GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

CEO Endorsement (CEO) entry - Full sized Project Child – GEF - 7

Global project to support countries with the shift to electric mobility

Part I: Project Information

Name of Parent Program
Global Programme to Support Countries with the Shift to Electric Mobility.

GEF ID
10270

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI
- ☐ CBIT
- ☐ NGI

Project Title
Global project to support countries with the shift to electric mobility

Countries

Global

Agency(ies)
UNEP, ADB, EBRD

Other Executing Partner(s)
United Nations Environment Programme (UNEP), International Energy Agency (IEA), Asian Development Bank (ADB), European Bank for Reconstruction and Development (EBRD), Centro de Movilidad Sostenible (CMS)

Executing Partner Type
Others

GEF Focal Area
Climate Change

Taxonomy
Focal Areas, Climate Change, Climate Change Mitigation, Sustainable Urban Systems and Transport, Stakeholders, Type of Engagement, Participation, Consultation, Information Dissemination, Civil Society, Non-Governmental Organization, Academia, Community Based Organization, Private Sector, Individuals/Entrepreneurs, Capital providers, Large corporations, Financial intermediaries and market facilitators, SMEs, Communications, Behavior change, Public Campaigns, Awareness Raising, Education, Gender Equality, Gender results areas, Access to benefits and services, Gender Mainstreaming, Women groups, Beneficiaries, Capacity, Knowledge and Research, Knowledge Generation, Innovation, Capacity Development, Learning, Knowledge Exchange, Influencing models, Strengthen institutional capacity and decision-making, Demonstrate innovative approache, Transform policy and regulatory environments

Rio Markers
Climate Change Mitigation
Climate Change Mitigation 2

Climate Change Adaptation
Climate Change Adaptation 0

Submission Date
4/15/2021

Expected Implementation Start
6/1/2021

Expected Completion Date
6/30/2026

Duration
60In Months

Agency Fee($)
369,009.00

A. FOCAL/NON-FOCAL AREA ELEMENTS

Objectives/Programs	Focal Area Outcomes	Trust Fund	GEF Amount($)	Co-Fin Amount($)
CCM-1-2	Promote innovation and technology transfer for sustainable energy breakthroughs for electric drive technologies and electric mobility	GET	4,100,100.00	34,273,250.00
		Total Project Cost($)	4,100,100.00	34,273,250.00

B. Project description summary

Project Objective

To support low and middle-income countries around the world with the shift to electric mobility

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
Global Thematic Working Groups and knowledge materials	Technical Assistance	1. The four Global Thematic Working Groups generate knowledge products to support policy and investment decisions by governments and private sector stakeholders to promote the sustainable acceleration of e-mobility in country projects	1.1 The Global Thematic Working Group on *4 -wheeled electric light duty vehicles (LDVs)* is operational and information exchange and network opportunities are created between countries and global and regional experts. 1.2 A toolbox *for 4-wheeled electric LDVs* is developed and training materials for use in the Support and Investment Platforms are prepared. 1.3 The Global Thematic Working Group on *electric 2&3 wheelers* is operational and information exchange and network opportunities are	GET	1,310,526.00	7,036,452.00

created between countries and global and regional experts.

1.4 A toolbox for *electric 2&3-wheelers* is developed and training materials for use in the Support and Investment Platforms are prepared.

1.5 The Global Thematic Working Group on *electric heavy-duty vehicles (HDVs)* is operational and information exchange and network opportunities are created between countries and global and regional experts.

1.6 A toolbox for *electric HDVs* is developed and training materials for use in the Support and Investment Platforms are prepared.

1.7 The Global Thematic Working Group on *electric vehicle charging, grid integration, renewable power supply and battery re-use, recycling and safe disposal* is operational and

			information exchange and network opportunities are created between countries and global and regional experts. 1.8 A toolbox for *electric vehicle charging, grid integration, renewable power supply and battery re-use, recycling and safe disposal* is developed and training materials for use in the Support and Investment Platforms are prepared.			
Support and Investment Platforms	Technical Assistance	Outcome 2: Conditions are created for market actors in low and middle-income countries to expand investment in electric mobility through the Support and Investment Platforms.	2.1 The Support and Investment Platform for *Africa* is established, including a community of practice and an e-mobility market place. 2.2 Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the *Africa* Support and Investment Platform	GET	2,042,340.00	19,431,885.00

2.3 Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in *Africa* is supported

2.4 The Support and Investment Platform for *Asia and the Pacific i*s established, including a community of practice and an e-mobility market place

2.5 Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the *Asia and the Pacific* Support and Investment Platform

2.6 Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in *Asia and the Pacific* is supported

2.7 The Support and Investment Platform for *Latin America and the Caribbean* is

established, including a community of practice and an e-mobility market place

2.8 Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the *Latin America and the Caribbean* Support and Investment Platform.

2.9 Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in *Latin America and the Caribbean* is supported

2.10 The Support and Investment Platform for *Central and Eastern Europe, West Asia & Middle East* is established, including a community of practice and an e-mobility market place

2.11 Government and private sector stakeholders are trained and technical

			support for enhanced capacity and investment is provided through the *Central and Eastern Europe, West Asia & Middle East* Support and Investment Platform. 2.12 Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in *Central and Eastern Europe, West Asia & Middle East* is supported			
Tracking progress, EV market monitoring and results dissemination	Technical Assistance	Outcome 3: Projects and electric mobility markets are tracked, and key developments, best practices and other lessons learned are shared to promote wider uptake of electric mobility by market actors in programme and non-programme countries.	3.1 Global EV Outlook and other relevant publications are expanded to additional countries, data-sets, assessments, and case studies 3.2 An e-mobility monitoring framework is established, data on market and policy framework is collected and indicators and targets are tracked.	GET	484,491.00	2,923,196.00

			3.3 A knowledge management system and a website are established to disseminate materials and results to programme and non-programme countries. 3.4 A gender responsive communications and branding programme is developed to communicate and showcase the results of the programme to promote replication and wider use of project tools 3.5 Programme stakeholders participate in one global project launch meeting and one global end of project electric mobility meeting co-organised with other events.			
Monitoring and Evaluation	Technical Assistance	Monitoring and Evaluation		GET	70,000.00	
				Sub Total ($)	**3,907,357.00**	**29,391,533.00**
Project Management Cost (PMC)						
				GET	192,743.00	4,881,717.00

	Sub Total($)	192,743.00	4,881,717.00
	Total Project Cost($)	4,100,100.00	34,273,250.00

C. Sources of Co-financing for the Project by name and by type

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount($)
GEF Agency	UNEP	Grant	Investment mobilized	3,476,900.00
GEF Agency	UNEP	In-kind	Recurrent expenditures	2,191,350.00
Donor Agency	European Commission Solutions Plus	Grant	Investment mobilized	20,430,000.00
Other	IEA - Clean Energy Transitions Programme	Grant	Investment mobilized	500,000.00
Other	IEA - Electric Vehicles Initiative	In-kind	Recurrent expenditures	1,120,000.00
Other	IEA - Renewable Integration and Secure Electricity Unit	In-kind	Recurrent expenditures	390,000.00
Other	IEA - Mobility Model Partnership	In-kind	Recurrent expenditures	665,000.00
Other	EVI members' and partners' in-kind contributions	In-kind	Recurrent expenditures	750,000.00
GEF Agency	ADB	Grant	Investment mobilized	2,000,000.00
GEF Agency	EBRD	In-kind	Recurrent expenditures	250,000.00
GEF Agency	EBRD	Grant	Investment mobilized	2,500,000.00
			Total Co-Financing($)	34,273,250.00

Describe how any "Investment Mobilized" was identified

The IEA's Clean Energy Transitions Programme (CETP) is a multi-year programme supported by IEA member countries and other partners to support countries' pathways to a clean energy transition. The CETP was launched in 2017 and provides independent, cutting-edge technical support to governments whose energy policies will significantly influence prospects for, and the speed of, a global transition towards more sustainable energy production and use (https://www.iea.org/programmes/clean-energy-transitions-programme). Priority countries include Brazil, China, India, Indonesia, Mexico and South Africa, other IEA association countries, and regions more widely – such as Africa, Latin America and Southeast Asia – where the programme can have high impact and use local partners' capabilities for wider benefit. Activities within the CETP encompass several work streams and activities, including support for modelling and

analysis related to transport and electric mobility. Activities within the “Global Programme to Support Countries with the Shift to Electric Mobility” (hereafter: the Global Programme) would inform, contribute to and be carried out in coordination with the CETP to maximise synergies with other activities and country engagements, leveraging IEA’s full analytic and policy capabilities.. UNEP is implementing programmes to 1.) Support countries and cities around the world with the introduction of electric mobility. The funding for this program is coming from extra budgetary resources and includes funding from the FIA Foundation, Germany (BMU-IKI), the European Union, the Hewlett Foundation, the Green Climate Fund (GCF), the Climate and Clean Air Coalition (CCAC), and the Costa Rica USA Foundation for Cooperation (CRUSA); and 2.) Support countries around the world to improve the efficiency of their vehicle fleet through the Global Fuel Economy Initiative (GFEI) – mostly through the introduction of standards, fiscal reforms and awareness campaigns. Funding for the GFEI activities considered as co-finance are solely coming from the European Union. More than half of these country projects include specific components on the promotion for the introduction of electric vehicles. No GEF funded projects are considered as co-finance. The provided co-finance includes the use of grants to 1.) develop knowledge materials; 2.) to adapt generic training materials to regional and sub-regional conditions; 3.) to support the development of communication materials; and to 4.) strengthen dissemination of programme results and outreach. It will furthermore be used to embed the GEF-7 Global E-Mobility work within the broader UNEP E-Mobility Programme. The UNEP E-Mobility Programme, of which the GEF-7 Global E-Mobility Programme is an integral part, will include normative work at supranational level, for example under the umbrella of the United Nations Environment Assembly. It also includes the transfer of lessons learnt from national e-mobility projects, which are not part of the GEF-7 / EC SOLUTIONSplus E-Mobility Programme into the GEF-7 E-Mobility Programme. In particular, UNEP’s experience with the on-going implementation of e-mobility pilot projects in Ethiopia, Kenya, Uganda and the Philippines, Thailand and Vietnam is of great value for the pilot projects envisaged under the GEF-7 Global E-Mobility Programme. Finally, UNEP’s in-kind contributions will be used to support administration and management of the programme.. ADB will provide funding for technical assistance (TA) for the Global Child Project’s activities from the ADB Sustainable Transport for All initiative. The ADB Sustainable Transport Initiative (STI) guides ADB’s support to the transport sector throughout Asia and the Pacific, and has identified four opportunities to enhance ADB’s lending operations: i) Urban transport, ii) Addressing climate change in transport, iii) Cross-border transport and logistics, and iv) Road safety and social sustainability. Within this framework, ADB currently supports USD 2- 3 billion of investments in transit-oriented development, non-motorized transport, integrated urban transport and land use planning, demand management, policies, regulations and standards, among others. ADB’s Energy Policy provides complementary support through its focus on energy security, and facilitating the transition to a low carbon economy for its Development Member Countries (DMCs). Under ADB’s STI there are several ongoing programmes and projects, principal among which is the “Sustainable Transport for All” technical assistance fund. As electric mobility is a relatively new area for ADB as well as its DMCs, this TA helps support countries at the policy and the strategy formulation level. Much of the work under the TA provides countries and cities with a range of technically and financially feasible options. There are three main thrusts to the work: i) focus on high distance vehicles, on cities and on large fleets, ii) optimize charging infrastructure, battery usage and greening of the grid, and iii) develop appropriate incentive structures, include financial and nonfinancial incentives as well as a creative packaging of incentives. The ADB has committed USD 2 million to support the creation of knowledge products in these focus areas. The European Commission Horizon 2020 programme is the most comprehensive EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020). The SOLUTIONSplus project with the title “Integrated Urban Electric Mobility Solutions in the Context of the Paris Agreement, the Sustainable Development Goals and the New Urban Agenda” has been selected by the European Commission (as part of the call for proposals LC-GV-05-2019 on “Urban mobility and sustainable electrification in large urban areas in developing and emerging economies”) and was officially launched at a kick-off workshop taking place January 21st and 22nd 2020 in Berlin, Germany. The project has been developed by Wuppertal Institute and will be coordinated through the Urban Electric Mobility Initiative UEMI. The project will be implemented by a consortium of about forty members from local governments, academia, private sector and international organizations, with UNEP being a key member of the SOLUTIONSplus consortium. The activities of the SOLUTIONSplus project and the GEF Global Programme are complementary and thus, each of

the two programs is a major contributor to the success of the other. Since UNEP is a key actor in both projects, UNEP ensures that both projects are well aligned and that the complementarity between the two initiatives can be fully used for successful project implementation and efficient co-financing. The European Bank for Reconstruction and Development (EBRD): The EBRD currently invests around EUR 4 billion a year in green projects through their Green Economy Transition programme. The Bank has ambitious targets that 40% of its total investments in 2020 are in green projects, rising to 50% of total investment in 2025. Given the EBRD's ambitious green agenda, expanding electric mobility is one of the key priorities of EBRD's 2019 – 2024 Transport Sector Strategy. Current the EBRD and has an investment pipeline in the order of EUR 650 million on road-based e-mobility projects with plans to expand this further. The investment mobilized for this project will be used for Technical Assistance to support countries with the development and implementation of electric mobility projects.

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)
UNEP	GET	Global	Climate Change	CC Global/Regional Set-Aside	3,216,100	289,449
ADB	GET	Global	Climate Change	CC Global/Regional Set-Aside	444,000	39,960
EBRD	GET	Global	Climate Change	CC Global/Regional Set-Aside	440,000	39,600
				Total Grant Resources($)	**4,100,100.00**	**369,009.00**

E. Non Grant Instrument

NON-GRANT INSTRUMENT at CEO Endorsement

Includes Non grant instruments? No

Includes reflow to GEF? No

F. Project Preparation Grant (PPG)

PPG Required ☐

PPG Amount ($)

50,000

PPG Agency Fee ($)

4,500

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)
UNEP	GET	Global	Climate Change	CC Global/Regional Set-Aside	50,000	4,500
				Total Project Costs($)	**50,000.00**	**4,500.00**

Core Indicators

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)	0	268942	0	0
Expected metric tons of CO_2e (indirect)	0	7500000	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)		268,942		
Expected metric tons of CO_2e (indirect)		7,500,000		
Anticipated start year of accounting		2021		
Duration of accounting		15		

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)		3,728,866,634		

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 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female		868		
Male		2,012		
Total	0	2880	0	0

Part II. Project Justification

1a. Project Description

1a. Changes in project design

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

Phase one of the Global Programme included the submission of 17 Country Child Projects for e-mobility in low and middle-income countries around the world. The Child Project concept notes have been approved in June 2019, and project documents for CEO endorsement will be submitted in parallel to the Global Child Project. In March 2020, a second round of 10 Country Child Project concept notes has been submitted for approval, alongside with an addendum to the Global Child Project. The addendum includes 1.) the set-up of a standalone Thematic Working Group for electric 2&3 wheelers executed by UNEP; 2.) the establishment of a fourth Regional Support and Investment Platform for Central & Eastern Europe, West Asia & Middle East, executed by the European Bank for Reconstruction and Development (EBRD); 3.) strengthening the existing Regional Support and Investment Platforms in order to welcome the additional Country Child Projects; and 4.) strengthening Component 4 on Tracking progress, monitoring and dissemination. It was agreed with GEF Secretariat to submit only one Global Child Project document for CEO approval, which is based both on the concepts submitted in June 2019 and the addendum submitted to the June 2020 Council. Hence, this project document contains quite a number of changes and additions when compared with the Global Child Project concept and the PFD approved in June 2019.

Notably, this project document for CEO endorsement differs from the Global Child Project concept:

The original concept included four Thematic Working Groups; 1.) Electric light duty vehicles (LDVs, including 2&3 wheelers); 2.) Electric heavy-duty vehicles; 3.) Charging infrastructure, grid, system and power market integration; and 4.) Batteries. This CEO Endorsement document also included four Thematic Working Groups, but with a somewhat changed focus: 1.) 4-wheeled electric light duty vehicles (LDVs); 2.) Electric heavy-duty vehicles; 3.) Electric 2&3wheelers 4.) Charging infrastructure, grid, system & power market integration and *battery re-use, recycling and safe disposal*. Since many of the country projects focus on the introduction of electric 2&3 wheelers it has been decided to dedicate a stand-alone Thematic Working Group to this mode. Furthermore, due to the close links between charging infrastructure, grid and system integration with a focus on renewable power integration and the use and environmentally sound disposal of used EV batteries for power storage it has been decided to merge the former Thematic Working Groups 3. and 4. into one combined Working Group.

The concept approved in June 2019 contained three Regional Support and Investment Platforms, with the expectation to form a fourth platform once a critical mass of country projects in Central & Eastern Europe, West Asia & the Middle East was reached. With Albania and Jordan joining the Global Programme as part of the second round of submission, and including the GEF 7 stand-alone e-mobility project in Belarus, the region now counts with six GEF funded e-mobility projects (including Armenia, Ukraine, and Uzbekistan submitted in 2019). Therefore, the Central & Eastern Europe, West Asia & Middle East Support and Investment Platform, managed by EBRD, is now part of the project submission.

In addition, as explained in more detail in Table 2 below, the structure of the project outputs has been changed. While the components and outcomes remained the same, project outputs have been reformulated to better reflect: 1.) Content; and 2.) Management structure, budget and reporting of the various implementing (UNEP, ADB, EBRD) and executing agencies (UNEP, ADB, EBRD, IEA and Centro de Movilidad Sostenible) to ensure better accountability.

Compared to the project concept, some changes were applied to the co-financing of the Global Child Project, see details in below Table 3. The total co-financing has been increased, from expected USD 30,045,000 to USD 34,273,250.

Parallel implementation of the GEF Global Electric Mobility Programme with the EC SOLUTIONSplus project

The Global Project Framework Document submitted in April 2019 already anticipated parallel implementation of the GEF 7 Global Electric Mobility Programme and the European Commission funded SOLUTIONSplus project. The EC SOLUTIONSplus project complements many of the objectives, outcomes and outputs of the GEF Global Electric Mobility Programme both at the Global Programme level as well as at the Child Country Project level. More specifically, the EC SOLUTIONSplus project aims to:

· Develop a comprehensive e-mobility toolbox;

· Implement a training and capacity building programme through city-to-city cooperation and professional development;

· Establish business models and technical cooperation partnership plans;

· Implement e-mobility demonstration projects in 9 cities (Kigali/Rwanda, Dar Es Salaam/Tanzania, Kathmandu/Nepal, Hanoi/Vietnam, Pasig City/the Philippines, Quito/Ecuador, Montevideo/Uruguay, Hamburg/Germany and Madrid/Spain) focussing on fleet applications and EV manufacturing;

· Prepare for scale-up and replication through development of bankable project proposals including the preparation for the development of financial mechanisms.

The EC SOLUTIONSplus comprises a consortium of about 40 partners, of which about half are industry partners such as ABB, Valeo, Volvo, Applus IDIADA, T-Systems, Centro Ricerche Fiat, among others. UNEP is a consortium member and is the leader of work package 5, “Scale-up, finance, bankability, commercialization and institutionalization”.

The GEF Global Electric Mobility Programme as well as the EC SOLUTIONSplus project have been designed to operate on a task-share basis to maximize the use of funds of both projects (see Table 1).

Table 1 overview of ec solutionsplus work packages and components of the gef 7 global electric mobility programme

Work package	Work package title	Lead agency	Matching GEF Global Child Project component(s)
WP 1	Toolbox and evaluation	VTT (Teknologian tutkimuskeskus VTT)	Component 1 - Global Thematic Working Groups and knowledge materials
WP 2	Capacity Building, city-to-city cooperation and professional development	POLIS (Promotion of Operation Links with Integrated Services – European City Network)	Component 1 - Global Thematic Working Groups and knowledge materials Component 2 - Support and Investment Platforms
WP 3	Technical and business partnerships, models and implementation plans	FIER (Fier Automotive B. V.)	Component 1 - Global Thematic Working Groups and knowledge materials Component 2 - Support and Investment Platforms
WP 4	Comparative demonstration actions	UITP (Union Internationale des Transports Publics)	Component 2 - Support and Investment Platforms
WP 5	Scale-up, finance, bankability, commercialisation and institutionalisation	UNEP	Component 2 - Support and Investment Platforms
WP 6	Exploitation and Dissemination	UEMI (Urban Electric Mobility Initiative)	Component 3 - Tracking progress, EV market monitoring and results dissemination
WP 7	Management		PMC
WP 8	Ethics requirements		PMC

Examples for the implementation of task sharing approaches between the GEF E-Mobility Progamme the EC SOLUTIONSplus project are as following:

· Joint development of knowledge products: a toolbox development is part of both projects and tasks will be shared by identifying the necessary knowledge products and the coordination of their development among the two programmes / projects to avoid any duplication. A detailed split of knowledge products to be developed by the Global Thematic Working Groups (GEF 7 E-Mobility Programme) and work package 1 (EC SOLUTIONSplus) is provided in Section 3, Alternative Scenario. All tools and knowledge products will be made public though a jointly branded GEF 7 E-Mobility – EC SOLUTIONSplus online toolbox which will be linked to both official programme websites.

