient Country Government	Ministry of Infrastructure, Land Transport, and Opening-Up (MITTD) (Senegal)	In-kind	Recurrent expenditures	250,000.00
Recipient Country Government	Ministry of Infrastructure, Land Transport, and Opening-Up (MITTD) (Senegal)	Public Investment	Investment mobilized	22,000,000.00
Recipient Country Government	Ministry of Environment and Sustainable Development (MEDD) (Senegal)	In-kind	Recurrent expenditures	250,000.00
Recipient Country Government	Ministry of Petroleum and Energy (MPE) (Senegal)	Public Investment	Investment mobilized	5,000,000.00
Recipient Country Government	Senegal National Electricity Company (SENELEC) (Senegal)	In-kind	Recurrent expenditures	250,000.00
Recipient Country Government	National Green Energy Fund (Vanuatu)	Public Investment	Investment mobilized	3,000,000.00
Recipient Country Government	Department of Energy, Ministry of Climate Change (Vanuatu)	In-kind	Recurrent expenditures	200,000.00
Donor Agency	KOICA (Vanuatu)	Grant	Investment mobilized	1,000,000.00

Donor Agency	Green Climate Fund (GCF) (Vanuatu)	Grant	Investment mobilized	500,000.00
Donor Agency	Ministry of Foreign Affairs and Trade of New Zealand (MFAT) (Vanuatu)	Grant	Investment mobilized	300,000.00
Recipient Country Government	Zambian Environmental Management Agency (ZEMA) (Zambia)	In-kind	Recurrent expenditures	350,000.00
Recipient Country Government	Ministry of Transport and Logistics (Zambia)	In-kind	Recurrent expenditures	100,000.00
Recipient Country Government	Ministry of Housing and Infrastructure Development (Zambia)	Public Investment	Investment mobilized	2,000,000.00
Recipient Country Government	Road Transport and Safety Agency (Zambia)	In-kind	Recurrent expenditures	100,000.00
Recipient Country Government	Ministry of Energy (Zambia)	Public Investment	Investment mobilized	3,300,000.00
Recipient Country Government	Energy Regulation Board (Zambia)	In-kind	Recurrent expenditures	100,000.00
Civil Society Organization	Zambia Electric Mobility and Innovation Alliance (ZEMIA) (Zambia)	In-kind	Recurrent expenditures	50,000.00
Recipient Country Government	Ministry of Transport and Infrastructure Development (MTID) (Zimbabwe)	In-kind	Recurrent expenditures	250,000.00
Recipient Country Government	Ministry of Transport and Infrastructure Development (MTID) (Zimbabwe)	Public Investment	Investment mobilized	3,000,000.00
Recipient Country Government	Ministry of Environment, Climate, Tourism and Hospitality Industry (MECTHI) (Zimbabwe)	In-kind	Recurrent expenditures	150,000.00
Recipient Country Government	Ministry of Energy and Power Development (MEPD) (Zimbabwe)	In-kind	Recurrent expenditures	150,000.00

Recipient Country Government	Ministry of Energy and Power Development (MEPD) (Zimbabwe)	Public Investment	Investment mobilized	3,000,000.00
Recipient Country Government	Zimbabwe United Passenger Company (ZUPCO) / Ministry of Local Government (Zimbabwe)	In-kind	Recurrent expenditures	100,000.00
Recipient Country Government	City of Harare (Zimbabwe)	In-kind	Recurrent expenditures	100,000.00
Donor Agency	UN-Habitat / SIDA (Zimbabwe)	In-kind	Recurrent expenditures	200,000.00
			Total Co-financing($)	**129,356,667.00**

ANNEX B: ENDORSEMENTS

GEF Agency(ies) Certification

GEF Agency Type	Name	Date	Project Contact Person	Phone	Email
GEF Agency Coordinator	Victoria Luque Panadero		Tania Daccarett		tania.daccarett@un.org
GEF Agency Coordinator	Alexis Franke				frankea@ebrd.com
GEF Agency Coordinator	Qinfeng Zhang		Arunkumar Samuel Abraham		aabraham.consultant@adb.org
GEF Agency Coordinator	Angela Armstrong				aarmstrong@worldbank.org

Record of Endorsement of GEF Operational Focal Point (s) on Behalf of the Government(s):