· Joint delivery of trainings and other capacity building events such as webinars, workshops etc: All capacity building events are held in full coordination and members of both programmes / projects can participate in both programme events. For example, a summer school implemented under the SOLUTIONSplus project as well as the Living Lab Webinar series can be attended by GEF 7 E-Mobility Programme partners. EC SOLUTIONSplus trainings will be integrated in the events carried out as part of the Regional Support and Investment Platforms.

· As part of the EC SOLUTIONSplus project UNEP has a budget of 500,000 Euros for seed-funding for start-ups to procure and install EV an EV supply equipment. Together with the EC SOLUTIONSplus project management team it has been decided that part of this budget will be used to procure EV charging equipment and to support local innovators with the installation and operation of this equipment in five GEF 7 Country Child Projects, namely: Armenia, Burundi, Sierra Leone, Seychelles and Togo. These budgets are marked as UNEP Investment Mobilized within the respective Child Project co-finance budgets and will be implemented through an open call for proposals within the target countries.

Changes in the logframe:

All changes in the logframe are tracked in Table 2.

Table 2 Changes in the logframe

Logframe item	Concept note wording	CEO Endorsement Document wording	Explanation / justification for changes
Outcome 1.	Knowledge products are generated to support policy making and investment decision-making through four Global Thematic Working Groups.	The four Global Thematic Working Groups generate knowledge products to support policy and investment decisions by governments and private sector stakeholders to promote the sustainable acceleration of e-mobility in country projects.	Editorial adjustment, to better reflect the project ambition.
Output 1.1	Four Thematic Working Groups on key electric mobility topics including light and heavy-duty electric vehicles, charging infrastructure and grid integration, and battery life cycle aspects are operational	The Global Thematic Working Group on 4-wheeled electric light duty vehicles (LDVs) is operational and information exchange and network opportunities are created between countries and global and regional experts.	While the output formulation at the concept stage only focussed at the purpose and the content of the Thematic Working Groups and the knowledge products, the re
Output 1.2	Information exchange and network opportunities are created between countries and global and regional experts	A toolbox for 4-wheeled electric LDVs is developed and training materials for use in the Support and Investment Platforms are prepared.	
Output 1.3	Best practices and experiences in electric mobility are collected and synthesized from first movers and GEF 5&6 projects	The Global Thematic Working Group on electric 2&3 wheelers is operational and information exchange and network opportunities are created between countries and global and regional experts	
Output 1.4	A toolbox including guidance materials, analytic tools, strategies, factsheets, cost benefit a	A toolbox for 2&3-wheeled electric LDVs is developed and training materials for use in the Support and In	

	gies, factsheets, cost benefit analyses, roadmaps, policy packages, business models and financing schemes for promoting and supporting electric mobility is developed	enals for use in the Support and Investment Platforms are prepared.	vised formulation of the outputs under component 1 also anticipates project management. Outputs under component 1 will be executed by UNEP and the IEA. It has therefore been decided to formulate output statements in a way that each output can be allocated to either UNEP or the IEA. While this causes some repetition (since the various Working Groups and developed knowledge products follow the same logic and look for similar application), it adds much more clarity to the project management structure, budgeting and future reporting.
Output 1.5	Training materials are prepared for use in the Support and Investment Platforms	The Global Thematic Working Group on electric heavy-duty vehicles (HDVs) is operational and information exchange and network opportunities are created between countries and global and regional experts	
Output 1.6	-	A toolbox for electric HDVs is developed and training materials for use in the Support and Investment Platforms are prepared.	
Output 1.7	-	The Global Thematic Working Group on electric vehicle charging, grid integration, renewable power supply and battery re-use, recycling and safe disposal is operational and information exchange and network opportunities are created between countries and global and regional experts.	
Output 1.8	-	A toolbox for electric vehicle charging, grid integration, renewable power supply and battery re-use, recycling and safe disposal is developed and training materials for use in the Support and Investment Platforms are prepared.	
Outcome 2	Conditions are created for market expansion and investment in electric mobility through Support and Investment Platforms.	Conditions are created for market actors in low and middle-income countries to expand investment in electric mobility through Support and Investment Platforms.	Editorial adjustment, to better reflect the project ambition.
Output 2.1	Three Support and Investment Platforms are established and	The Support and Investment Platform for Africa is established, includi	

	operational to disseminate knowledge from the Global Thematic Working Groups to countries, form regional communities of practice and create an e-mobility market place	ng a community of practice and an e-mobility market place.	
Output 2.2	Training courses are delivered to country and city stakeholders	Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the Africa Support and Investment Platform	
Output 2.3	Communities of practice are established to share good practices, through South-South cooperation and peer-to-peer support	Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in Africa is supported	
Output 2.4	Technical support is provided to countries and cities, including through help desk support and through knowledge developed in the Global Thematic Working Groups	The Support and Investment Platform for Asia and the Pacific is established, including a community of practice and an e-mobility market place	While the output formulation at the concept stage only focussed at the purpose and the content of the Regional Support and Investment Platforms, the revised formulation of the outputs under component 2 also anticipates project management. Outputs under component 2 will be implemented executed by UNEP, ADB and EBRD and executed by UNEP, ADB, EBRD, the IEA and the Centro de Movilidad Sostenible. It has therefore been decided to formulate output statements in a way that each output can be allocated to one implementing / executing agency. While this causes some repetition (s
Output 2.5	Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in the regions interested in promoting electric mobility is supported	Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the Asia and the Pacific Support and Investment Platform	
Output 2.6	Electric mobility market places are established to promote and support investment in electric mobility	6 Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in Asia and the Pacific is supported	
Output 2.7	-	The Support and Investment Platform for Latin America and the Caribbean is established, including a community of practice and an e-mobility market place	

		ility market place	ince the structure and the outputs of the various platforms follow the same logic), it adds much more clarity to the project management structure, budgeting and future reporting.
Output 2.8	-	Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the Latin America and the Caribbean Support and Investment Platform.	
Output 2.9	-	Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in Latin America and the Caribbean is supported	
Output 2.10	-	The Support and Investment Platform for Central and Eastern Europe, West Asia & Middle East is established, including a community of practice and an e-mobility market place	
Output 2.11	-	Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the Central and Eastern Europe, West Asia & Middle East Support and Investment Platform.	
Output 2.12	-	Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in Central and Eastern Europe, West Asia & Middle East is supported	
Component 3	Country project implementation (Country Child Projects)	Removed.	While the PFD document provides the strategic framework for the entire programme, including the Global Child Project and all Country Child Projects, the Global Child Project only refers to the operationalization of the Global Support Project. It therefore does not contain references to the Country Child Projects, which is why the for

			mer Component 3 [Country project implementation (Country Child Projects)] is not included in this document.
Component 4	Tracking progress, monitoring and dissemination	Component 3: Tracking progress, EV market monitoring and results dissemination	See explanation above.
Outcome 4	Projects and electric mobility markets are tracked and key developments, best practices and other lessons learned are shared to promote wider uptake of electric mobility.	Outcome 3 Projects and electric mobility markets are tracked, and key developments, best practices and other lessons learned are shared to promote wider uptake of electric mobility by market actors in programme and non-programme countries.	Editorial adjustment, to better reflect the project ambition. The Outcome numbering has changed too (refer to explanations above).
Output 4.1	Global EV Outlook and other related publications are expanded to additional countries, data, assessments, and case studies	Output 3.1: Global EV Outlook and other relevant publications are expanded to additional countries, data-sets, assessments, and case studies	Output numbering change only.
Output 4.2	Knowledge management, and communications, website established	Output 3.3 A knowledge management system and a website are established to disseminate materials and results to programme and non-programme countries.	Communications and branding became a separate output after approval of increased budget within the addendum to the Global Child Project. Also, the Output numbering has changed.
Output 4.3	Monitoring framework is established and indicators and targets are tracked	Output 3.2. An e-mobility monitoring framework is established, data on market and policy framework is collected and indicators and targets are tracked.	Editorial. In addition, the output numbering has changed
Output 4.4	One global project launch meeting and one global end of project electric mobility meeting are co-organised with other events	Output 3.4 A gender responsive communications and branding programme is developed to communicate and showcase the results of the programme to promote replication and wider use of project tools	The additional budget allocated to Component 4 in the addendum to the Global Child Project (i.e. now Component 3 of this document) will be used to improve communications of programme results. Also, the Output numbering has changed.
Output 4.5	-	Output 3.5 Programme stakeholder	Former Output 4.4. The output nu

Output 4.3		Output 3.3 Programme stakeholders participate in one global project launch meeting and one global end of project electric mobility meeting co-organised with other events.	Former Output 4.4. The output number has now changed to Output 3.5.
M&E	-	M&E	Monitoring and Evaluation has been separated from the rest of the components

Changes to the GEF budget distribution

All changes to the GEF budget distribution are tracked in Table 3.

Table 3 changes to the GEF budget distribution

Logframe item	Concept note GEF budget	CEO Endorsement Document GEF budget	Explanation / justification for changes
Component 1	1,050,000	1,310,526	Budget increase due to the inclusion of the addendum to the Global Child Project submitted to the June 2020 Council meeting, which foresees the set-up of a fully-fledged Thematic Working Group on electric 2&3 wheelers at and additional budget of USD 200,000.
Component 2	1,500,000	2,042,340	Budget increase due to the inclusion of the addendum, which foresees: 1.) the establishment of a fourth Regional Support and Investment Platform for Central & Easter Europe, West Asia and Middle East at a total cost of USD 419,048; as well as 2.) increased budgets for the Africa, Asia and the Pacific and Latin America and the Caribbean Platforms to host the additional Country Child Projects submitted as part of the 2nd round at a total cost of USD 127,619.
Component 3	500,000	484,491	Slight budget reduction due to the separate inclusion of M&E budget.
Monitoring & Evaluation		70,000	M&E (Mid-Term Evaluation and Terminal Evaluation) has been separated from the rest of the budget.
PMC	152,500	192,743	Increased PMC due increased budget for project activities.
Total	**3,202,500**	**4,100,100**	

Changes to the co-finance budget distribution:

The Child Project Concept did not include a detailed breakdown of the Global Child Project co-finance by component. Overall, the confirmed co-finance to the Global Child Project increased from USD 30,045,000 to USD 34,273,250. Main reasons for this increase are: 1.) Additional co-finance has been secured through the participation of EBRD as an additional Implementing Agency of the Global Child Project; 2.) Additional co-finance has been leveraged by UNEP though approval of additional projects such as the extension of the CCAC Soot-free Buses and Heavy-Duty Vehicles Initiatives as well as the GCF Readiness Programme “Advancing a Regional Approach to E-Mobility in Latin America”.

1b. Project Description

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

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 section 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.

A global transition to low- and zero- emission mobility is essential to meet international climate commitments, including the Paris Climate Agreement. The Intergovernmental Panel on Climate Change (IPCC), in its October 2018 report, stated that to achieve a target of 1.5C all vehicles added to the global fleet need to be electric from 2035 onwards, resulting in a complete switch to electric fleets by 2050. At UNFCCC COP21, a group of countries adopted the Paris Declaration on Electromobility and Climate Change which calls for 100 million electric cars and 400 million electric two and three wheelers by 2030. The United Nations Environment Assembly, at its fourth session in March 2019, adopted the first ever UN sustainable mobility resolution that calls on all countries to switch to sustainable mobility, including electric mobility.

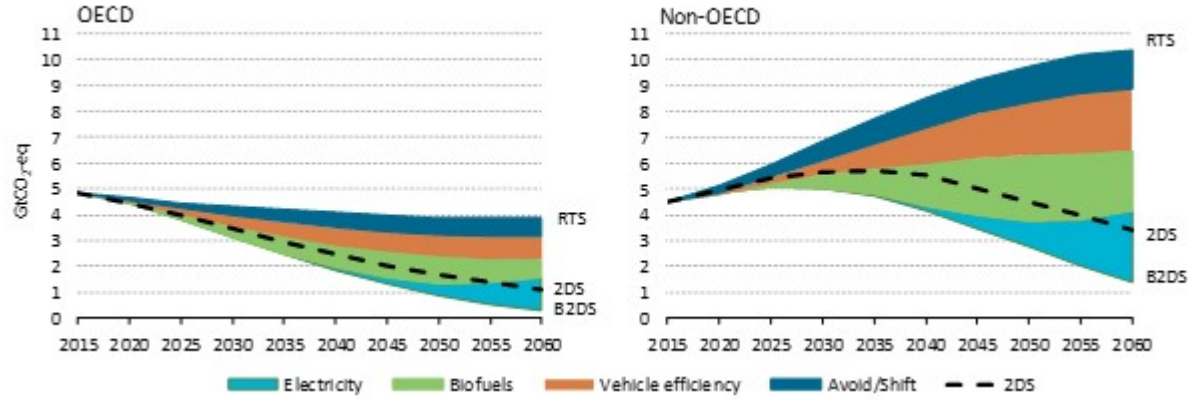


Figure 1 WELL-TO-WHEEL GHG EMISSIONS REDUCTIONS FROM TRANSPORT IN OECD AND NON-OECD COUNTRIES IN THE BEYOND 2°C SCENARIO (B2DS) COMPARED WITH THE REFERENCE TECHNOLOGY SCENARIO (RTS) and the 2°C SCENARIO (2DS)

Source: IEA Energy Technology Perspectives 2017

A shift to a zero-emissions transport sector requires the combination of three key actions: (i) reducing travel demand; (ii) shifting to energy-efficient transport modes, such as public transport; and (iii) introducing zero-emission vehicles. As indicated in Figure 1, the introduction of electric vehicles, coupled with low carbon electricity, will have a major contribution to transport decarbonization (Note: this figure also includes aviation, rail and maritime, hence the high share of biofuels on transport emission mitigation).

The world has now started this shift to zero-emission electric mobility. A rapid development of technology and falling battery prices have seen the global fleet of electric vehicles double in size every 18 months until 2019, when the pace of the fleet increase slightly reduced. Countries such as China, the United States, Japan, Norway, Sweden, Finland, Germany and France, amongst others, have implemented comprehensive policy frameworks to stimulate national transitions to electric mobility transport sectors.

Nonetheless, the share of electric vehicles on the global vehicle fleet is still very small. While there were almost a billion passenger cars on the road globally in 2019, the fleet of electric cars accounted for about 7.2 million. Hence, the share of EVs among passenger cars is below one percent. The key associated driver for the on-going reliance on internal combustion engine transport is the current inexistence of socially and economically viable alternatives to fossil fuel road transport. There are several barriers to the broad adoption of low-emission electric vehicles.

· **High up-front investments:** High purchase prices of electric vehicles are a significant hurdle for the success of EVs. However, these higher costs will be recovered from the reduced operating costs of these vehicles. Another challenge is the investment in the development of charging infrastructure. Innovative financing models can help and the creation of (sub)regional platforms bringing together countries/ cities, technology providers and financial institutions are needed to promote investment. The role of the private sector is important, as all sources of financing electric mobility projects need to be untapped. This includes the set-up of new business models which involves cross border actions between all stakeholders to spread the needed investment as well as the economic risk.

· **Lack of information/awareness:** Consumers, policy makers and vehicle manufacturers are not fully aware of the environmental and economic benefits related to electric mobility. In many low- and middle-income countries EVs are still perceived as very expensive and high-tech vehicles, which are not adapted to local conditions. In addition, there are major opportunities for low- and middle-income countries to leapfrog to electric mobility, including for example through the development of manufacturing and assembly capacity, or through the import of used electric vehicles. EVs can also be perceived as providing limited GHG savings compared to conventional vehicles in countries with a more carbon-intensive grid.

· **Policy and planning challenges:** Limited or counterproductive policy measures are in place. Many low- and middle-income countries have no dedicated fiscal or regulatory policies in place to incentivize the uptake of electric vehicles. On the other hand, many countries still subsidize petroleum fuels or have disadvantageous fiscal policies in place, which complicate for example the import of (second-hand) electric vehicles.

· **Limited institutional capacity**: Decision makers lack the capacity to develop national electric mobility projects. The development of policies to foster the uptake of electric mobility most often includes stakeholders from various ministries and requires thorough analysis and understanding of the national transport sector. For example, countries are struggling to develop national standards for electric vehicles. Additionally, there is a whole suite of options to incentivise electric mobility and a tailored set of interventions needs to be developed based on the national preconditions. Decision makers need technical support during all stages of electric mobility policy development.

· **Range anxiety and limited availability of charging infrastructure:** Although driving range of EVs is increasing rapidly, and ranges of more than 400km are now available with many models, EV range is still perceived to be considerably lower compared to conventional vehicles. Although data shows that 80%+ of daily trip lengths can easily be met with cutter EV ranges, the lack of alternatives for occasional longer travel hinders the further penetration of EVs. Low and middle-income countries have no or very sparse EV charging infrastructure. A lack of recharging infrastructure in many of the countries further enforces range anxiety and the perception of EVs not being suitable for longer trips. However, range issues with many modes of electric mobility are much less a challenge and/or do not need extensive public charging infrastructure. This is mostly the case for fleet applications (especially electric buses and electric 2&3 wheelers).

· **Limited offer of electric vehicles and electric vehicle supply equipment in low and middle income countries:** While car and bus manufacturers already offer a broad spectrum of vehicles and models in OECD countries, the availability of new EVs in low and middle income countries is limited or nil. This presents a serious barrier as the purchase of used EVs with no secured maintenance and without any warranty is not an option for many fleet operators. Even in case interested fleet operators would like to invest in electric vehicles, it is often simply impossible in many low and middle income countries.

· Uncertainty with regards to end-of-life issues of used EV batteries: The absence of regulation and know-how

It is the aim of the Global Programme to support low and middle-income countries in overcoming these barriers through a combination of technical assistance and investment. Technical assistance on the Country Child Project level includes awareness raising campaigns, capacity building and the development of instructional structures to support the introduction of electric mobility. It furthermore includes laying the ground for large-scale market introduction of electric mobility through 1.) The development of policies, including fiscal, regulatory and local measures; 2.) The establishment of adequate business models and finance mechanisms; and 3.) The development of plans and studies to ensure environmental sustainability. The investment component of the Country Child Projects will be used for electric mobility demonstration projects to allow for the creation of local experience to de-risk the technology and to attract investors to upscale electric mobility in the respective countries.

It is the purpose of the Global Child Project to develop the materials and networks, to ensure the necessary support is provided to the national electric mobility projects under the Global Programme and to collect, analyse and disseminate the lessons learned and best practices stemming from the national projects. It is an excellent opportunity for global market acceleration and knowledge management through the two global lead agencies IEA and UNEP who co-implement this Global Child Project.

The GEF-7 Global Programme will closely link with the European Commission SOLUTIONSplus Project (hereafter EC SOLUTIONSplus), which aims at developing integrated urban electric mobility solutions in the context of the Paris Agreement, the sustainable development goals and the New Urban Agenda. The EC SOLUTIONSplus project has a budget of 18 million Euros (~ USD 20,430,000) and will work in 9 demonstration cities as well as a yet to be defined number of replication cities.
Collectively, the two programmes will bring together a network of approximately 40 projects in 38 countries working on electric mobility policies, business models, financial schemes and demonstration projects to prepare for accelerated introduction and scaling up of electric mobility. Involvement of development banks and other financial partners such as the Green Climate Fund in the global components of the programmes and the country projects is aiming to secure direct investments for scaling-up and replication of electric mobility. An important aspect of synergy and complementarity is the focus of the SOLUTIONSplus Programme on Cities and a stronger emphasis on research and business development, both of which will complement well the GEF Programme's focus on government capacity building, policy development, infrastructure planning and market deployment.

2) Baseline scenario and any associated baseline projects

The number of electric cars on the road surpassed 7.2 million units in 2019, with the majority in China, the US, Japan and European countries. Electric car sales grew vastly over the last decade, surpassing the 2 million mark. According to the IEA Global EV Outlook, "Worldwide the market share of electric cars reached 2.6% in 2019, an all-time high (up from 2.4% in 2018 and 1.5% in 2017)".
However, this shift towards electric mobility is happening at different paces. With most transport growth due to come from non-OECD countries, there is therefore an urgent need to put programs and policies in place that will ensure that vehicle growth in these countries is through the use of zero-emission vehicles (combined with a shift from individual car use to active and public transport). To date, no Global Programmes exist which support low and middle

income countries with building up local capacity and experience to develop and put in place strategies, policy frameworks, business models and finance schemes to create an environment which allows for the large-scale introduction of electric mobility.

Although various initiatives and programmes of institutions such as UNEP, IEA, the European Commission and multilateral development banks are already under development or just began implementation, the systematic promotion of electric mobility in low and middle-income countries still lacks a global framework, which ensures that activities are not taking place in isolation, which enables the exchange of lessons learnt and best practices between countries on a global and regional level, and which links individual efforts to support the introduction of electric mobility with financial institutions and EV and supply equipment manufacturers. The latter results in the current situations that 1.) Financial institutions see the potential of e-mobility to help reduce energy use, GHG and air pollutant emissions and transport sector costs in low and middle-income countries, but do not have the confidence yet to invest in national e-mobility projects; and 2.) Manufacturers do not see markets at scale and therefore are not able to provide adequate products at acceptable prices in these countries.

The GEF Global Programme through the support of the Global Child Project can benefit from experience and progress achieved in activities and/or projects working on e-mobility, clean fuels and vehicles and urban mobility programme that are already existing.

Baseline activities and projects implemented by leading intergovernmental organizations include:

· **Electric Mobility Programme of the United Nations Environment Programme (UNEP):** UNEP is supporting a large group of low- and middle-income countries with the introduction of electric mobility policies and pilots. This has four workstreams:

1.) **Electric two and three wheelers** – UNEP is supporting eight countries with the introduction of electric two- and three-wheelers. These are Kenya, Uganda, Rwanda, Ethiopia, Morocco, Philippines, Vietnam and Thailand. The emphasis is on introducing policies and incentives for the introduction, removing administrative hurdles, and piloting of electric motorcycles. It is working with local operators, companies and governments, and includes financing and local production and assembly for a wider uptake of electric motorcycles

2.) **Electric buses** – UNEP is supporting six countries/cities with the introduction of clean and soot free buses, including the introduction of electric buses. UNEP is implementing these activities with the International Council for Clean Transportation (ICCT), and the Climate and Clean Air Coalition (CCAC). Activities include providing technical advice, sharing best practices and developing “marketplaces” where the interested cities can discuss with technology providers and financial institutions.

3.) **National policies for light duty electric vehicles** - UNEP is supporting more than 40 countries in promoting policies and incentives for the introduction of privately-owned light duty vehicles. This builds on the work UNEP is doing in the Global Fuel Economy Initiative (GFEI), which is a Global Programme in which the International Energy Agency (IEA) is also participating, that is supporting more efficient vehicle fleets. Most countries UNEP is supporting are looking at introducing fiscal incentives for the Import of electric vehicles, for example through reducing or even completely waiving import duties for electric vehicles.

4.) **Normative activities** – as the principal environment agency of the United Nations, UNEP is supporting members states with developing roadmaps for the introduction of electric mobility. UN Member States are engaged in the development and implementation of global resolutions on issues such as climate change, clean energy and air quality, and the introduction of electric mobility plays a major role in this. UNEP will promote, for example at intergovernmental fora, the role and importance of a shift to electric mobility in achieving global and regional targets set by UN Member States.

In addition to the work performed under the UNEP E-Mobility Programme, UNEP is promoting the introduction of Cleaner Fuels and Vehicles under the Partnership for Clean Fuels and Vehicles (PCFV), which has recently been expanded to work on the regulation of trade of used vehicles. Synergies exist between the work performed under the PCFV and the UNEP E-Mobility Programme, in particular with regards to policy development to incentivize Cleaner

Fuels and Vehicles, including electric vehicles. UNEP is also active to promote non-motorized transport (NMT) in cities in low and middle-income countries around the world, and substantial progress has been made in mainstreaming aspects of NMT into policy making and urban development plans. The connecting element with electric mobility is the role of public transportation in both programmes – its interaction with NMT and electrification of public transport fleets. Most recently, UNEP also entered the field of digitalization of transport. UNEP has been selected to develop and lead a project on "Accelerating Access to Low Carbon Urban Mobility Solutions through Digitalization", funded with a grant of EUR 20 million by the German Climate Initiative under the Federal Ministry of the Environment, Nature Conservation and Nuclear Safety (BMU). This is a joint programme of ten organisations engaged in six countries in Latin America (Argentina, Brazil, Colombia, Ecuador, Mexico, Peru). Focusing on fleet applications and public transportation, there will be cross-cutting work with the e-mobility programme, especially in countries which are part of both programmes, such as Ecuador and Peru.

· The International Energy Agency (IEA) promotes the uptake of electric mobility at various levels and through various initiatives and campaigns:

1.) IEA Electric Vehicles Initiative (EVI). The EVI is a government-to-government policy forum established in 2009 under the Clean Energy Ministerial. The IEA serves as the EVI coordinator. EVI is dedicated to accelerating the deployment of electric vehicles worldwide. EVI facilitates exchanges between policy makers working in governments that are committed to supporting EV development and a variety of partners, bringing them together twice a year. EVI serves as a platform for knowledge-sharing on policies and programmes. Governments currently active in the EVI include Canada, Chile, China, Finland, France, Germany, India, Japan, Mexico, Netherlands, New Zealand, Norway, Sweden and United Kingdom.

2.) The EV30@30 Campaign of the EVI promotes a target at least 30 percent new electric vehicle sales by 2030. It involves countries and private sector stakeholders.

3.) The Drive to Zero Campaign of the EVI. The Campaign is expected to be launched at the margins of the Clean Energy Ministerial 11 later this year. The Campaign will support governments in their work to advance electrification of commercial vehicle fleets.

4.) Global EV Pilot City Programme. The Global EV Pilot City programme was launched by the EVI in May 2018 as part of the EV30@30 Campaign. The programme aims to build a network of more than 100 cities in five years, and work together with these cities to further the uptake of electric mobility. To date, the programme has more than 30 city members, with a broad geographical representation.

5.) IEA electric mobility and system integration: The IEA has successfully established itself as a global reference for analysis of the global electric mobility market and system integration of renewables. The electric mobility workstream is strongly linked to the EVI, and responsible for several high-profile analytical publications, including the Global EV Outlook series, guiding policymakers and industry worldwide.

6.) IEA Technology Collaboration Programmes on Hybrid and Electric Vehicle Technologies and Programmes (HEV). Technology Collaboration Programmes are special activities under the IEA and consist of groups comprised of international experts from government and industry that lead programmes and projects on a wide range of energy technologies and related issues. The IEA has been in close dialogue with HEV TCP for the preparation of the project document to discuss how the TCP can contribute to the knowledge product and tool development.

· Centro de Movilidad Sostenible / Centro Mario Molina Chile The Latin America and the Caribbean (LAC) Platform is led by the Centro de Movilidad Sostenible (CMS), a non-profit created by Centro Mario Molina Chile (CMMCH) to further research and develop new forms of sustainable transportation that seek to mitigate climate change effect and air pollution in Latin America and the Caribbean in an effort to move the region towards "carbon neutrality" of

transportation. CMS is led and composed by Centro Mario Molina's current staff and is based in Santiago, Chile. In this regard, CMS brings all of CMMCH prior experience to the fore in this renewed vision to promote and solidify the movement towards low emission transportation in the region. Centro Mario Molina Chile has been working on electric mobility since 2012, particularly focused on the deployment of electric buses in Santiago de Chile in conjunction with utility companies (ENEL), public authorities (Ministry of Transport) and a technical partnership with the Technical Research Centre of Finland (VTT). At the same time, this experience has been expanded across the Latin American and Caribbean region in collaboration with UNEP under different collaboration frameworks including the Global Fuel Economy Initiative (GFEI) and the Climate and Clean Air Coalition (CCAC). More recently, CMMCH together with UNEP has set up the MOVE LATAM platform for knowledge dissemination, the P4G financed ZEBRA initiative together with ICCT and C40 to expand zero emission bus networks in key cities in the region and several local initiatives with the Inter-American Development Bank on battery electric buses in Chile and Colombia. In Costa Rica, partnering with GIZ and the local CRUSA Foundation, UNEP and CMMCH are helping the country in the planning and deployment of the first fleets of battery electric buses. Finally, CMMCH is an active partner of the EC SOLUTIONSplus initiative where it is co-leading demonstration activities of electric vehicle initiatives in Ecuador and Uruguay. During 2020, CMMCH created the Centro de Movilidad Sostenible (CMS) to handle all transport and mobility related initiatives as a non-profit entity. CMS is integrated by CMMCH staff and will take over execution of all of CMMCHs projects in this area beginning in December of 2020.

· UNDP is promoting the shift towards electric mobility and is involved in several GEF-supported electric vehicles projects. These include: the recently approved GEF 6 Bhutan EV project which aims to facilitate low-carbon transition in Bhutan's urban transport sector by promoting wider uptake of low emission vehicles and electric; a GEF 5 project in Malaysia, "Green Technology Application for the Development of the Low Carbon Cities"; a project in the Philippines, "Promotion of Low Carbon Urban Transport Systems in the Philippines" that aims to create an enabling environment for the commercialization of low carbon urban transport systems (incl. electric and hybrid vehicles), and the MOVES project supporting a sustainable and efficient urban mobility system in Uruguay. UNDP is also working on the introduction of electric vehicles as part of their own fleet and has successfully implemented demonstration projects such as the e-mobility project in Namibia.

· UNIDO As a specialized agency of the United Nations mandated to promote and accelerate inclusive and sustainable industrial development (ISID), UNIDO is already supporting countries in their transition towards electrification of transport systems. Through its technical cooperation services, the Organization is assisting governments in building up their electric fleets, developing appropriate charging structures, and providing skills and training to support improvements areas such as in battery technology. Deploying its policy advisory and knowledge transfer services, UNIDO contributes to establishing sustainable transport strategies, designing market guidelines and raising awareness in order to drive the move to carbon-free transport necessary to meet the sustainable development goals. UNIDO e-mobility programme, which is currently being implemented in China, Malaysia and South Africa with the support of the Global Environment Facility (GEF) integrates the power sector with transport, and incorporates electric mobility into the urban planning concept of transit-oriented development.

Initiatives and international partner projects working on low-carbon, sustainable transport including electric mobility include:

· Global Fuel Economy Initiative (GFEI): six leading agencies are supporting a Global Programme to improve the fuel efficiency of the global vehicle fleet, these are: the FIA Foundation, the United Nations Environment Programme, the International Energy Agency, the International Council for Clean Transportation, the International Transport Forum, and the University of California Davis. The objective of the GFEI is to double the efficiency of the global fleet from 2005 to 2050 (going from about 8l/100km to 4l/100km). The GFEI implements activities at all levels – at a global level it keeps stock of the efficiency of the global fleet. At national level it is supporting more than 50 country projects to develop baselines on the efficiency of their fleets and to develop action plans to improve the efficiency of their fleets. Most of these action plans include components to promote electric vehicles, for example through fiscal incentives. As such the GFEI is currently one of the leading global programs to support the introduction of electric vehicles. GEF is one of a group of supporters of the GFEI.

· **MOVE Electric Mobility in Latin America:** In 2016, UNEP and Mario Molina Centre Chile launched a regional platform to accelerate deployment of electric mobility in Latin America. Since then, MOVE has provided (1) capacity building to public technical officers from almost 20 countries in the region through online webinars and face-to-face meetings, (2) knowledge creation on the uptake of electric mobility in Latin America and the Caribbean, (3) technical assistance, through the elaboration of National Electric Mobility Strategies in Colombia, Argentina and Panama and (4) resource mobilization to enable countries to transition to electric mobility – with a special focus on electric road mass transit.

· **SOLUTIONS project:** The SOLUTIONS project is the predecessor of SOLUTIONSplus. SOLUTIONS stands for Sharing Opportunities for Low carbon Urban transportation and has been financed under the 7th Framework Programme of the European Union (FP 7, theme SST.2013.3-2 (Implementing innovative and green urban transport solutions in Europe and beyond). The objective of SOLUTIONS is to foster the uptake of innovative sustainable mobility solutions in cities across the world. The SOLUTIONS projects is based on a wide network of experts from academia, private sector, government and international organizations.

· **Urban Electric Mobility Initiative (UEMI)**: The UEMI is a joint initiative of the SOLUTIONS partners and UN Habitat launched at UN Climate Summit in September 2014 and building on international activities in the areas of sustainable urban development, energy, mobility, and focusing on the equal access provision of urban basic services in Latin America, Asia and Africa. The UEMI aims to help phase out conventionally fuelled vehicles and increase the share of electric vehicles (2-,3- and 4-wheelers) in the total volume of individual motorized transport in cities to at least 30% by 2030.

· **GIZ TUMI Volt initiative** Transforming Urban Mobility (TUMI) is a global implementation initiative on sustainable mobility formed through the union of 11 partners. TUMI supports transport projects all around the world and enables policy makers to transform urban mobility. TUMI is based on three pillars: innovation, knowledge, investment and 1.) supports innovative pilot projects around the world; 2.) shares knowledge with planners about modern mobility concepts, in workshops and conferences; and 3.) invests in the construction and modernisation of sustainable urban infrastructure. TUMI partners include the German Federal Ministry of Cooperation and Development, the C40 Cities initiative, the World Resource Institute (WRI), the Institute for Transportation and Development Policy (ITDP), the ICLEI – Local Governments for Sustainability, the Kreditanstalt fuer Wiederaufbau (KFW), the Andean Development Bank (Corporacion Andina de Fomento, CAF), the ADB, the Gesellschaft fuer Internationale Zusammenarbeit (GIZ), UN Habitat and the Partnership for Sustainable Low Carbon Transport (SLOCAT).

· **ZEBRA**: The Zero Emission Bus Rapid-deployment Accelerator (ZEBRA) is targeting the introduction of electric bus in Mexico City (Mexico), Sao Paolo (Brazil) and Medellin (Colombia) with the target to "secure a public commitment from regional finance institutions to invest 1 billion USD in zero emission electric drive technology in Latin America by 2021". ZEBRA is led by C40 Cities and the International Council on Clean Transportation (ICCT).

Baseline projects and activities focusing on the introduction of electric mobility funded by multilateral development banks and green funds include:

· **Asian Development Bank (ADB):** has supported several relevant projects in its Transport Sector portfolio. Two are of note: i) Low-Carbon Buses in the People's Republic of China (co-financed by GEF), and ii) E-Mobility Options for Developing-Member Countries of ADB. ADB has been studying city and country specific electric vehicle studies and producing scoping reports electric vehicle policy for 23 cities. ADB has been implementing and preparing electric vehicle loan projects for several developing member countries with cross-sectoral approach between transport, energy and urban in which holistic solutions are sought. ADB stretched its electric vehicle study and loan scope to e-boats and e-delivery vehicles with the pilot projects in Thailand, Viet Nam and other neighbouring countries. ADB is currently processing electric bus loan project in the Kyrgyz Republic, e-Ferry project and public charging station projects in Thailand, and consulting with several developing member countries for developing electric vehicle projects. ADB has also planned regional and country specific electric vehicle trainings for 2020 onwards.

· European Bank for Reconstruction and Development (EBRD), is active in promoting e-mobility investment projects in its countries of operation as it is a key priority areas for the Bank. Current activities include implementing projects with public transport operators for electric buses and associated charging infrastructure as this is a sector where the costs of electrification are increasingly competitive with conventional combustion engines. In addition, the EBRD is exploring electric captive fleet projects with commercial transport operators due the economies of scale of electrifying such operations. The Bank has extensive experience of investing in the energy sector, so is also active in financing distribution grid re-enforcement and charging infrastructure projects. The EBRD has been investing in the e-mobility supply chain with a number of significant investments in projects to build a large scale lithium-ion battery manufacturing facilities for automotive applications. Furthermore, it is actively exploring waste management investment to support lithium-ion battery recycling.

· World Bank, is increasingly active in the area of electric mobility and is supporting the introduction of electric mobility on various levels – through the World Bank's Energy Sector Management Assistance Program (ESMAP), and through in-country work. With the support of the ESMAP, the World Bank recently published the Engagement Paper "Electric Mobility and Development". The World Bank is funding various electric bus projects in middle income counties around the world, for example the Abidjan Urban Mobility Project in Cote d'Ivoire, the joint UITP World Bank E-Mobility Project in India, the World Bank Electric Bus Assistance Project in the Greater Cairo Area in Egypt and many more. The Country Child Project in Cote d'Ivoire will partner with the AUMP project and further synergies with other projects such as the Dakar Bus Rapid Transport Project in Senegal are to be explored.

· The African Development Bank (AfDB) is one of the biggest financiers of infrastructure projects in Africa. Harmful emissions from transportation have been identified a major driver of urban air pollution. AfDB is now "Paving the way for climate resilient infrastructure" and the support of "Building Sustainable Infrastructure and Low Carbon Mobility in Africa".

· Green Climate Fund (GCF) Readiness Programme on E-Mobility in Latin America: The UNEP Regional Office in Panama currently implements a GCF Readiness Programme on E-Mobility with the title "Advancing a regional approach to e-mobility in Latin America" including Argentina, Costa Rica, Cuba, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Paraguay and Uruguay. The project has a budget of USD 2,800,000 and aims at building capacity, development of e-mobility policies and business models, identification of strategies to finance the shift to electric mobility in the region and will be implemented combining a national with a regional approach, whereby close collaboration is sought for with the GEF Global E-Mobility Programme.

Baseline activities focusing the support of low-carbon, clean transportation undertaken by sub-regional unions and associations include:

· The Economic Community of West African States (ECOWAS) comprises 15 member states namely, Benin, Burkina Faso, Cape Verde, Cote d' Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Niger, Nigeria, Sierra Leone, Senegal and Togo. The ECOWAS Commission coordinates regional activities and seeks to promote regional integration of among member states. UNEP has been collaborating with individual member states and the ECOWAS Commission to promote cleaner, more efficient vehicle policies. A regionally harmonized fuel economy road map that lays the foundation for the adoption of electric vehicles in the sub-region was approved by Minsters of Energy and the Environment in February 2020. The roadmap supported the development of a regulatory framework and pilot projects to facilitate import of electric vehicles.

· The Association of Southeast Asian Nations (ASEAN), though its ASEAN Centre for Energy (ACE) is exploring the opportunities and challenges of the introduction of e-mobility within its member states. A particular focus lies on the manufacturing of EVs and EV supply equipment and many ASEAN member countries are actively exploring the opportunities to build electric vehicles at scale. The work on e-mobility has been preceded by efforts to introduce ASEAN wide harmonized policies on vehicle fuel efficiency, recently published as the "ASEAN Fuel Economy Roadmap for Transport Sector 2018 – 2025: with Focus on Light-Duty Vehicles".

The efforts undertaken by research and academia to foster the uptake of e-mobility are uncountable. A few strategic partner organizations and programmes implemented by universities include:

· China Society of Automotive Engineers (SAE China) SAE China promotes scientific and technical progress in the automotive industry and pushes forward technical exchange between the Chinese and international automotive industries. SAE China has access to a vast network of specialist in the automotive industry and is a member of the EVI. Under the framework of the EVI, an International EV Demo Zone (including a Test Driving Centre, an Operation Service Centre, and a Data Collection Centre) has been established in Jiading, Shanghai. China holds the International EV Pilot Cities Forum every two years and has successfully held the 2011, 2013, 2015 International EV Pilot Cities and Industrial Development Forums.

· The School of Environment (SOE) of Tsinghua University (THU) is one of the most renowned Chinese institutions dedicated to environmental research. SOE also hosts the Basel and Stockholm Convention Regional Centre for the Asia and Pacific Region in China (BCRC-SCRC China). It is one of the 14 regional centres network for capacity building and technology transfer. The Centre has expertise in implementing various projects on controlling release of pollutants into the environment including the management of electronic waste and batteries. The Centre was nominated to serve as a Stockholm Convention centre in November 2007 and was endorsed in 2009 as a regional centre for capacity building and technology transfer under the Stockholm Convention.

· The University of California Sustainable Transportation Energy Pathways Programme (STEPS) has been a long-term partner in the promotion of cleaner fuels and vehicles within the GFEI. Through its work on the Three revolutions in urban transportation - vehicle electrification, automation, and shared mobility, the Institute of Transportation Studies has become a leading actor in the field of low and zero emission mobility.

The Global Programme, through the Global Child Project, will also cooperate with other GEF funded programmes and projects which include electric mobility:

· Sustainable Cities Impact Programme (SCIP): The programme led by UNEP will support the implementation of 9 Sustainable Cities Child Projects (Argentina, Brazil, Costa Rica, Chine, India, Indonesia, Morocco, Rwanda, Sierra Leone). Costa Rica, India, Indonesia and Sierra Leone are also part of the GEF 7 Global Electric Mobility Programme. UNEP as the lead Implementing Agency for both programmes will ensure that these Child Projects are implemented in coordination and that aspects of sustainable electric mobility will be integrated in efforts to enhance urban planning and to invest in low-carbon, resilient and integrated urban infrastructure. Part of the Child Projects include components on electric mobility. The Global E-Mobility Programme, through the Global Child Project will seek for close collaboration with these Sustainable City Child Projects, for example through participation of the respective programme members in events organized through the Regional Support and Investment Platforms, which are part of the GEF E-Mobility Programme.

· Kathmandu Sustainable Urban Transport (SUT) Project. The project objective is: Bus fleet improvement through fleet renewal, including assessment and promotion of low-carbon vehicle technologies employing electricity and alternative fuels;

· ASTUD: Mongolia Urban Transport Development Investment Program: The baseline Bus Rapid Transit (BRT) project will restore, update and expand trolley-bus infrastructure (electric wires, feeder cables, and substations); and integrate the existing trolley-bus system into the BRT;

· Green Cities: Integrated Sustainable Transport in the City of Batumi and the Achara Region: This project aims to increase investment in cable car systems in the Adjara region;

· Vientiane Sustainable Urban Transport Project. The project will increase investment in low carbon pedicab technology with the aim of replacing existing tuk-tuks in the capital of Laos;

· Integrated Adoption of New Energy Vehicles in China. The project will facilitate and scale up the integrated development of New Energy Vehicles (NEVs) and Renewable Energy (RE) in China;

· **Development of Transport Sector NAMA in Peru**. The project implemented by UNDP has led to concrete electric mobility targets in Peru.