Name	Position	Ministry	Date

Mr. Pita Wise	Acting Permanent Secretary	Environment Office of The Prime Minister, Fiji	4/4/2023
Mr. Chanel Iroi	Deputy Secretary and GEF Operational Focal Point	Ministry of Environment, Climate Change, Disaster Management and Meteorology, Solomon Islands	3/30/2023
Esline Garaebiti	Director General and GEF Operational Focal Point	Ministry of Climate Change Adaptation, Meteorology, Geo-hazards, Environment & Energy & NDMO, Republic of Vanuatu	3/27/2023
Emin Garabaghli	Head, Division of International Cooperation and GEF Operational Focal Point	Ministry of Ecology and Natural Resources, Republic of Azerbaijan	3/31/2023
Mr. Baba Drame	Director of Environment (Directeur de l'Environnement et des Etablissements Classés)	Ministry of Environment, Sustainable Development and Ecological Transition, Senegal	3/24/2023
Mr. Godwin Fishani GONDWE	Director/ GEF Operational Focal Point	Ministry of Green Economy and Environment, Zambia	4/5/2023
Mr. Tanyaradzwa MUNDOGA	Deputy Director Natural Resources	Secretary for Environment, Climate Tourism and Hospitality, Zimbabwe	3/27/2023

ANNEX C: PROGRAM LOCATION

Please provide geo-referenced information and map where the project interventions will take place

Location Name Required field	Latitude Required field	Longitude Required field	Geo Name ID Required field if the location is not an exact site	Location Description Optional text field	Activity Description Optional text field
Azerbaijan	40.37767	49.89201	587084		
Senegal	14.69376	-17.44406	2253354		
Zambia	-15.4164488	28.2821535	27564994		
Zimbabwe	-17.8317730	31.0456860	282335934		
Fiji	-18.1415884	178.4421662	2289652909		
Solomon islands	-9.43333	159.95	2536278		
Vanuatu	-17.7414972	168.3150163	115622916		

ANNEX D: ENVIRONMENTAL AND SOCIAL SAFEGUARDS SCREEN AND RATING

(Program level) Attach agency safeguard screen form including rating of risk types and overall risk rating.

Title

ANNEX E: RIO MARKERS

Climate Change Mitigation	Climate Change Adaptation	Biodiversity	Desertification
Principal Objective 2	No Contribution 0	No Contribution 0	No Contribution 0

ANNEX F: TAXONOMY WORKSHEET

Level 1	Level 2	Level 3	Level 4
Influencing Models	Transform policy and regulatory environments Strengthen institutional capacity /decision-making Demonstrate innovative approaches		
Stakeholders	Private sector	Capital providers Financial intermediaries and market facilitators Large corporations SMEs Individuals/Entrepreneurs	
	Civil society	Community Based Organization Non-Governmental Organization Academia	
	Type of engagement	Information Dissemination Consultation Participation	
Capacity, Knowledge and Research	Capacity Development	Knowledge Management	

		Innovation Capacity Development Learning	
Gender Equality	Gender mainstreaming Gender results areas	Beneficiaries Women groups Access to benefits and services	
Focal Area/Theme	Climate change Chemicals and wastes	Mitigation	

ANNEX H: CHILD PROJECT INFORMATION

Title

GEF-8_EM_ConceptNotesCompilation_2023.05.17_Rev3	
GEF-8_EM_ConceptNotes_2023.05.13_rev2	
EM_ConceptNotesCompilation_2023.05.09_Rev1	
EM_ConceptNotesCompilation_2023.04.06	

Child Projects under the Program						
Country	**Project Title**	**GEF Agency**	**GEF Amount($) PROJECT FINANCING**	**Agency Fee($)**	**Total($)**	
	FSPs					

Global	Global Programme to Support Countries to Upscale Integrated Electric Mobility Systems	UNEP	7,221,101.00	649,899.00	7,871,000.00	
Azerbaijan	Transition towards low and no-emission Electric Mobility in Azerbaijan	UNEP	3,000,000.00	270,000.00	3,270,000.00	
Senegal	Supporting the Shift to Electric Mobility in Senegal	UNEP	3,589,724.00	323,076.00	3,912,800.00	
	Subtotal ($)		13,810,825.00	1,242,975.00		
	MSPs					
Fiji	Sustainable Mobility in Fiji - Decarbonizing Public Buses	UNEP	1,787,500.00	160,875.00	1,948,375.00	
Solomon Islands	Transformation to Low/Zero Transport sector - Enabling uptake of Electric Mobility in Solomon Islands	UNEP	1,787,500.00	160,875.00	1,948,375.00	
Vanuatu	Support to the acceleration of sustainable land transport and the introduction of electric mobility in Vanuatu	UNEP	871,560.00	78,440.00	950,000.00	
Zambia	Supporting the Shift to Electric Mobility in the Republic of Zambia	UNEP	2,000,000.00	180,000.00	2,180,000.00	
Zimbabwe	Supporting the Shift to Electric Mobility in Zimbabwe	UNEP	2,000,000.00	180,000.00	2,180,000.00	
	Subtotal ($)		8,446,560.00	760,190.00		
	Grant Total ($)		22,257,385.00	2,003,165.00	24,260,550.00	