It is the objective of the Global Child Project under the Global Programme to bundle these existing initiatives and to closely join it with new programmes such as the European Commission SOLUTIONSplus project, to build a global framework for the promotion of electric mobility in low and middle-income countries across the world. The Global Child Project will provide the physical and virtual places where the experiences of these initiatives can be gathered and analyzed to support countries with the market introduction and scale-up of electric mobility around the world. The Global Child Project will bring together experienced and new stakeholders to leverage investments in electric mobility.

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

The Global E-Mobility Programme's overall objective is to contribute to reaching the levels of electric mobility necessary to significantly reduce emissions in the transport sector in low- and middle-income countries, while minimizing adverse effects for the sustainability of transport and energy systems. With the support of the Global Child Project, countries implementing national e-mobility projects under the programme will have developed capacities and strategies to plan for the large-scale market introduction of e-mobility. Many of the participating countries will have established policies and regulatory frameworks which are submitted for adoption. Countries will have developed a positive e-mobility market environment based on viable business models and adequate finance mechanisms. Concrete ideas on how to integrate the charging of significant shares of electric vehicles into national power grids and how to effectively reduce the carbon footprint through reliance on substantial shares of renewable power will be developed. The issue of battery re-use, recycling and safe disposal will have been addressed and schemes to collect used batteries and to ensure adequate treatment either through second life applications or through recycling will be initiated.
This will be achieved through the support of the Global Child Project assisting the Country Child Projects to:

· **Raising awareness** of the multiple benefits of electric mobility among all relevant stakeholders in the Country Child Projects. For example, with respect to greenhouse gas and air pollutant emissions, energy use and costs;

· **De-risking investment** in electric vehicles and electric vehicle supply equipment. Actions to achieve this will include providing guidance on the development of studies and analyses, and developing and implementing demonstration projects that strengthen developing country experience with electric mobility and facilitate accelerated learning;

· **Providing policy packages** to promote the development of adequate and context-specific policies, such as regulations, standards, fiscal measures and other local and national incentives; that are flexible and can be adapted to the needs of different countries, depending on the desired pathway to electric mobility, local context, and different priorities and needs;

· **Ensuring that the integration of renewable energy sources** and the de-carbonization of the power grid is part of the transition to electric mobility. This ensures that electric mobility will deliver significant net savings of GHG emissions compared to projected baselines;

· **Promoting sustainable use and re-use of batteries**, battery materials recycling and environmental safe disposal;

· **Mainstreaming gender equality** into (electric) mobility and work with policy makers in designing gender-responsive policies and solutions;

· **Promoting private sector engagement and facilitate the creation of regional markets** for the introduction of electric mobility through inviting and supporting suppliers of electric mobility (and affiliated companies such as those offering recharge facilities) to supply electric mobility solutions to non-OECD countries and by bringing them together with financiers and countries and cities keen to introduce electric mobility; and

· **Raising confidence of financiers** such as multilateral development banks, green funds such as the Green Climate Fund (GCF) and private investors to develop adequate financial instruments for the introduction and up-scaling of e-mobility.

Country-overarching support will be organized through the Global Child Project's activities on both global and regional level (Figure 2). Activities at the global level include the establishment of **four Global Thematic Working Groups**, which will be responsible for developing knowledge materials, compiling best practices, providing e-mobility policy proposals, developing analytical tools, designing generic business models and finance schemes and setting up training programmes for use in the Country Child Projects. By building on the vast network of e-mobility research institutions and private sector stakeholders of the IEA and the EVI, and through UNEPs close cooperation with the EC SOLUTIONSplus consortium members, the Global Programme is expected to be in the position to transfer know-how from leading countries in Asia, Europe and North America to low and middle-income countries that are part of the Global Electric Mobility Programme. A detailed description of the Global Thematic Working Groups is provided below under the subsection on Component 1 of the Global Child Project.

At the regional level, a total of **four Regional Support and Investment Platforms** will be set up, for 1.) Africa, 2.) Asia and the Pacific, 3.) Latin America & the Caribbean and 4.) Central and Eastern Europe, West Asia & the Middle East. The Support and Investment Platforms will be the link between the Global Working Groups and the Country Child Projects and will cooperate closely with financial institutions and electric vehicle and EV supply equipment manufacturers by involving them directly and from the beginning within the Country Child Projects. A detailed description of the Regional Support and Investment Platforms is provided below under the subsection on Component 2 of the Global Child Project.

The Global Thematic Working Groups together with the Regional Support and Investment Platforms will support the Country Child Projects on all aspects of project implementation to lay the ground for the introduction and scale-up of electric mobility in the GEF Global Programme Countries. The Country Child Projects implemented under the umbrella of the Global Electric Mobility Programme follow a similar logical framework structure being developed around the following elements:

· **Institutionalization of low-carbon electric mobility**, e.g. through establishment of coordinating bodies, building capacity within government and developing a national e-mobility strategies;

· **Short term barrier removal through preparation and implementation of demonstration projects**, which target 1.) the introduction of electric vehicles in public transportation fleets such as taxi fleets using 2&3 wheelers and light duty vehicles including passenger cars and minibuses, as well as urban and peri-urban bus fleets using mid-sized and full-sized urban buses; and 2.) the development and scale-up of public electric vehicle charging networks;

· **Preparing for scale-up and replication of low-carbon electric mobility** by 1.) developing policy environments that will allow and promote the uptake of electric mobility. For example, to support countries with the development of regulatory, fiscal and local policy frameworks to promote the introduction of electric vehicles by consumers and companies; and by 2.) supporting the development of business models and finance schemes by highlighting the key success factors and through identification of concepts for follow-up projects with involvement of financing institutions such as development banks, green funds or other venture capital;

· **Long-term environmental sustainability of low-carbon electric mobility** by 1.) developing schemes and policy proposals for the collection, re-use, recycling and safe disposal of used EV batteries; and 2.) developing strategies and studies for the integration of renewable power generation for charging of electric vehicles.

While the Global Thematic Working Groups map the modal challenges as well as the need for EV supply infrastructure, the Regional Support and Investment Platforms accommodate the different challenges and opportunities of e-mobility in the four target world regions.

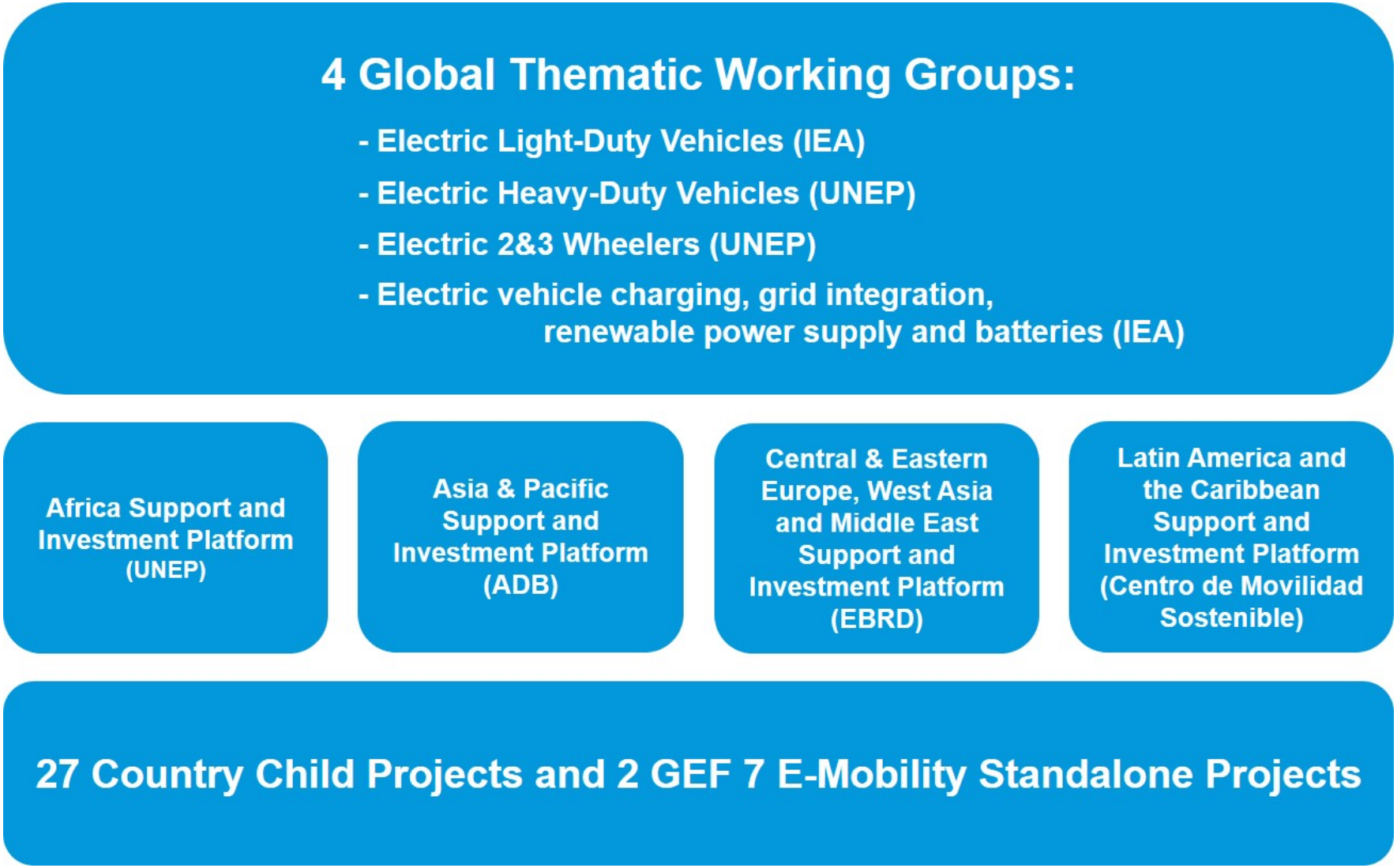


Figure 2 Structure of the Global Programme

Deployment barriers covering technological, operational, governance, financial and behavioural aspects as outlined under the section on root causes and barriers will be addressed as described under the component description. The programmatic approach will assure reduced overall costs intervention since it will avoid duplication and maximise economies-of-scale. This will also allow for more comprehensive learning experiences and generation of good practices, thus providing the relevant information to build capacity and raise awareness for electric mobility in the programme countries.

Country Child Projects supported by the Global Child Project

The programme was submitted initially with 17 Child Project Concepts including Antigua & Barbuda, Armenia, Burundi, Chile, Costa Rica, India, Ivory Coast, Jamaica, Madagascar, Maldives, Peru, Seychelles, Sierra Leone, St. Lucia, Togo, Ukraine, and Uzbekistan, which had all been approved by the GEF Council in June 2019.

In March 2020, a second round of Country Child Project Concept notes has been submitted, which has been approved by the GEF Council in June 2020. The second-round submission included: Albania, Bangladesh, Ecuador, Grenada, Indonesia, Jordan, South Africa, Sri Lanka, the Philippines and Tunisia.

Country Child Projects under the Global Programme have been submitted for implementation by a number of different GEF Agencies including: UNEP, UNDP, UNIDO, the ADB, the EBRD and the DBSA. In addition, two electric mobility standalone projects have been approved by the GEF Secretariat which are Belarus (UNDP) and Mauritius (UNDP). The two standalone projects are envisaged to allocate budget to the participation of their staff in the Global Programme events, and to be closely linked to the Global Programme. An overview about the Global Programme Child Country Projects is provided in Table 4.

	No	Region	Country	GEF IA	GEF Project Cost
1st round of submission	1	Africa	Burundi	UNEP	775,688
	2		Ivory Coast	UNEP	408,716
	3		Seychelles	UNEP	423,716
	4		Sierra Leone	UNEP	423,716
	5		Togo	UNEP	423,716
	6		Madagascar	UNEP	1,142,661
	7	Latin American and the Caribbean	Antigua & Barbuda	UNEP	3,245,000
	8		Chile	UNEP	1,784,862
	9		Costa Rica	UNEP	876,712
	10		Jamaica	UNDP	1,784,862
	11		Peru	UNDP	1,784,862
	12		Saint Lucia	UNEP	785,688
	13	Central and Eastern Europe	Armenia	UNEP	592,202
	14		Ukraine	UNEP / EBRD	1,601,376
	15	Asia Pacific	Uzbekistan	UNDP	3,569,725
	16		India	UNEP / ADB	5,366,976
	17		Maldives	UNEP	1,826,339
	Total 1st round				**26,816,817**
2nd round of submission	18	Africa	Tunisia	UNIDO	1,784,862
	19		South Africa	DBSA	4,713,224
	20	Latin American and the	Ecuador	UNEP	1,280,275
	21		Grenada	UNEP	1,050,917
	22	Central and Eastern Europe	Albania	UNIDO	766,208
	23		Jordan	UNIDO	1,142,661
	24	Asia Pacific	Philippines	UNIDO	4,280,000
	25		Sri Lanka	UNEP	1,096,789
	26		Indonesia	UNDP	1,816,500
	27		Bangladesh	UNDP	1,788,991
	Total 2nd round				19,720,427

Table 4 GEF global programme countries, IA and project cost

GEF Sustainable Cities Impact Programme

The programme will closely link to the GEF Sustainable Cities Impact Programme in cases where country projects have included electric mobility in their project design and / or both GEF 7 Global Electric Mobility Programme and SCIP Country Child Projects are implemented at the same time (Costa Rica, India, Indonesia, Sierra Leone). The activities of the Global Child Project are designed in a way that a) Non-GEF funded national electric mobility projects can participate in Regional Support and Investment Platforms events on their own expense; b) Knowledge products developed by the Global Working Groups and disseminated through the project website can be accessed and used for free by non-GEF funded e-mobility projects; and c) more GEF funded e-mobility country projects can be added to and supported through the Global Programme in case adequate additional funding will be provided.

In cases where both GEF 7 Global Electric Mobility Programme and SCIP Country Child Projects are implemented at the same time, outputs and outcomes achieved under the Global Electric Mobility Programme can support the outcomes achieved under the SCIP. For example, outputs and outcomes as part of the effort to institutionalize electric mobility can contribute to Component 1 of the SCIP “Evidence-based sustainable and integrated urban planning” by improving inter-ministerial planning processes and better integration of the transport with the energy sector. Equally, replication and scale-projects building on the demonstration projects and efforts to build coherent policy frameworks and positive business environments can contribute to SCIPS’s Component 2 “Low carbon, resilient and integrated infrastructure investments”. Equally, infrastructure investments related to electric mobility can contribute to the GEF 7 Electric Mobility Programme target to leverage additional funds for e-mobility projects. Business models developed and financial mechanisms established under the Global Electric Mobility Programme can support Outcome 3 “Innovative financing solutions and business models are tested for scaling up” under Component 3 “Innovative financing”, in cases where countries participate in both GEF programme at the same time. Finally, capacity built on issues of sustainable urban transportation and electric mobility will contribute to SCIUP’s Component 4 “Advocacy, Knowledge Exchange, Capacity Building, and Partnerships” and vice versa.

Parallel implementation and coordination with the European Commission SOLUTIONSplus Project

The GEF-7 Global Programme will be implemented in parallel with the European Commission SOLUTIONSplus Project, which aims at developing integrated urban electric mobility solutions in the context of the Paris Agreement, the sustainable development goals and the New Urban Agenda.

The EC SOLUTIONSplus project has a budget of 18 million Euros (~ USD 20,430,000) and will work in 9 demonstration cities: Quito (Ecuador), Montevideo (Uruguay), Dar Es Salaam (Tanzania), Kigali (Rwanda), Kathmandu (Nepal), Pasig City (Philippines), Hanoi (Vietnam), Hamburg (Germany) and Madrid (Spain). In addition, a number of replication projects are foreseen under the EC SOLUTIONSplus project.

Together, both projects target 38 countries and have a total project cost of USD 71,067,344. Country coverage of the combined GEF Global Programme – EC SOLUTIONSplus electric mobility projects shows a balanced distribution of projects across Africa, Asia and the Pacific and Latin America and the Caribbean (Figure 3 and Table 5). In addition, the particularly vulnerable group of Small Island Development States is well represented. As such, the combined GEF Global Programme – EC SOLUTIONSplus project has the potential to truly support to a transformational change in low and middle-income country transport systems.

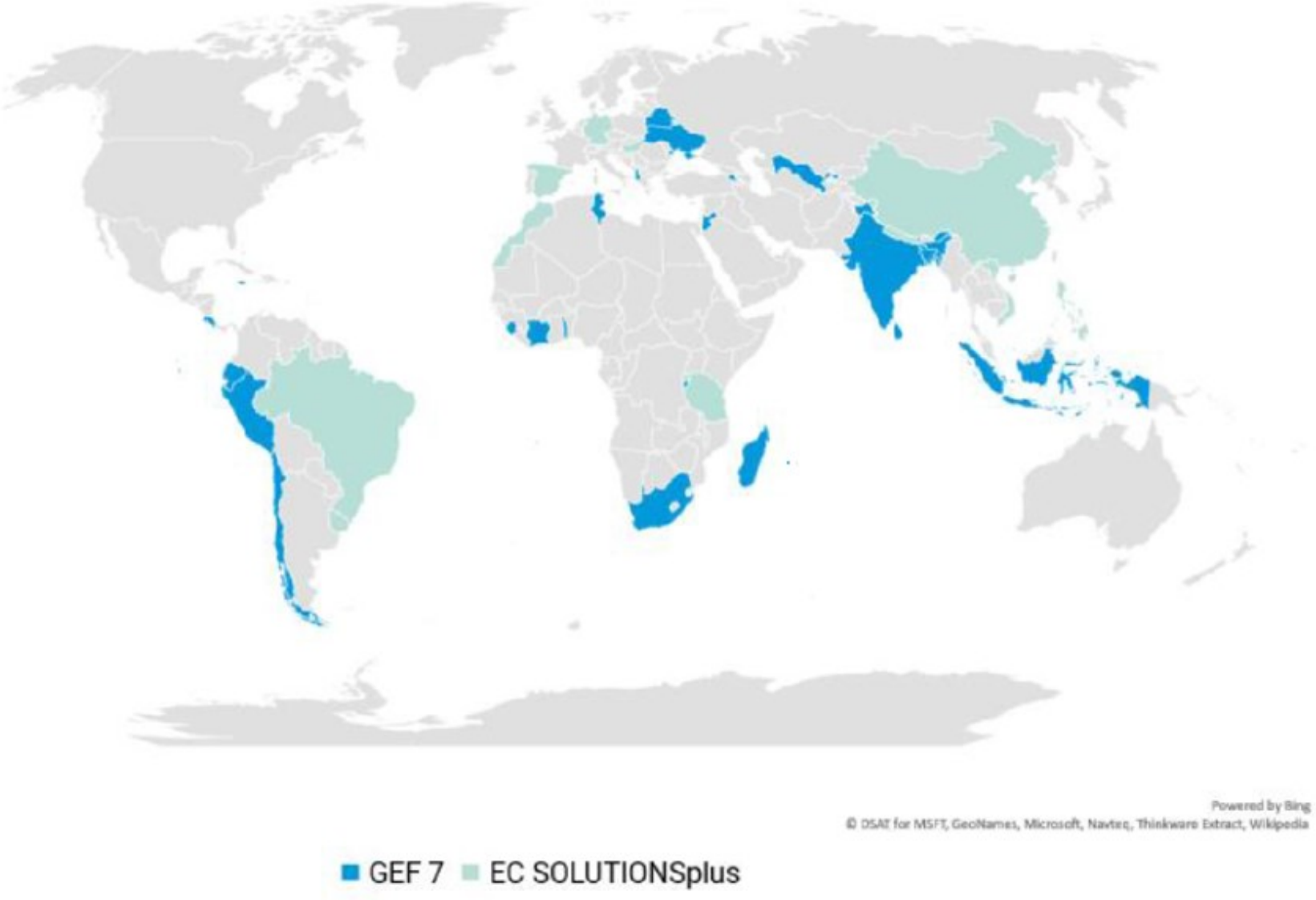


Figure 3 Country coverage of the GEF Global Programme Electric Mobility Programme and the EC Solutions Plus Programme.

Africa	Asia	Central & Eastern Europe, West Asia & Middle East	Latin America & the Caribbean
Madagascar	Maldives	Ukraine	Antigua & Barb.
Burundi	India	Armenia	Chile
Sierra Leone	Indonesia	Uzbekistan	Saint Lucia
Seychelles	Mauritius	Albania	Costa Rica
Togo	Sri Lanka	Jordan	Peru
Ivory Coast	Bangladesh	Belarus	Jamaica
Tunisia	Philippines	Germany	Grenada
South Africa	Nepal	Spain	Ecuador
Tanzania	Vietnam		Uruguay
Rwanda			
GEF 7		EC SOLUTIONSplus	

Table 5 Overview of all country and city projects: GEf global e-mobility programme, gef standalone and ec solutionsplus

An overview of the demonstration actions and support teams of the EC SOLUTIONSplus project is provided in Table 6 below.

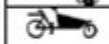
City	Modes	Vehicles	Operation	Integration	Demo and business model partners
Kathmandu		5 E-minibuses	Fast charging for E-Bus and E-minibus	Smart services (apps, smart card)	**Industry**: Valeo, IDIADA, Volvo **Implementation**: WI, UN-H, VTT, RC **Finance**: ADB
		30 new and 50 re-modelled e-3-wheelers	Li-ion battery swapping for E-3-wheeler	Fleet management	
		2 E-buses: convert two diesel bus to E-buses	Business model on retrofitting E-buses	Mobility as a service SOL+ MaaS App	
		20 E-scooter	2 docking-cum charging for E-scooter	Business model on energy integration (Dynniq)	
Hanoi		20 E-minibuses	10 docking-cum-charging & Smart battery swapping & Fast charging	Smart services (apps, smart card)	**Industry**: ABB, Valeo (Bosch) **Implementation**: CAA, UTT, UNEP **Finance**: ADB
		200 E-scooter: 200 at 10 stations	Business model on electric mini-buses	GPS positioning Eco-routing SOL+ MaaS App	
Pasig		50 E-cargo bikes	20 AC charging stations Battery swapping station	GPS and control centre Smart services (apps) SOL+ MaaS App	**Industry**: T-Systems, Valeo **Implementation**: CAA, FIER, ZLC **Finance**: ADB
		15 E-minibuses	Integrated ticketing, TSY charging system	Eco-drive monitoring tool ETSI ISO	
		20 E-scooter	Sharing system development	Last mile service, SOL+ MaaS app	
Quito		60 E-bikes for a sharing system	10 DC charging points for E-2-wheelers	Passenger and freight integration	**Industry**: Valeo, Volvo; **Implementation**: WI, SIMUS, CMM, **Finance**: CAF, KfW
		30 E-cargo bikes	10 DC charging points for E-cargo bike	SOL+ MaaS App	
		10 E-buses		Integration for with last-mile services	
		20 E-3-wheelers	10 DC charging points for E-3-wheelers		
Montevideo		10 E-taxis	Multi-standard 50 kw fast charging for E-taxi	Bus and taxi service integration	**Industry**: ABB, Volvo, IDIADA **Implementation**: CMM, SIMUS, **Finance**: CAF
		Business model for e-BRT systems	Business model for fast-charging e-BRT systems Charging standardisation	SOL+ MaaS App	
		30 E-buses	Fast charging for E-bus	Charging operations management	
Madrid		5 E-taxis		Open source software to monitor and control the power network	**Industry**: ABB, CRF; **Implementation**: UITP, Polis, IDIADA, ZLC
		10 E-bus	2 inverted pantographs for E-Bus	SOL+ MaaS App	
		E-car sharing		Business model for E-car sharing	
Hamburg		50 E-scooters	Charging solutions Business model for PT-owned e-scooter sharing systems	Last-mile services in the peri-urban area SOL+ MaaS App	**Industry**: T-Systems; **Implementation**: UITP, WI, ERTICO
Dar es Salaa		50 imported E-3-wheeler 10 prototypes (incl. business model)	Smart battery swapping Charging at hubs	Integration of e-3-wheelers at 5 BRT stations SOL+ MaaS App	**Industry**: Valeo, **Implementation**: DLR, ITDP, UNEP **Finance**: AfDB, AFD
Kigali		20 new E-moto taxis; 10 remodelled local-EU prototypes	E-moto taxi business model	Physical and fare integration of e-3-wheelers at 5 BRT stations SOL+ MaaS App	**Industry**: Valeo, **Implementation**: UN-H, ITDP, UNEP Finance: AfDB
		100 local-EU E-bikes	Charging stations, sharing model	Smart services, Eco-routing, SOL+ MaaS App	

Table 6 SOLUTIONSplus planned demonstration actions and support teams

VTT: Teknologian tutkimuskeskus VTT, POLIS is the network of European cities and regions; FIER Automotive was founded at the Erasmus University in Rotterdam to facilitate innovative and economic research in the automotive industry; UEMI Urban Electric Mobility Initiative – project lead EC SOLUTIONSplus, VIF – Kompetenzzentrum Das Virtuelle Fahrzeug Forschungsgesellschaft mbH; ICCT – International Council on Clean Transportation; UITP – Union Internationale des Transports Publics; DLR – Deutsches Zentrum fuer Luft und Raumfahrt e.V.

The actual implementation of e-mobility demonstration projects as well as the preparation for scale-up through the development of policies, business models and finance schemes are the core of the EC SOLUTIONSplus project. Knowledge materials, analytical tools, trainings, business models, etc., will be developed in work packages. An overview of the work packages and the respective lead agencies as well as the linkages with the components of the Global Child Project are shown in Table 7.

UNEP is part of the EC SOLUTIONSplus project consortium and is also the lead agency for work package 5, “Scale-up, finance, bankability, commercialisation and institutionalisation”. As part of this work package, UNEP is responsible for the implementation of seed funding for local e-mobility start-ups to procure equipment and support with the installation and operation of these assets.

Table 7 Worpackages and lead agencies of the SOlutionsplus project

Work package	Work package title	Lead agency	Matching GEF Global Child Project component(s)
WP 1	Toolbox and evaluation	VTT (Teknologian tutkimuskeskus VTT)	Component 1 - Global Thematic Working Groups and knowledge materials
WP 2	Capacity Building, city-to-city cooperation and professional development	POLIS (Promotion of Operation Links with Integrated Services – European City Network)	Component 1 - Global Thematic Working Groups and knowledge materials Component 2 - Support and Investment Platforms
WP 3	Technical and business partnerships, models and implementation plans	FIER (Fier Automotive B.V.)	Component 1 - Global Thematic Working Groups and knowledge materials Component 2 - Support and Investment Platforms
WP 4	Comparative demonstration actions	UITP (Union Internationale des Transports Publics)	Component 2 - Support and Investment Platforms
WP 5	Scale-up, finance, bankability, commercialisation and institutionalisation	UNEP	Component 2 - Support and Investment Platforms
WP 6	Exploitation and Dissemination	UEMI (Urban Electric Mobility Initiative)	Component 3 - Tracking progress, EV market monitoring and results dissemination
WP 7	Management		PMC
WP 8	Ethics requirements		PMC

VTT: Teknologian tutkimuskeskus VTT, POLIS is the network of European cities and regions; FIER Automotive was founded at the Erasmus University in Rotterdam to facilitate innovative and economic research in the automotive industry; UEMI Urban Electric Mobility Initiative – project lead EC SOLUTIONSplus

Where appropriate and feasible, support materials in this Programme will be developed on a task share basis under the coordination of UNEP, IEA and EC SOLUTIONSplus to avoid duplication. To the extent possible, knowledge products will be shared using a common and co-branded virtual toolbox, which will be linked to the projects' websites.

The following outputs of the Global Child Project of the GEF Global Electric Mobility Programme will be implemented in close collaboration with EC SOLUTIONSplus project on a task sharing basis:

- Output 1.2 A toolbox for 4-wheeled electric LDVs is developed and training materials for use in the Support and Investment Platforms are prepared.
- Output 1.4 A toolbox for 2&3-wheeled electric LDVs is developed and training materials for use in the Support and Investment Platforms are prepared.

· Output 1.6 A toolbox for electric HDVs is developed and training materials for use in the Support and Investment Platforms are prepared.

· Output 1.8 A toolbox for electric vehicle charging, grid integration, renewable power supply and battery re-use, recycling and safe disposal is developed and training materials for use in the Support and Investment Platforms are prepared.

· Output 2.2 Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the Africa Support and Investment Platform

· Output 2.3 Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in Africa is supported

· Output 2.5 Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the Asia and the Pacific Support and Investment Platform

· Output 2.6 Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in Asia and the Pacific is supported

· Output 2.8 Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the Latin America and the Caribbean Support and Investment Platform.

· Output 2.9 Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in Latin America and the Caribbean is supported

· Output 2.11 Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the Central and Eastern Europe, West Asia & Middle East Support and Investment Platform.

· Output 2.12 Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in Central and Eastern Europe, West Asia & Middle East is supported.

· Output 3.3 A knowledge management system and a website are established to disseminate materials and results to programme and non-programme countries.

More details on the nature of the task-sharing is provided below, within the description of the components, outcomes, outputs and deliverables.

In addition to the attempt to maximize the impact of project resources through task sharing, budget sharing elements are built into elements of the Global Child Project and the Country Child Projects under the GEF Global E-Mobility Programme. On the level of the Global Child Project, a joint e-mobility on-line toolbox will be developed to collect, store and disseminate knowledge products and Country Child Project outputs as appropriate.

On the level of the Child Country Projects it has been agreed to use part of the available seed-funding for implementation within GEF E-Mobility Child Country Projects and in particular within those projects with limited GEF funding. The GEF E-Mobility Child Country Projects, which will receive part of the EC SOLUTIONSplus replication funds are: Armenia, Burundi, Seychelles, Sierra Leone and Togo. The private sector partners for the seed-funding will be selected following a public call for proposals.

To facilitate the procurement process and to maximize the limited resources, procurement will focus on EV charging equipment such as charging stations, batteries, inverters and solar panels. So far, the following procurement agencies have been identified: 1.) United Nations Office for Project Services (UNOPS); 2.) the Office of Information Management & Technology of the United Nations Development Programme.

The following section will provide a detailed description of outcomes, outputs and deliverables of the various components.

Component 1: Global Thematic Working Groups and knowledge materials

Outcome 1*: The four Global Thematic Working Groups generate knowledge products to support policy and investment decisions by governments and private sector stakeholders to promote the sustainable acceleration of e-mobility in country projects.*

The IEA and UNEP will **establish four Thematic Working Groups to facilitate exchanges on technical topics between industrialized, developing and emerging countries and to serve as the major knowledge management facility for the GEF Programme and beyond**. The overall objective of the Global Thematic Working Groups is to develop knowledge products, tools and trainings that will be disseminated through the Regional Support and Investment Platforms for use by decision-makers in governments and in private sector to prepare for the introduction and scale-up of electric mobility. The work is led by the IEA and UNEP and will be carried out in close collaboration with the leads of the Support and Investment Platforms, as well as the e-mobility Country Child Projects funded by the GEF and the e-mobility city projects funded by the European Commission under the EC SOLUTIONSplus project. All knowledge[1] products developed will be made publicly and freely accessible through a joint GEF 7 / EC SOLUTIONSplus e-mobility on-line toolbox (or in some exceptional cases through the partners dedicated GEF 7 Global Electric Mobility Programme webpages).

[1] All knowledge products including analytical reports, best practice policy briefs, e-mobility market status updates, technology overviews, generic business models & financing schemes, interactive tools (e.g. for total cost of ownership analysis), excel based models and training materials such as presentations, recorded webinars and other on-line learning materials qualify as “tools”.

The four Thematic Working Groups are:

· **Light-duty vehicles (LDVs)**: The LDV Working Group will be developed and managed by IEA. It will focus on individual and fleet electric light-duty four-wheelers and their related national policies necessary to incentivise the uptake of electric-vehicles. The Working Group is expected to look at aspects that overall can lower the barriers for the deployment of electric light-duty vehicles, such as total cost of ownership.

· **Heavy-duty vehicles (HDV, buses, minibuses and trucks):** The HDV Working Group will be developed and managed by UNEP and will mainly focus on electric buses, with work on electric trucks being included as required by the Country Child Projects. Electric buses are of great interest in many low and middle-income countries around the world which are now investing at scale in public transport systems within their metropolitan areas. E-buses have reached a degree of maturity at which total cost of ownership over the lifetime of the buses are significantly lower than those of conventional buses. Yet, it is decisive that adequate buses and charging systems are procured and that they are correctly operated, maintained and monitored.

· **2&3 wheelers:** The 2&3 wheeler Working Group will be developed and managed by UNEP. It will focus on the electrification of 2&3 wheeler fleets, which have a great potential to completely phase out conventional motorcycles and three-wheelers in many low and middle-income countries over the next decade. Conventional 2&3 wheelers used in low-income countries are very often cheap and very polluting. Low quality engines with low life-times and quick deterioration of engine compression are burning large amounts of fuel and engine oil thus leading to very high levels of air pollution and climate emissions. In combination with high daily driving distances of up to 100km and more, mitigation potential of electric 2&3 wheelers used for passenger and goods travel is very significant in many low-income countries.

· **Charging infrastructure, grid integration, low-carbon power supply and battery re-use, recycling and safe disposal:** The grid and battery Working Group will be developed and managed by the IEA and will focus on vehicle charging infrastructure, as well as grid, energy system and power market integration. Its intention is to emphasize the decisive aspect for EVs to deliver net reductions of GHG emissions (compared to the baseline), which is to ensure that a transition to electric mobility goes together with a reduction in the carbon intensity of the power grid. It will furthermore discuss ways to ensure the sustainability of the battery supply chain and the end-of-life treatment of batteries. It will also provide generic information about batteries issues as experienced in electric mobility projects, such as those related to different types of batteries, life expectancy, toxicity and quality issues. Striving to enhance the environmental sustainability of battery production and use, the Working Group will consider instruments which maximise the economic value of batteries at the end of their useful life. It will do so by reviewing instruments and practices capable to maximize the opportunities for second-life applications of EV batteries and policies managing their end-of-life treatment.

The secretariats of the Thematic Working Groups will be located within the respective executing agencies (IEA and UNEP). They will be chaired by the Working Group leaders and will meet twice per year over the first 2 years to 3 years of project implementation, physically or virtually[1]. Where possible, the Working Group meetings will be organized back-to-back with already existing events such as the EVI annual meetings.
The Working Group members are expected to include: 1.) representatives from international organisations, 2.) academia, 3.) independent experts, 4.) the private sector, 5.) civil society, and 6.) representatives from selected country and city projects of the GEF and EC Solution Plus programmes to inform on the requirements of the country projects. By addressing a broad stakeholder group, the Working Groups will be in a position to develop knowledge materials covering a wide range of electric mobility, including vehicle manufacturing, charging, and electricity vehicle battery design (including the sourcing of raw materials as well as the re-use, recycling and sound disposal of used batteries). At the same time, the Working Groups will provide the private sector with an opportunity to understand the specific challenges and requirements that non-OECD countries are facing with the introduction of electric mobility. E-mobility industry players and start-ups from all over the world will be invited to participate in the Working Groups. For example, IEA will invite members of the Mobility Model partnership while UNEP will reach out to the broad network of e-mobility start-ups in the area of mobility services and vehicle manufacturing. A selection of possible Working Group members is provided in the stakeholder engagement plan (see Table 13).
The Global Thematic Working Groups will be established in close coordination with the Regional Support and Investment Platforms and the EC SOLUTIONSplus project, and to the extent possible, knowledge materials and tools will be developed within this framework. The development of knowledge products of the GEF Global Electric Mobility Programme and the EC SOLUTIONSplus project will happen on a task-share basis to maximize synergies between the two programmes and the Working Groups coordinators (IEA and UNEP) will act as focal points to ensure overall project alignment and in particular with the Regional Support and Investment Platforms and the EC SOLUTIONSplus project.
The Working Group members, under the coordination of the Working Group leads, will provide guidance and input to the products and materials under each project deliverable. This list of deliverables from each Working Group may include: 1.) review of current policy instruments; 2.) identification of good practices to support policy development; 3.) comparison of technologies; 4.) review and development of financing models and instruments; 5.) development of business models; 6.) provision of analytical tools and models; 7.) establishment of methodologies (e.g. for cost-benefit analyses, feasibility studies, data collection and analysis, demonstration project development, implementation and monitoring etc.); and 8.) development of generic training materials. Detailed deliverables are provided under the respective descriptions of outputs.
The development of the knowledge materials should be finalized after year two of the project implementation. The remainder of the knowledge products will be produced in year three and upon request from the Child Country Projects and agreed by the Working group leads. By including a number of knowledge products, which have not been specified yet, and which will be developed by the Thematic Working Groups upon request of the Country Child Projects and agreed by the Working group leads, the Programme has the flexibility to respond to specific needs emerging during project implementation. The process to

receive feedback on the knowledge products and to select the additional knowledge products will be initiated by the Working Group leads in collaboration with the help-desk staff of the Regional Support and Investment Platforms. Modalities of the selection process will be defined during the set-up of the Working Groups.

The dissemination of the products of the Working Groups to the country and city projects will take place through technical support, capacity building and training activities that will be organised by the Support and Investment Platforms (see Component 2 below). Members of the Working Groups are encouraged to participate in these events upon invitation of the Regional Support and Investment Platforms, which will also cover for the travel cost and DSA.

The development of knowledge products and tools by the four Global Working Groups (Output 1.2 to 1.8) will take place in coordination with the EC SOLUTIONSplus project, to maximize synergies and to prevent any duplication. The knowledge products and tools of both the GEF Global Electric Mobility Programme and the EC SOLUTIONSplus project will be combined in one on-line e-mobility toolbox. This co-branded online toolbox will combine brief presentations of e-mobility challenges and opportunities by mode and by region, brief summaries about technologic, financial and political solutions to the identified challenges with a search engine to access all knowledge products, tools and project reports of both the GEF Global Electric Mobility Programme and the EC SOLUTIONSplus project. This on-line toolbox will be the central tool for dissemination of the products developed under the two programmes. Figure 4 provides a schematic overview of the outputs of the GEF Global Programme and the complementary deliverables of the EC SOLUTIONSplus project which together will provide the tools and knowledge products disseminated through the combined e-mobility on-line toolbox.

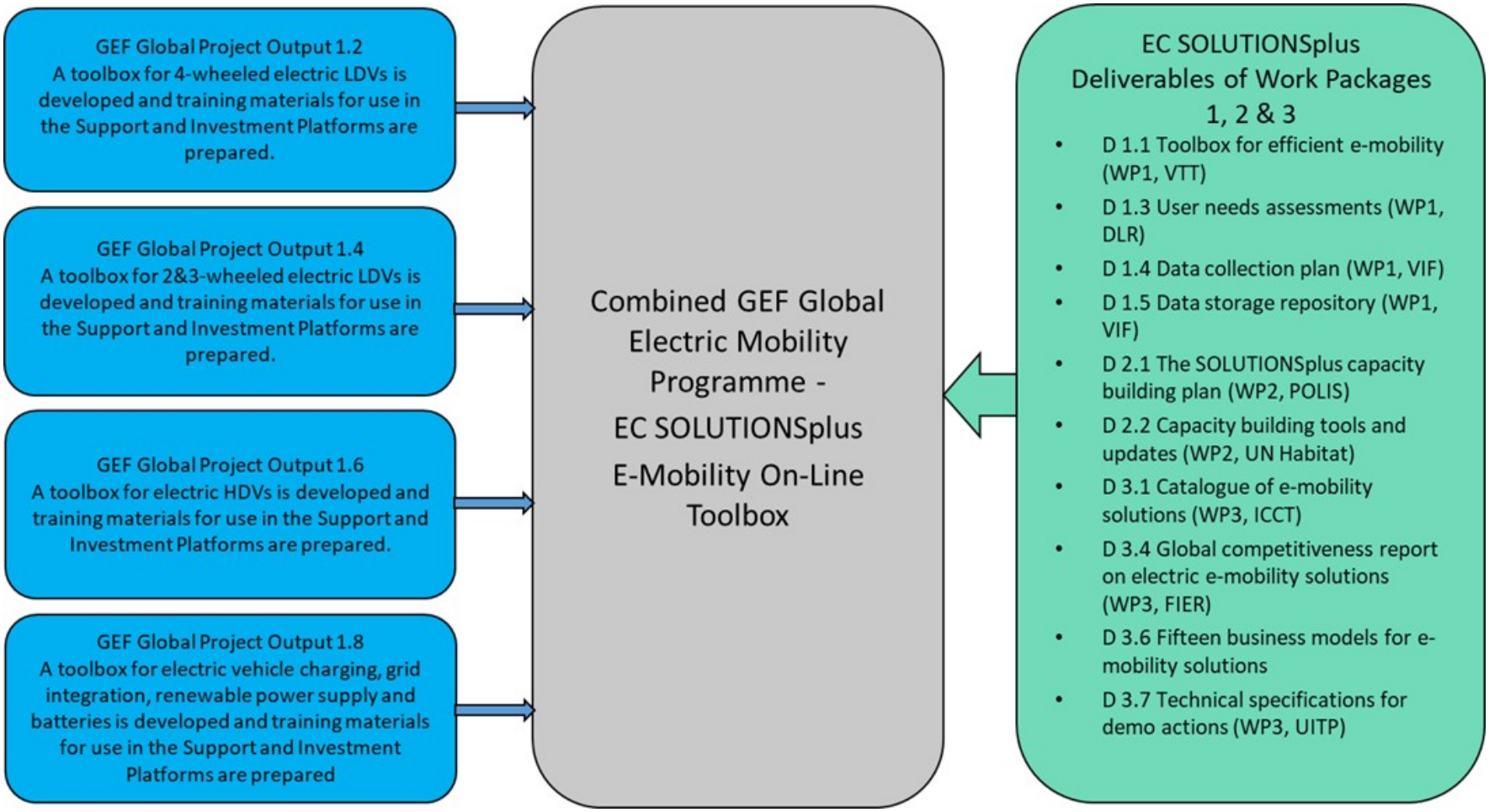


Figure 4 outputs of the gef global programme and deliverables of the Ec solutionsplus project uploaded to the combined on-line e-mobility toolbox

VTT: Teknologian tutkimuskeskus VTT, POLIS Promotion of Operation Links with Integrated Services – European City Network; FIER Automotive was founded at the Erasmus University in Rotterdam to facilitate innovative and economic research in the automotive industry; VIF – Kompetenzzentrum Das Virtuelle Fahrzeug Forschungsgesellschaft mbH; ICCT – International Council on Clean Transportation; UITP – Union Internationale des Transports Publics; DLR – Deutsches Zentrum fuer Luft und Raumfahrt e.V.

Outputs:

1.1: The Global Thematic Working Group on 4-wheeled electric light duty vehicles (LDVs) is operational and information exchange and network opportunities are created between countries and global and regional experts

The IEA will act as the Secretariat to the Working Group and lead the activities related to individual and fleet electric cars / light-duty four-wheelers.

The Light-duty Vehicles Working Group's main objective is to develop and make available knowledge materials and tools for governments and private sector stakeholders interested in promoting the deployment of electric cars. It will build upon existing expert participation that the Electric Vehicle Initiative (EVI) provides by member governments as well as representatives from industry and other stakeholders. Potential experts from industry and academia will be found among the Mobility Model Partnership (https://www.iea.org/areas-of-work/programmes-and-partnerships/the-iea-mobility-model) as well as members of the IEA Technology Collaboration Programme on Hybrid and Electric Vehicles (HEV TCP, https://www.iea.org/areas-of-work/technology-collaboration/transport).

Deliverables:

D 1.1.1: Secretariat of the Working Group established

D 1.1.2 Bi-annual Working Group meetings held during the first two years, reduced to annual meetings in the 3rd year

D 1.1.3: Exchange between EVI, GEF-7 countries and beyond facilitated

D 1.1.4: Webinars for EVI and GEF-7 countries implemented

1.2 A toolbox for 4-wheeled electric LDVs is developed and training materials for use in the Support and Investment Platforms are prepared.

The toolbox for 4-wheeled electric LDVs will be developed through partners of the Global Programme, led by the IEA, and in cooperation with the EC SOLUTIONSplus to avoid duplication and to enhance synergies. Alignment between the LDV Working Group, the Regional Support and Investment Platform and the EC SOLUTIONSplus project will be ensured through collaboration of the Working Group lead with the Platforms' lead and the leader of work package 1 (lead: VTT) of the EC SOLUTIONSplus project. The knowledge products and interactive tools developed need to be provided to be ready for use in the capacity building and training events of the Regional Support and Investment Platforms and need to be publicly and freely available for use in presentations and further analysis.

Deliverables:

General overviews & policies:

D.1.2.1 Status update on light-duty vehicle deployment across regions and countries (including technical, operational and financial aspects where relevant)

D.1.2.2 Market characterization and model availability for different regions established

D.1.2.3 Best-practice policy briefs for electric light-duty vehicles deployment developed

Interactive tools:

D.1.2.4 Interactive tool to estimate and compare total cost of ownership developed

D.1.2.5 Interactive tool to estimate well-to-wheel and/or lifecycle emissions of various light-duty vehicles developed

Other tools and materials as required by the country projects and agreed by the Coordinator:

D.1.2.6 Additional tools developed upon request by the Country Child Projects and agreed by the Coordinator.

Complementary deliverables of the EC SOLUTIONSplus project are displayed in Figure 4.

Noting that the list of topics to be explored by the Working Groups is intended to be developed to align with areas of interest of countries, as a starting point, the following provides an overview of some of the key topics that the Working Group may focus on when preparing the development of knowledge products and tools:

- What is the latest status of electric light-duty vehicle deployment in the GEF-7 countries and other parts of the world?
- What is available in terms of electric vehicles on the market today in different regions of the world?
- What are the lessons learned from leading countries on policies and pre-requisites for electric light-duty vehicle deployment?
- How do light-duty electric vehicles compete with other vehicle options on a cost, energy efficiency and emissions basis?
- How to design cost-effective short-, medium-, and long-term policies for electric light-duty vehicle deployment?
- How can consumers be better informed about EVs and their multiple benefits?
- Which business models can make the electrification of individual and fleet light-duty vehicles attractive?
- What are key steps and best practices for light-duty vehicle fleet procurement?
- How do electric cars and two- and three-wheelers compete or synergise with other modes of transport (such as public transport, rail, micro-mobility)?

1.3: The Global Thematic Working Group on electric 2&3 wheelers is operational and information exchange and network opportunities are created between countries and global and regional experts

UNEP, will host the Secretariat for the Working Group and will organize Working Group meetings, track progress, link with other work in the GEF7 & EC SOLUTIONSplus projects, keep overall track of the development of the toolbox, compile all tools into one toolbox and will ensure the toolbox will be online and is disseminated widely, including to all GEF 7& EC SOLUTIONSplus demonstration projects. Alignment between the LDV Working Group, the Regional Support and Investment Platform and the EC SOLUTIONSplus project will be ensured through collaboration of the Working Group lead with the Platforms' lead and the leader of work package 1 (lead: VTT), work package 2 (lead: POLIS & UN Habitat) and work package 3 (lead: FIER) of the EC SOLUTIONSplus project. Working Group members will include relevant EC SOLUTIONSplus partners, representatives of international electric 2&3 wheeler manufacturers as well as local electric vehicle manufacturing and mobility service start-ups (see stakeholder engagement plan Table 13).

Deliverables

D 1.3.1: Secretariat of the Working Group established

D 1.3.2: Bi-annual Working Group meetings held during the first two years, reduced to annual meetings in the 3rd year

D 1.3.3: Networking between GEF and EC SOLUTIONSplus project partners and beyond facilitated

D 1.3.4: Webinars for country projects implemented

1.4 A toolbox for 2&3-wheeled electric LDVs is developed and training materials for use in the Support and Investment Platforms are prepared.

UNEP, on behalf of the Global Programme, and VTT, FIER, and DLR (among others), on behalf of the EC SOLUTIONSplus project, will jointly develop the toolbox for 2&3-wheeled electric LDVs. Half of the tools will be led by SOLUTIONSplus partners and half by GEF-7 partners. Equally, half of the tools will be funded through GEF-7 budgets and the other half will be funded through SOLUTIONSplus budgets in form of co-finance. Partners will discuss the tool development in meetings to support and review the tool development and to assure quality standards are met.

Deliverables

General overviews & policies:

D 1.4.1 Overview of currently available technologies and technical specifications needed in specific markets developed;

D 1.4.2 Overview of the different charging solutions (overnight charging vs. battery swapping) including operating environment considerations and business models developed;

Financial tools & business models:

D 1.4.3 Overview of financing options for e 2&3 wheelers including best practices, and taxation instruments developed;

D 1.4.4 Business models for the use of e-2&3-wheelers in fleets established;

Other tools and materials as required by the country projects:

D.1.4.5 Training materials on technical, operational, financial and policy aspects of electric 2&3 wheelers for use in the Regional Support and Investment Platforms developed

D 1.4.6 At least 2 additional tools developed upon request by the Country Child Projects

Complementary deliverables of the EC SOLUTIONSplus project are displayed in Figure 4.

1.5: The Global Thematic Working Group on electric heavy-duty vehicles (HDVs) is operational and information exchange and network opportunities are created between countries and global and regional experts.

UNEP host the Secretariat for the Working Group and will organize Working Group meetings, track progress, link with other work in the GEF7 & EC SOLUTIONSplus projects, keep overall track of the development of the toolbox, compile all tools into one toolbox and will ensure the toolbox will be online and is disseminated widely, including to all GEF 7& EC SOLUTIONSplus demonstration projects. Alignment between the LDV Working Group, the Regional Support and Investment Platform and the EC SOLUTIONSplus project will be ensured through collaboration of the Working Group lead with the Platforms' lead staff and the leader of work package 1 (lead: VTT), work package 2 (lead: POLIS & UN Habitat) and work package 3 (lead: FIER) of the EC SOLUTIONSplus project.

Working Group members will include relevant EC SOLUTIONSplus partners and representatives of international electric HDV manufacturers (see stakeholder engagement plan Table 13).

Deliverables

D 1.5.1: Secretariat of the Working Group established

D 1.5.2: Bi-annual Working Group meetings held during the first two years, reduced to annual meetings in the 3rd year

D 1.5.3: Networking between GEF and EC SOLUTIONSplus project partners and beyond facilitated

D 1.5.4: Webinars for country projects implemented

1.6 A toolbox for electric HDVs is developed and training materials for use in the Support and Investment Platforms are prepared.

The toolbox will be jointly developed through partners of the GEF Global Programme and the EC SOLUTIONSplus project. Half of the tools will be led by SOLUTIONSplus partners and half by GEF-7 partners. Equally, half of the tools will be funded by SOLUTIONSplus budgets and half by GEF-7 budgets. Partners will participate in meetings to support and review the tool development and to assure quality standards are met.
Selected partners will form task teams of 4-5 partners that will lead the development of a suite of specific tools. The task teams will meet separately, as needed, to support the development of specific tools. Under the guidance of the Task teams, the tools will be produced by partner organisations, consultants and/or a combination of partner organisations and consultants. Final drafts of the tools will be presented to the Working Groups to review and finalize.
The toolbox will contain five types of deliverables: 1.) General overviews; 2.) Technical tools; 3.) Financial tools; 4.) Policy tools; and 5.) Training materials

Deliverables

Technical tools

D 1.6.1 Analytical tool on charging infrastructure and electricity load needs developed

D 1.6.2 Overview of current technologies for electric buses daily operation—data collection, analysis, maintenance, energy management developed;

D 1.6.3 Overview of issues related to end of life issues for electric busses, especially the collection, re-use and recycling of batteries developed;

Financial tools and business models:

D 1.6.4 Overview of financing options for electric busses, including an overview of current best practices and policy instruments developed;

D 1.6.5 Overview of best business model of electric busses for use in public transport fleets including legal frameworks for bus operating company set-up prepared;

D 1 6.6 Electric buses procurement guidelines developed

Policy tools:

D 1.6.7 Regional Roadmaps and deployment strategies for introduction of electric bus fleets developed

Other tools and materials as required by the country projects:

D.1.6.8 Training materials on technical, operational, financial and policy aspects of electric buses for use in the Regional Support and Investment Platforms developed

D 1.6.9 At least 3 additional tools developed upon request by the Country Child Projects

Complementary deliverables of the EC SOLUTIONSplus project are displayed in Figure 4

The list of deliverables will be subject to changes and can be expanded as required by the country projects and including the outcomes of the user needs assessment under the EC SOLUTIONSplus project.

1.7: The Global Thematic Working Group on electric vehicle charging, grid integration, renewable power supply and battery re-use, recycling and safe disposal is operational and information exchange and network opportunities are created between countries and global and regional experts.

The IEA will act as the Secretariat to the Working Group. The Working Group's main objective will be to develop and make available knowledge materials that support governments in their ambitions for advancing a sustainable roll out of electric mobility – with a focus on charging infrastructure, system integration and the re-use of batteries.
The Working Group is intended to focus on two sub-themes: 1) Charging infrastructure & system integration and 2) batteries.
The system integration of distributed battery storage and charging infrastructure have to date been predominantly considered from the perspective of high-income countries with liberalised electricity markets. However, there is increasing need to understand specific challenges and solutions in low and middle-income countries with growing electricity demand, a much more diverse range of network topologies and different market structures. The main task of this Working Group will be to provide a comprehensive picture of the various roll-out models for charging infrastructure available and their potential impact on the power system (grids, users and markets). This is intended to allow policy makers, facing vastly different integration challenges, to identify potential value sources and coordinate the deployment of infrastructure with other programmes for increasing energy access, network expansion or even ensuring continuity of service in island systems. The work will cover system wide impacts looking at aspects such as supply capacity, transmission needs and electricity markets. It will also cover the other side of the spectrum looking at local distribution aspects, including local flexibility needs and technical barriers.
The other subtheme looks at policy instruments to ensure the sustainability of the battery supply chain and the end-of-life treatment of batteries. It will also provide general information about battery issues as experienced in electric mobility projects, such as those related to different types of batteries, life expectancy, toxicity and quality issues. Striving to enhance the environmental sustainability of battery production and use, the Working Group will consider instruments which maximise the economic value of batteries at the end of their useful life. It will do so by reviewing instruments and practices capable to maximize the opportunities for second-life applications of EV batteries and policies managing their end-of-life treatment.
In addition to semi-annual meetings[2], the Working Group intends to organise webinars and other activities over the four-year period to facilitate information exchange and peer learning between interested participants.
The accessible expert pool includes members of the IEA Technology Collaboration Programme (TCP) on Electricity and in particular the TCP on smart grids (ISGAN TCP, https://www.iea.org/areas-of-work/technology-collaboration/electricity) and the Energy Technology Systems Analysis TCP (ETSAP TCP, https://www.iea.org/areas-of-work/technology-collaboration/cross-cutting).
Deliverables
D 1.7.1: Secretariat of the Working Group established

D 1.7.2: Bi-annual Working Group meetings held during the first two years, reduced to annual meetings in the 3rd year

D 1.7.3: Networking between GEF, EVI, PSF, and EC SOLUTIONSplus project partners and beyond facilitated

D 1.7.4: Webinars for country projects implemented

1.8 A toolbox for electric vehicle charging, grid integration, renewable power supply and battery re-use, recycling and safe disposal is developed and training materials for use in the Support and Investment Platforms are prepared.

The toolbox for electric vehicle charging models and system integration will be developed through partners of the Global Programme and in dialogue with the EC SOLUTIONSplus project. Battery supply chain aspects will also be covered in the toolbox. Alignment between the LDV Working Group, the Regional Support and Investment Platform and the EC SOLUTIONSplus project will be ensured through collaboration of the Working Group lead with the Platforms' lead staff and the leader of work package 1 (VTT) of the EC SOLUTIONSplus project. The knowledge products and technical tools developed need to be provided to be ready for use in the capacity building and training events of the Regional Support and Investment Platforms and need to be publicly and freely available for use in presentations and further analysis.

Deliverables

General overviews & policies:

D 1.8.1: Policy brief on public charging infrastructure roll-out strategies and regulatory measures to enable successful business models developed

D 1.8.2: Policy Makers Manual report on how to assess techno-economic impact of charging strategies on the overall energy system and incorporate charging infrastructure into long-term energy plans and renewable power integration developed.

D.1.8.3: Analysis report of EV battery life cycle, repurposing and end-of-life options including recommendations to improve sustainability is developed

Technical tools:

D.1.8.4 EV charging loads assessment tool to estimate the impact of e-mobility strategies on national and local power supply grids

Other tools and materials as required by the country projects and agreed by the Coordinator:

D.1.8.5: Additional tools developed upon request by the Country Child Projects and agreed by the Coordinator

Complementary deliverables of the EC SOLUTIONSplus project are displayed in Figure 4.

The list of deliverables will be subject to changes and can be expanded as required by the country projects and including the outcomes of the user needs assessment under the EC SOLUTIONSplus project. The Working Group lead will be in close dialogue with the EC SOLUTIONSplus leads with the aim to ensure complementarity of the two initiatives work on knowledge product and toolkit development, with the endeavour to making sure to avoid duplications of outputs and for mutual benefit from each other's work.
Noting that the list of topics to be explored by the Working Groups is intended to be developed to align with main areas of interests of countries, as a starting point, the following provides an overview of some of the key topics that the Working Group may focus on when preparing the development of knowledge products and tools:

- What are the key policy frameworks to define an appropriate roll-out strategy for charging infrastructure (whether in homes, residential buildings, at workplaces, on-street, at dedicated stations or at destination) and to ensure comprehensive coverage?
- What are key factors for successful business models in publicly accessible charging infrastructure?

· What options are available to assess and manage the network impacts of different approaches to charging infrastructure roll-out?

· How to optimize grid integration of chargers to: 1.)optimise loads on local distribution grids; and to 2.) realize synergies between increasing deployment of EVs and intermittent renewables generation, thus contributing to decarbonisation of the power and transport sector?

· What tools are available to understand the emission change impact of electrified mobility under various battery and generation mix combinations?

· What is the role of battery technologies to optimise system integration of renewables and what synergies exist between automotive and stationary storage batteries?

· What are the key current and future automotive battery technologies and their relative performances and potential?

· What are the critical materials for automotive batteries and what are the key risks associated to their supply chains? What policy frameworks can help increase supply chains transparency and mitigate their key risks (environmental, economic, social, fiscal) at various steps of battery life cycle (material extraction, battery manufacturing, collection, repurposing, recycling, disposal)?

Component 2: Support and Investment Platforms

Outcome 2*: Conditions are created for market actors in low and middle-income countries to expand investment in electric mobility through the Support and Investment Platforms.*

The primary objective of the Support and Investment Platforms is to support the countries and cities in developing and implementing their GEF and the EC SOLUTIONSplus funded electric mobility projects. Secondary objectives include to generate interest, build capacity and create opportunities for wider uptake of electric mobility in the regions through replication and knowledge sharing.
The Global Programme, through the Global Child Project, will fund four **Support and Investment Platforms in 1.) Africa, 2.) Asia and the Pacific, 3.) Latin America & the Caribbean and 4.) Central and Eastern Europe, West Asia & the Middle East**. The platforms will be open for the participation of non-GEF Global Programme / EC SOLUTIONSplus countries and cities with an interest in introducing and scaling-up electric mobility. This also includes projects under the GEF Sustainable Cities Impact Programme, which incorporate components on electric mobility. Non–GEF programme country and city projects will be able to participate in training, networking and replication activities of the platforms using their own resources.
The Regional Support and Investment Platforms will be the link between the Working Groups and the country projects. The Regional Support and Investment Platforms have four main tasks: **1.) Adaptation and dissemination of the knowledge materials** developed in the Global Thematic Working Groups to the countries and training and capacity building of country project stakeholders; **2.) Creating communities of practice for electric mobility projects** in each of the three regions to promote electric mobility and share experiences; **3.) Supporting the demonstration and scale-up of e-mobility** through establishing “market places” where e-mobility project partners meet manufactures of electric vehicle and EV supply equipment; and **4.) Replication of e-mobility projects** in other cities, regions and countries by bringing together regional expertise, new project ideas and financing opportunities.
The **adaptation and dissemination of the knowledge materials** is targeting the development of training curricula, the adjustment of the knowledge materials developed within the Global Thematic Working Groups to regional specifications and their delivery to the countries through capacity building and trainings events. As such, the regional platforms play a crucial role in capacity building and will support the development and implementation of the GEF & EC

SOLUTIONSplus country and city projects throughout their project lifetime. This also includes the adaptation of training materials developed within the Global Thematic Working Groups to the specific preconditions of the respective region, which might include translation of training materials into Spanish and French. Capacity building and training events will be organized:

· around generic issues of e-mobility including opportunities and challenges with the integration of e-mobility charging within current and future power grids and as well as issues around the re-use, recycling and safe disposal of used EV batteries;

· for the use of the tools developed by the Global Working Groups, for example on how to use calculators and models to estimate total cost of ownership of EVs or to project future reductions in energy use, GHG and air pollutant emissions and fuel cost;

· on the needs to design, develop, implement and analyse the e-mobility demonstration projects included within the Child Country Projects and;

· to prepare for up-scaling and replication through the design and implementation of policies, business models and financing schemes.

More specifically, EV mode specific trainings for 1.) electric 2&3 wheelers and LDVs, and 2.) electric buses will be carried out. These trainings focus on the design, implementation and analysis of the demonstration projects and will support decision makers within countries to better understand the required analysis and studies to prepare the demonstration projects, to define technical specifications of the electric vehicles and charging equipment, to operate and maintain the demo EVs and EV supply equipment and to use the data and experience gathered through the demonstration projects to prepare for the development of adequate policy packages, business models and finance schemes required for successful up-scaling of e-mobility. It will be ensured that at least one training of each of the four Regional Support and Investment Platform will further explore the gender dimension of electric mobility.

The creation of communities of practice for electric mobility projects is targeting: 1.) the exchange of experiences and lessons learnt through creation of networks between GEF 7, EC SOLUTIONSplus and other e-mobility projects in the region; 2.) the facilitation of interaction between the Thematic Working Groups and the Child Country Projects; and 3.) the interaction with other e-mobility initiatives in the regions covered by the Support Platforms. Through formal and informal dialogues between various e-mobility projects it is expected to facilitate spill-over of knowledge with regards to institutionalization of e-mobility, the successful implementation of the demonstration projects, the development of policies, business models and financial schemes as well as issues regarding the sustainability of e-mobility including the integration of renewable power for EV charging as well as issues around the end-of-life or EV batteries. The creation of communities of practise will be supported by the set-up of help desks within each of the Regional Support and Investment Platforms, which will facilitate and coordinate the exchange between EV projects, and which will also support the Country Child Projects to identify national and international experts needed to carry out the specific deliverables defined under the outputs of the Child Country Projects. Through the help desk, exchange between Country Child Projects under the GEF Global Electric Mobility, the GEF Sustainable Cities Impact Programme and other e-mobility initiatives will be coordinated. The help desks will also be the link between the Thematic Working Groups and the Country Child Projects to coordinate requests for development of additional knowledge materials, which have not been predefined at the time of CEO Endorsement, and to provide feedback on the offered knowledge products to further refine and update them.

Supporting the demonstration and scale-up of e-mobility is focusing on bringing together e-mobility projects and EV and EV supply equipment manufacturers to facilitate the implementation of the Country Child Project e-mobility pilots and to support Country Child Projects design and develop concrete scale-up projects. By demonstrating demand of electric vehicles and EV supply equipment, it is expected to increase interest within the industry to supply adequate vehicles at acceptable prices to low and middle-income countries around the world. This is an important function since in many low and middle income countries adequate EVs are not available yet. For example, there are only a few companies manufacturing electric motorcycles for the African market, and none of the big global manufacturers have yet integrated vehicles in their offer which are tailormade to the needs of the African market. Similarly, first electric 3 wheeler models are on offer in Asia, but often the technical specifications are not sufficient to compete with respective ICE vehicles used for taxi services in

Africa, Asia and Latin America. It will be the task of the Regional Support and Investment Platform market place events in combination with the reach-out through the Global Working Groups to highlight to manufacturers the demand for vehicles for demonstration and later on for up-scaling. The market place events are expected to provide a forum for manufacturers to make expressions of interest or preliminary agreements to supply Country Child Projects with electric vehicles and EV supply equipment demonstration and scale-up projects. Together with the replication function described in the next paragraph, the events will facilitate the development of concepts for upscaling and replication projects, to be submitted by the countries to targeted financing institutions.

Replication of e-mobility projects is focusing on facilitating the replication of the GEF 7 and EC SOLUTIONSplus e-mobility projects in other cities, countries and regions. Therefore, relevant stakeholders are invited to all Platform events to monitor the progress on the demonstration projects and to learn about business opportunities of e-mobility in their region. By attending the events, the interaction of governments, EV manufacturers and EV users, it is expected that all stakeholders build capacity to better understand and integrate e-mobility projects in their portfolios. It is expected that this will lead to increased confidence into developing e-mobility projects as part of public transportation projects, urban development projects, infrastructure projects, renewable power integration projects, projects to enhance administration and policy making in the transport and power sector. The replication events are expected to result in the development of a number of concrete replication project proposals / concept notes, which will be developed by the countries, and which are intended for submission to the targeted financiers. These proposals are likely to involve the close participation of financial institutions, including bilateral and multilateral development banks. They may seek to use green funds such as the Green Climate Fund and other sources project funding.
The events such as capacity building and training workshops, market place and replication events under the Regional Support and Investment Platforms target stakeholders who are directly responsible for or affected by the introduction of electric mobility. This includes decision makers from national and local governments but equally private sector stakeholders. The trainings developed in the Global Thematic Working Groups will address specific audience, e.g. fleet managers at bus operating companies, bus drivers etc. Since most of the country projects will be implemented with the support of several ministries such as Ministry of Environment, Ministry of Transport, Ministry of Energy, Ministry of Industry and Trade, etc., and since most of the country projects have the development of national e-mobility coordinating bodies as a specific output, project managers in the countries will have the ability to delegate the right stakeholders to the various e-mobility events organized through the Regional Support and Investment Platforms. In addition, since most of the country projects will have an e-mobility demonstration project, private companies or government agencies running the actual demonstration project will be in the position to select the most appropriate participants for the various training, marketplace and dissemination events.
Upon availability of financial resources, the Regional Support and Investment Platforms are envisaged will be able to outlast the GEF Global Programme time frame. In their role as e-mobility market place they will would provide a permanent lasting platform to match e-mobility projects with financing opportunities and EV and EV supply equipment provision. A distribution of GEF Global Programme and EC Solution Plus countries by regional platform is provided in Table 5.

As for the Global Working Groups, the Regional Support and Investment Platforms will be implemented in close cooperation with the EC SOLUTIONSplus project. For example, training and capacity building programmes developed by EC SOLUTIONSplus will be delivered during the events of the Support Platforms. Likewise, GEF Global Programme partners are invited to participate in EC SOLUTIONS online webinars such as the Summer School and the Living Labs. In addition, GEF Global Programme partners will be able to attend the EC SOLUTIONSplus on-line e-mobility courses.

All training materials developed by the Global Working Groups and adapted and disseminated through the Support Platforms and all replication and up-scaling materials will be uploaded to the joint GEF Global E-Mobility Programme – EC SOLUTIONSplus on-line e-mobility toolbox. Likewise, all training materials, replication roadmaps, policy advice papers for upscaling and National Urban Mobility Proposals will be up-loaded to the on-line e-mobility toolbox. Figure 5 provides an overview of complementary outputs and deliverables of the GEF Global Electric Mobility Programme and the EC SOLUTIONSplus project, which will be made accessible through the on-line e-mobility toolbox.

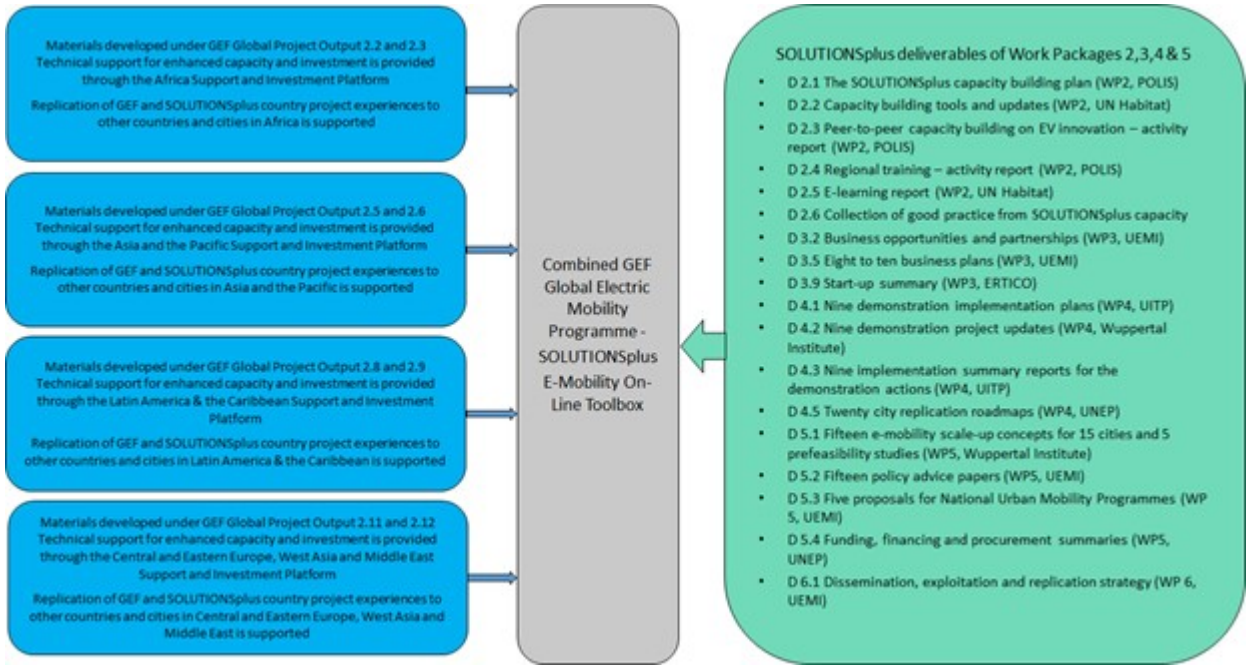


Figure 5 OUTPUTS OF THE GEF GLOBAL PROGRAMME AND DELIVERABLES OF THE EC SOLUTIONSPLUS PROJECT UPLOADED TO THE COMBINED ON-LINE E-MOBILITY TOOLBOX

POLIS Promotion of Operation Links with Integrated Services – European City Network; UITP – Union Internationale des Transports Publics; ERTICO – European Road Transport Telematics Implementation Coordination Organization Intelligent Transport Systems and Services Europe

Outputs:

2.1: The Support and Investment Platform for Africa is established, including a community of practice and an e-mobility market place.

The Africa Platform is led by the UNEP, based in Nairobi, Kenya. Technical, policy support and networking support will be provided by a group of organisations that have expertise on supporting electric mobility in Africa. These include UNEP, UN Habitat, Sustainable Transport Africa (STA), ITDP, Other GEF agencies such as UNDP, the World Bank, the African Development Bank, the Development Bank of Southern Africa, the West African Development Bank, the European Bank for Reconstruction and Development and EC SOLUTIONSplus partners.

A community of practise will be established to bring together countries and cities of the EC SOLUTIONSplus and the GEF Global Programme to jointly develop and implement their projects and share lessons learned. Engagement with Child Country Projects under the GEF Sustainable Cities Impact Programme will be sought as appropriate. By bringing the city/country projects together it will also be easier to get interest from technology providers and investors. The primary focus of the community of practice is on the African GEF Global Progamme and EC SOLUTIONSplus projects, but the network can also involve other country

and city projects where relevant. As part of the community of practice the platform will also set up task teams around specific topics, at the very least one task team on the introduction of electric bus fleets in Africa and one on the introduction of electric 2 and 3 wheelers projects in the region. The primary objective of the task teams will be to align the needs for knowledge products with the Global Thematic Working Groups.

The Africa Support and Investment Platform will provide a venue, the “e-mobility marketplace”, where it will invite solution providers, such as technology manufacturers, and financers, including development banks, together with the GEF-7 and EC SOLUTIONSplus projects in Africa to match e-mobility demonstration projects and concepts for replication and upscaling with supply for electric mobility technology applications and financing opportunities. By bringing the demonstration projects together economies of scale for procurement of EVs and EV supply equipment can be achieved. The market place events aim to closely include financial institutions to track the progress of the demonstration projects to build confidence in the technology as well as operational and economic performance to de-risk investment and to build capacity within the finance sector. The e-mobility market place meetings will take place in conjunction with already planned events such as the Africa Infrastructure Investment Conference.

E-mobility solution providers will include BYD, Volvo, TailG, Volkswagen, ABB, Valeo, among others which can be recruited through IEA’s Mobility Model partnership once the Programme is running and first results are visible. Financing agencies to participate in the platform will include the World Bank, the African Development Bank, the West African Development Bank, the German Reconstruction Bank KfW, the European Bank for Reconstruction and Development, the Development Bank of Southern Africa among others. The platform will also reach out to venture capital such as the Private Infrastructure Development Group (PIDG). On the demand side, the platform will invite bus operation companies and small and medium sized enterprises (SMEs) active in the transportation sector such as taxi companies, ride-hailing app providers, vehicle assemblers and manufacturers. Local suppliers of EV equipment manufacturers as well as mini and micro grid applications will also be targeted. An overview of possible candidates in included in Table 13.
Alignment between the Africa Support and Investment Platform, the Thematic Working Groups and the EC SOLUTIONSplus project will be ensured through collaboration of the lead staff with Working Group Leads and the leader of work package 2 (lead: POLIS & UN Habitat), work package 3 (lead: FIER), work package 4 (lead: UITP), work package 5 (lead: UNEP) and work package 6 (lead UEMI) of the EC SOLUTIONSplus project.
Deliverables:
Creation of a community of practice of countries and city projects in Africa (travel and accommodation funded by the country projects):

D 2.1.1 Africa Support and Investment Platform launched

D 2.1.2 Africa Task teams on electric 2&3 wheelers and electric buses established and user needs assessment for toolbox development delivered

D 2.1.3 Two meetings of the Africa Platform delivered with focus on 1.) Child Country Project progress and specification and procurement of demonstration assets and 2.) Child Country Project progress and demonstration project implementation

Creation of an E-mobility project marketplace (travel and accommodation funded by the country projects):

D 2.1.4 Two marketplace & financing workshops delivered to support match-making of EV industry (supply side), local e-mobility service providers (demand side), finance and country project development teams

D 2.1.5 Development of four Expressions of Interest / preliminary agreements to supply EVs and EV supply equipment to e-mobility projects facilitated

D 2.1.6 Development of three e-mobility scale up concepts facilitated

2.2 Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the Africa Support and Investment Platform

The platform will provide a helpdesk. This is a central point where the GEF Global Programme and EC SOLUTIONSplus projects can ask for help with the implementation of their project. The Africa helpdesk will be located at UNEP in Nairobi and will involve support from UNEP and other the GEF Global Programme and EC SOLUTIONSplus partners. UNEP will coordinate incoming support requests at the helpdesk and involve other partners in the EC SOLUTIONSplus and the GEF Global Programme project if needed. In addition, the Platform Support staff is asked to travel to the Child Country Projects to provide support in person as needed. A total of two such trips are envisioned for each of the country / city projects. These missions mainly support the training and capacity building activities as well as the planning and implementation of the demonstration projects.

The Platform will organize and implement a training curriculum on electric mobility. Training will be organized around: 1) The general concept of electric mobility; 2) The technical and legal design and implementation of electric mobility demonstration projects including the set-up of data collection and analysis; 3) The design and implementation of contractual agreements for electric fleets in public transport; 4) The operation and maintenance of electric vehicles in fleets; 5) Specific trainings on the use of tools and analytical models developed by the Working Groups. Some of these trainings can also be virtual through webinars. These webinars can be hold on a rolling basis once specific tools are ready for dissemination and will use the network of the platforms. Some of the trainings will be technology specific, for example around electric busses and/or electric 2&3 wheelers. Also, topics of the specific trainings will depend on the demand in the region. The Africa Support and Investment Platform will ensure that at least one of the trainings offered will address the nexus between gender and e-mobility.

The training materials will be developed by the Global Working Groups and adapted to the specific needs of African countries. The adaptation of training materials will be done in house and / or contracted to consultants.

Deliverables:

Set-up of a help desk:

D 2.2.1 E-mobility helpdesk for country and city projects support established incl. website, email and dedicated phone line

D 2.2.2 Two platform visit to all African GEF Global Electric Mobility Child Projects carried out (as requested by Country Child Project)

Provision of training:

D 2.2.3 Training materials prepared by the Global Working Group are adapted and a training curriculum / schedule is developed

D 2.2.4 Regional electric mobility training on general aspects of electric mobility (including the integration of EV charging into current and future power grids as well as end-of-life issues of batteries) and the use of tools and knowledge products provided by the Global working Groups delivered

D 2.2.5 Two regional trainings on demonstration project design, technical specification, vehicle and charging equipment procurement, vehicle operation and maintenance, and data collection delivered for 1.) electric 2&3 wheeler demonstration projects and 2.) electric bus demonstration projects

D 2.2.6 Two regional trainings on demonstration data analysis, business model and financial scheme design and sustainability of e-mobility (including the use of renewable power for charging and battery end-of-life issues) delivered including initial lessons learnt for 1.) electric 2&3 wheeler demonstration projects and 2.) electric bus demonstration projects

Complementary deliverables of the EC SOLUTIONSplus project see Figure 5.

UNEP will lead these functions in close cooperation with EC SOLUTIONSplus and GEF Global Programme partners. Where possible, the Platform will include non-EC SOLUTIONSplus and non-GEF projects / countries / cities, to participate in platform activities. However, non-EC SOLUTIONSplus and GEF Global Programme projects will need to cover any costs associated to the platform activities themselves.

2.3 Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in Africa is supported

As a follow-up of the marketplace events, a distinct replication event will be held, bringing together the country projects with potential other countries and cities being interested in replicating the projects under the GEF/EC SOLUTIONSplus programme. The replication event is ultimately targeting the development of a number of e-mobility replication and scale-up concepts in the region, for submission to respective financing agencies. It is furthermore aiming at the development of a number of country / city replication roadmaps. This component will be implemented in close collaboration of the EC SOLUTIONSplus project and on a task share and budget share basis. UNEP is leading work package 5 “Scale-up, finance, bankability, commercialisation and institutionalization” and funds of the EC SOLUTIONSplus project will be used to turn the mission of the replication event to prepare for replication and scale-up into reality.
The replication event will involve strategic partners with experience in transport and infrastructure projects such as the World Bank and the African Development Bank.
Deliverables:

D 2.3.1 Replication event and call for proposals including EV industry (supply side), local e-mobility service providers (demand side), finance and country project development teams delivered

D 2.3.3 Development of three e-mobility replication concepts facilitated

Complementary deliverables of the EC SOLUTIONSplus project see Figure 5.

2.4: The Support and Investment Platform for Asia and the Pacific is established, including a community of practice and an e-mobility market place.

The Asia and the Pacific Support and Investment Platform is led by the ADB, based in Manila, Philippines to support ADB’s Development Member Countries (DMCs) and a range of technical and financial partners in the Asia Pacific Region in in identifying, creating and maintaining enabling conditions for investments to support long term transformation of economies to electric mobility. Specifically, this includes the creation of a community of practice and the establishment of an e-mobility marketplace.

Through the Asia and the Pacific Support and Investment Platform partly funded by the GEF and supported with ADB co-financing, ADB will provide support to e-mobility country projects of ADB, the GEF Global Programme and projects supported by the EC SOLUTIONSplus project in the Asia and the Pacific Region. In addition, the Asia and the Pacific Support and Investment Platform will be open for knowledge sharing of any other countries and cities with an interest in introducing and scaling-up electric mobility. Such countries and cities would participate in training, networking and replication activities of the platform using their own resources. The platform will also invite projects under the GEF Sustainable Cities Impact Programme, which incorporate components on electric mobility, to join in the work of the platform, including training, capacity building and communities of practice.

The Asia and the Pacific Support and Investment Platform builds on the activities of the ADB Sustainable Transport Initiative (STI), which supports the transition to a cleaner and more efficient transport sector throughout Asia and the Pacific. Through the STI, four opportunities to enhance ADB's lending operations have been identified: 1) Urban transport; 2) Addressing climate change in transport; 3) Cross-border transport and logistics; and 4) Road safety and social sustainability. Within this framework, ADB currently supports USD 2-3 billion of investments in transit-oriented development, non-motorized transport, integrated urban transport and land use planning, demand management, policies, regulations and standards, among others. ADB's Energy Policy provides complementary support through its focus on energy security and facilitating the transition to a low carbon economy for its development member countries (DMCs).

Under ADB's STI, there are several ongoing programs and projects, principal among which is the "Sustainable Transport for All" technical assistance. As electric mobility is a relatively new area for ADB as well as its DMCs, this technical assistance helps to support countries at the policy and the strategy formulation level. It recognizes that cities are the main drivers of e-mobility and helps to transfer this knowledge to close policy gaps at national level. Many cities are developing initiatives to reduce the number of polluting fossil vehicles from its territory and to promote EVs. Cities also have the means to implement EV promotion policies, especially in the field of commercial vehicles.

Country	City	Country	City
Armenia	Yerevan	Azerbaijan	Baku
Bangladesh	Dhaka	Fiji	Suva
Georgia	Tbilisi	Indonesia	Jakarta, Makassar
Kyrgyzstan	Bishkek	Lao PDR	Vientiane
Malaysia	Langkawi, Malacca, Penang	Mongolia	Ulaanbaatar
Myanmar	Yangon	Nepal	Kathmandu
Philippines	Manila	Tajikistan	Dushanbe
Thailand	Bangkok, Krabi, Phuket	Vietnam	Hai Phong, HCMC, Hue

Table 8 Coverage of ADB e-Mobility Technical Assisstance

Therefore, cities have been selected by ADB as champions for the adoption of EVs. A recent review confirms that "an e-mobility strategy allows cities to structure pilot programs for implementation, which have a significant impact and a high replication potential. The coverage of ADBs technical assistance for e-mobility projects under the STI is shown in Table 8.

Networks and Communities of Practice

The Asia and the Pacific Support and Investment Platform will be the centre of knowledge on electric mobility in the region. The platform will create a community of practice, bringing together the ADB's e-Mobility projects, the GEF and EC SOLUTIONSplus projects but also other countries and cities in the region interested in introducing/upscaling e-mobility. The communities of practice will become the leading forum on e-mobility in the region.

The platform will promote the issue, facilitate sharing of practices among countries and cities, connect projects with experts, provide information through publishing documentation (presentations, research, market insights and case studies of electric mobility projects) and provide a virtual forum where countries and cities can share project progress and best practices, and therefore provide opportunities to showcase these as part of the fourth component of the programme, aiming to track progress and facilitate replication.

Deliverables:

D.2.4.1 Asia and the Pacific Support and Investment Platform created

D.2.4.2 Task teams established for E-mobility market segments, potentially including 2&3wheelers, and 4wheelers (particularly light duty trucks) and e-buses (with the possibility of inclusion of maritime transport) and user needs assessment carried out

D.2.4.3 Five regional meetings (SE, SW, EAST, CW and Pacific) of task teams and project partners conducted, actionable knowledge and information & data shared and match-making of EV industry (supply side), local e-mobility service providers (demand side), and country project development teams facilitated

D 2.4.4 Development of four Expressions of Interest / preliminary agreements to supply EVs and EV supply equipment to e-mobility projects facilitated

D 2.4.5 Development of three e-mobility scale up concepts facilitated

Complementary deliverables of the EC SOLUTIONSplus project see Figure 5.

2.5 Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the Asia and the Pacific Support and Investment Platform

One of the objectives of the technical assistance is to support cities in the development of roadmaps, which allows them to shift gradually from fossil fuels to electric vehicles in the most cost-effective way possible. To achieve this objective, the Asia and the Pacific Support and Investment Platform will provide:

· Technical support – support the identification, development and implementation of the ADB, GEF & EC SOLUTIONSplus country and city projects;

· Networks and communities of practice – build networks and communities of practice to promote electric mobility and share experiences;

· Training and capacity building, including helpdesk – organize training sessions around specific electric mobility modes and technologies at regional and sub-regional levels;

· Information dissemination from Global Thematic Working Groups – disseminate the knowledge and tools developed by the four thematic Global Thematic Working Groups to the city and country projects in the region;

· Replication support – promote replication of lessons learned in the ADB e-Mobility projects, the GEF and EC SOLUTIONSplus projects to other countries and cities in the regions to promote wider impacts of ADB e-Mobility, the GEF and EC programs

Technical Support

The Asia and the Pacific Platform will support the ADB's e-Mobility projects, the GEF and EC SOLUTIONSplus country and city projects and other countries in the respective regional networks with identifying, developing and implementing electric mobility projects through technical support, policy development support, and financing support. Where relevant this will involve the networks of partners involved in the GEF and SOLUTIONSplus programs and expertise in the Global Thematic Working Groups. Direct technical support will be provided to individual GEF and EC SOLUTIONSplus in-country projects. This will include visiting the projects and providing or hiring specific technical and policy expertise where needed.

Through the Asia and the Pacific Platform sub-regional and thematic teams can be set-up and supported where requested – for example if several countries in a certain sub-region want to introduce electric bus fleets, the Asia and the Pacific Platform can support the creation of a subgroup to specifically focus on a coordinated and harmonized approach, working in close cooperation with the Thematic Working Group on the subject, and contributing to the maximization of the utility of the tools developed in the Thematic Working Groups. The community of practice will involve regional experts and the private sector to develop and provide solutions to these subgroups.

Training and Capacity Building

The Asia and the Pacific Platform will organise a training programme based on the needs of the in-country projects. The training will be aimed at the ADB's e-Mobility projects the GEF and EC SOLUTIONSplus country projects but will also invite other interested parties within the region (the latter self-funded). Training sessions will be tailor-made based on demand and key issues within the specific regions. As such, trainings may be general or focused on specific modes and technologies. Trainings can also be for the complete region or for a specific sub-region. Using the partners involved in the GEF and the EC SOLUTIONSplus projects, there will be a wide set of experts available for assisting with the trainings. The trainings will use the materials developed by the ADB e-Mobility team.

The trainings will cover: 1.) Electric vehicle policy and strategy overview; 2.) EV finance and business models; 3.) Impact of EVs on environment and power sector; 4.) EV charging station and battery and battery recycling; 5.) electrification of different modes (buses, boats and urban delivery vehicles); and 6.) EV safety and maintenance. The Asia and the Pacific Support and Investment Platform will ensure that at least one of the trainings offered will address the nexus between gender and e-mobility.

Information Dissemination from the Global Thematic Working Groups

The Asia and the Pacific Platform will also act to disseminate the tools and knowledge developed by the ADB and the Global Thematic Working Groups to the GEF/ EC SOLUTIONSplus in-country projects and other countries in the regions. These materials will be used both for the in-country projects and for the activities of the Platforms, including the training, community of practice, and finance marketplace activities of the Platforms. The Platforms will participate in the four Global Thematic Working Groups to ensure that the key challenges and lessons learned from the in-country projects are considered in the Working Groups.

Deliverables:

D 2.5.1 Set up helpdesk function incl. website, email and dedicated phone line for country and city project support

D.2.5.2. Knowledge shared across task teams and networks on pilot demonstrations with view to replication and scaling

D.2.5.3 Training materials prepared by the Global Working Group are adapted and a training curriculum / schedule developed

D 2.5.4 Five Regional Trainings delivered (SE, SW, EAST, CW and Pacific) across participating countries and sub-sectors within the e-mobility space on 1.) the use of the knowledge products provided by the Global Programme and 2.) the planning, implementation and analysis of e-mobility demonstration projects and 3.) the sustainability of e-mobility, including the integration of renewable power and battery end-of-life aspects

Complementary deliverables of the EC SOLUTIONSplus project see Figure 5.

2.6 Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in Asia and the Pacific is supported

The ADB will support replication of experience within all relevant ADB Membership Countries through the helpdesk/county coordinators.

Electric mobility marketplace and replication

The Platforms will support the replication of country and city projects results. To do so the Platforms will: share and promote the successes and lessons learned; promote the wider use of the tools and policy products developed; encourage the development of similar projects outside of the GEF framework in the Asia & Pacific Region; and seek to develop e-mobility networks (including between technology suppliers, financiers and interested cities/ countries). This aims to achieve maximum impact beyond the GEF/ SOLUTIONSplus in-country projects, and support interest in countries not included in the GEF/ EC SOLUTIONSplus programs. For example, the ADB aims to establish a number of demonstration pilot projects, for example on charging infrastructure, battery technology, fleet management, introduction of commercial EVs, and will create an EV Fund, to co-finance EV projects of cities which have transformational impact potential.

The replication event is ultimately targeting the development of a number of e-mobility replication and scale-up concepts in the region, for funding by the ADB. It is furthermore aiming at the development of a number of country / city replication roadmaps. This component will be implemented in close collaboration with UNEP and the EC SOLUTIONSplus project, which has dedicated outputs on “Scale-up, finance, bankability, commercialisation and institutionalization” (work package 5) led by UNEP.
Deliverables

D.2.6.1 Support for mobility networks provided in selected countries of Asia and the Pacific – Activity report

D 2.6.2 Replication event to inform ADB Membership countries about the lessons learnt from GEF and EC SOLUTIONSplus country project in the region – Activity report

D 2.6.3 Additional financial resources mobilized from ADB and other donors and investors to support investment readiness in selected market segments

D 2.6.4 Development of three e-mobility replication concepts facilitated

Complementary deliverables of the EC SOLUTIONSplus project see Figure 5.

2.7. The Support and Investment Platform for Latin America and the Caribbean is established, including a community of practice and an e-mobility market place.

The Latin America and the Caribbean (LAC) Platform is led by the Centro de Movilidad Sostenible (CMS), a non-profit created by Centro Mario Molina Chile (CMMCH) to further research and develop new forms of sustainable transportation that seek to mitigate climate change effects and air pollution in Latin America and the Caribbean in an effort to move the region towards “carbon neutrality” of transportation. CMS will handle all transport and mobility related initiatives as a non-profit entity and is led and composed by Centro Mario Molina’s current staff based in Santiago, Chile. In this regard, CMS brings all of CMMCH prior experience to the fore in this renewed vision to promote and solidify the movement towards low emission transportation in the region.

As part of the LAC Support and Investment Platform, a community of practice will be established with the GEF Country Child Projects being developed in the region as well as partner EC SOLUTIONSplus cities. Engagement with Child Country Projects under the GEF Sustainable Cities Impact Programme will be sought as appropriate. The community of practice will bring to the forefront the main barriers being faced to develop and scale e-mobility projects in the region as well as the main lessons learned for successful execution of these initiatives. The community will be open to other partner initiatives as mentioned

in Table 9 below but will primarily serve as a vehicle for GEF Global Programme Country Child Projects and EC SOLUTIONSplus cities. As part of this community of practice, the GEF platform will identify and create to task teams to focus on (1) LDVs and 2&3 wheelers and (2) electric bus deployments. Note that in both groups charging infrastructure will be discussed as this is interlinked with any electric vehicle deployment. Table 9 gives a brief overview of the current programs that will participate in the Support and Investment Platform. As seen, the projects defer in focus areas but are all linked by a common themed of strengthening and enhancing the deployment of electric vehicles and charging infrastructure in the region.
The LAC Support and Investment Platform will also host two marketplace meetings focused on investments in vehicle technology, charging infrastructure and new business models for scaled deployment of electric vehicle initiatives in the region. The purpose of hosting these marketplace forums is to increase the likelihood of investments at scale, particularly during the latter stages of the Country Child Projects once preliminary results are obtained from pilot and demonstration projects. There is also a larger likelihood that technology and finance providers will have a greater interest of providing solutions to a number of projects in the region while GEF Country Child Projects could benefit from common or aligned procurement strategies. As in other regional platforms, the marketplace meetings will aim to be hosted in conjunction with other events held in the region or sub-regions, to take advantage of logistics and increase the likelihood of a larger number of actors attending these summits.

Task teams on electric 2&3 wheeler and electric buses will be created. The members of the task teams will comprise key stakeholders involved in the launch of Country Child Projects focused on the deployment of electric buses in the region. The regional task team together with assistance from the regional platform will define the main areas of support to effectively deploy pilot initiatives in each country. The task team will organize contacts and presentations from electric bus manufacturers interested in demonstrating their products in the region, as well as local startups and related technological providers (including charging equipment and monitoring services). The focus of the task team will be to guarantee that each Country Child Project develops the correct technical specifications and business model for the deployment of their pilot programs in order to better ensure success and potential scaling or replication of these activities. The task team will be organized and coordinated by CMS.

There are already a large number of technology providers in the region which will be invited to attend these marketplace meetings. In terms of OEMs, these will be dominated by Chinese firms (particularly for the electric bus segment), traditional OEMs offering products in LAC (Nissan, BMW, Hyundai, Peugeot et al), charging infrastructure providers (ABB, ChargePoint, et al) and utilities (Enel, Engie, et al). These will likely vary depending on the project focus and geographic location but the most relevant actors for each project will be invited and pursued to attend. On the financial front, participation will be sought out from regional development banks including the Inter-American Development Bank (IADB), the Development Bank of Latin America (CAF), the Central American Bank for Economic Integration (CABEI), the World Bank and other local actors financing electric mobility projects in partner countries/cities. Non-traditional financial and investment actors will also be invited as these have already made investments in certain countries in the region to deploy e-mobility solutions. On the demand side, the platform will invite public transportation companies and small and medium sized enterprises transportation cooperatives, transportation network companies (TNCs) and vehicle dealers. Local vehicle assemblers, suppliers of EV equipment manufacturers as well as mini and micro grid applications will also be targeted where suitable.

Alignment between the Latin America & Caribbean Support and Investment Platform, the Thematic Working Groups and the EC SOLUTIONSplus project will be ensured through collaboration of the lead staff with Working Group Leads and the leader of work package 2 (lead: POLIS & UN Habitat), work package 3 (lead: FIER), work package 4 (lead: UITP), work package 5 (lead: UNEP) and work package 6 (lead UEMI) of the EC SOLUTIONSplus project.

Table 9 COVERAGE OF CMS E-MOBILITY TECHNICAL ASSISSTANCE IN LAC AND ASSOCIATED INITIATIVES

Program	Country/City	Focus
GEF 7 Global Programme	Peru	Electric bus & 2-3 wheelers
	Costa Rica	Electric Bus Deployment
	Chile	Taxi fleet electrification
	Jamaica	Electric Bus Deployment
	Antigua & Barbuda	LDVs + Electric Bus + Charging Infrastructure
	Saint Lucia	Government Fleet (LDVs)
EC SOLUTIONSplus (40+ European Consortium)	Quito (Ecuador)	Charging infrastructure, Electric Bus Deployment and 2-3 wheelers
	Montevideo (Uruguay)	Charging Infrastructure
Associated Electric Mobility Initiatives		
MOVE LATAM (UNEP & CMS)	Regional focus	Knowledge Dissemination
ZEBRA (C-40, ICCT & CMS)	Santiago (Chile)	Electric Bus Deployment
	Sao Paolo (Brazil)	Electric Bus Deployment
	Medellin (Colombia)	Electric Bus Deployment
	Mexico City (Mexico)	Electric Bus Deployment
IADB Funded Projects	Cali (Colombia)	Electric Bus Deployment
	San Jose (Costa Rica)	Electric Bus Deployment
	Panama City (Panama)	Electric Bus Deployment
	Guayaquil (Ecuador)	Electric Bus Deployment

Deliverables:

Creation of a community of practice of countries and city projects in Latin America and the Caribbean:

D 2.7.1 Latin America and the Caribbean Platform launched focussing on the expectations of each initiative to define/agree a work plan including a site visit at Transantiago BRT

D 2.7.2 LAC task team on LDVs / 2&3 wheelers and electric buses established and user needs assessment for toolbox development delivered

D 2.7.3 Two meetings LAC Platform with focus on 1.) Child Country Project progress and procurement of demonstration assets; and 2.) Child Country Project progress and demonstration project implementation delivered

Creation of an e-mobility marketplace:

D 2.7.4 Two marketplace & financing workshops delivered to support match-making of EV industry (supply side), local e-mobility service providers (demand side), finance and country project development teams

D 2.7.5 Development of four Expressions of Interest / preliminary agreements to supply EVs and EV supply equipment to e-mobility projects facilitated

D 2.7.6 Development of three e-mobility scale up concepts facilitated

2.8 Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the Latin America and the Caribbean Support and Investment Platform.

A key attribute of the regional platforms will be to provide technical support for the successful execution and completion of all GEF Global Programme and EC SOLUTIONSplus projects. To do so, requires the timeline follow up and identification of critical needs in each initiative and to link these with lessons learned from the region and Global Thematic Working Groups. In order to successfully track each initiative and provide swift support, a help desk will be established to provide a single window where all initiatives can seek on-going support for their city/country projects. The LAC helpdesk will be located at CMS in Santiago de Chile and will involve support from IEA, UNEP and other GEF Global Programme and EC SOLUTIONSplus partners. CMS will coordinate incoming support requests at the helpdesk and involve other partners in the EC SOLUTIONSplus and GEF Global Programme projects, as required. CMS staff will provide on-site support as needed and/or requested by city/country projects.

The platform will organize and implement a training curriculum on electric mobility in conjunction and coordination with other regional platforms and materials developed by the Global Thematic Working Groups. Trainings will include: 1) Basic concepts of electric mobility; 2) Guide for the successful design, execution, monitoring and evaluation of electric mobility demonstration projects; 3) The design and implementation of contractual agreements for electric fleets in public transport; 4) The operation and maintenance of electric vehicles; 5) Specific trainings on the use of tools and analytical models developed by the Working Groups. Other topics will also be covered and delved into in task specific trainings, such as: 1. Development of appropriate business models for small and medium sized fleet operators; 2) Recommendations for successful operation based on real performance of battery electric vehicles; 3) Standardization of charging infrastructure for local, national and sub-regional interoperability; 4) Technical requirements for electric LDVs, buses and 2&3 wheelers; and, 5) Basic design and configuration of charging stations, including technical requirements for purchase of equipment. The trainings will be held, when and where possible, in person taking advantage of other on-going meetings but may also take place as webinars held in Spanish and English for stakeholders in all city/country projects. The task groups set up for electric buses and LDV and 2&3 wheeler deployment, will help in identifying critical elements and areas for more in-depth training. The Latin America & Caribbean Support and Investment Platform will ensure that at least one of the trainings offered will address the nexus between gender and e-mobility.

Deliverables:

Set-up of a help desk:

D 2.8.1 E-mobility helpdesk at CMS set up for country and city projects support incl. website, email and dedicated phone line

D 2.8.2 Platform visits of CMS staff to projects carried out (as requested by Country Child Projects) –

Provision of training:

D 2.8.3 Training materials prepared by the Global Working Group are adapted and a training curriculum / schedule developed

D 2.8.4 Regional electric mobility training on general aspects of electric mobility (including the integration of EV charging into current and future power grids as well as end-of-life issues of batteries) and the use of tools and knowledge products provided by the Global working Groups delivered

D 2.8.5 Two regional trainings on demonstration project design, vehicle operation and maintenance, and data collection delivered for 1.) electric 2&3 wheeler and LDV demonstration projects and 2.) electric bus demonstration projects

D 2.8.6 Two regional trainings on demonstration data analysis, business model and financial scheme design and sustainability of e-mobility (including the use of renewable power for charging and battery end-of-life issues) delivered including initial lessons learnt for 1.) electric 2&3 wheeler and LDV demonstration projects and 2.) electric bus demonstration projects

Complementary deliverables of the EC SOLUTIONSplus project see Figure 5.

CMS will lead these functions in close cooperation with IEA, UNEP and EC SOLUTIONSplus and GEF Global Programme partners. Where possible, the platform will include non-EC SOLUTIONSplus and non-GEF projects / countries / cities, to participate in platform activities. That said, non-EC SOLUTIONSplus and GEF Global Programme projects will need to cover any costs associated to the platform activities themselves.

2.9 Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in Latin America and the Caribbean is supported

In the last year of the GEF Global Programme, a replication event will be held bringing together the city and country projects with interested parties looking to replicate the activities in their own constituencies. The replication event is ultimately targeting the development of a number of e-mobility replication and scale-up concepts in the region, for submission to respective financing agencies. It is furthermore aiming at the development of a number of country / city replication roadmaps. This component will be implemented in close collaboration with the EC SOLUTIONSplus project and on a task share and budget share basis. UNEP is leading work package 5 “Scale-up, finance, bankability, commercialisation and institutionalization”.
Deliverables:

D 2.9.1 Replication event and call for proposals including EV industry (supply side), local e-mobility service providers (demand side), finance and country project development teams

D 2.9.2 Development of three e-mobility replication concepts facilitated

2.10. The Support and Investment Platform for Central & Eastern Europe, West Asia & the Middle East is established, including a community of practice and an e-mobility market place.

The Platform for Central & Eastern Europe, West Asia & Middle East will be led by the EBRD and will cover the Bank’s 38 countries of operation in the region. It will be partly funded by the GEF and supported with EBRD co-financing. This This Platform will build on the current five country projects under the programme in the region (Ukraine, Armenia, Albania, Jordan and Uzbekistan), as well as a stand-alone project in Belarus. Recognising the importance of partnerships, the EBRD will cooperate with UNEP and other GEF agencies, where appropriate, in developing the Platform.

The Platform will set up and co-ordinate a community of practice to create and maintain networks between the Country Child Projects in the region. This will enable the project representatives to discuss development and implementation issues, share best practices and lessons learned. Bringing the Country Child Project representatives together will also help to develop interest and engagement from technology providers and investors. Where appropriate, the Platform

will invite project representatives under the GEF Sustainable Cities Impact Programme, which incorporates components on electric mobility, to join some activities foreseen by the community of practice. Similarly, the Platform will seek to involve representatives from EBRD financed e-mobility projects and other country and city e-mobility projects from outside of the GEF funded activities in the community of practice, as well as relevant private sector participants.

Under the community of practice, the Platform will create thematic groups around key e-mobility themes in the region. The Platform will engage with the Country Child Projects to help identify the main themes for the community of practice to focus on. Given the nature of transport in the region, the themes will likely include the introduction of electric charging infrastructure as well as development of electric buses and trolley buses (given the extensive legacy of public transit systems in many of the countries of the region and promising opportunities for electrification). The thematic group members will likely comprise representatives of the projects in the region and selected experts from the business sector. The work of the thematic groups will be coordinated by the Platform.
The Platform will organise one regional event a year for three years to bring together the community of practice. The events will aim to facilitate networking between members of the community of practice and key stakeholders and to share expertise between GEF Global Programme and EC SOLUTIONSplus project representatives. Under the Platform, they will meet together, possibly at one of the EBRD's offices (e.g. London HQ or one of the Bank's regional offices). Travel and accommodation for the annual regional events will be funded by the country projects. Video conferencing will also be provided for those unable to travel. If the travel restrictions persist, the meetings may be moved to the virtual format. The annual events will bring together the thematic groups under the community of practice to take stock of progress in the implementation in the city and country projects; to share lessons learnt and challenges faced. The events will also integrate an e-marketplace to engage the broader e-mobility industry (see below), as well as training and replication components to build capacity and encourage new project development, explained in sections 2.11 and 2.12.

The regional Platform will provide a forum for the development of a regional "e-mobility marketplace". It will develop links with e-mobility solution providers, such as technology manufacturers and financers, and provide networking opportunities with the GEF-7 and EC SOLUTIONSplus projects in the region, as well as other interested projects. The aim of the marketplace will be to raise the private sector awareness of the emerging project concepts and demand for electric mobility technology applications, as well as to enable GEF and wider projects to keep informed of developments in technologies and financing approaches. Bringing the projects and solution providers together should support successful project implementation and encourage replication.

For the marketplace, e-mobility solution providers will be engaged in an open way to encourage broad participation. Therefore, in addition to direct contacts with leading e-mobility technology and systems suppliers, the Platform will reach out to relevant industry trade associations (e.g. ACEA, CLEPA, EUROBAT). We would also seek to engage local technology suppliers in the countries with projects, such as manufacturers of charging equipment or vehicle assemblers to support local economic development. The Platform will also engage with other interested funders such as other Multilateral Development Banks, commercial financiers including both multinational financial institutions as well as local banks from the countries. Developing local financing capabilities can help promote replication of the programme. On the demand side, the Platform will seek to engage projects outside of the GEF programme and target potential e-mobility adopters, such as municipal transit companies, fleet operators such as car rental companies, postal and logistics service providers and taxi companies.

Deliverables:

D 2.10.1 Central & Eastern Europe, West Asia & the Middle East Platform launched and community of practice created including two thematic groups related to key priority areas in the region

D 2.10.2 A first in-person[3] event to launch the Regional Platform delivered to discuss working modalities, the work to date, key issues emerging and suggestions for the functioning of the Platform, including the community of practice and its thematic groups.

D 2.10.3 A workshop to discuss the development of the marketplace. The workshop will take place as part of the first annual Platform event and focus on supporting match-making of EV industry (supply side), local e-mobility service providers (demand side), finance and country project development teams

D 2.10.4 Two meetings of the regional Platform delivered to 1.) cover technical and policy issues emerging with the project, to discuss tendering, financing and procurement elements and to develop feedback to the Global Thematic Working Groups and 2.) to discuss further replication and upscaling projects and an approach to sustain the activities of the Platform beyond the GEF Global Programme.

D 2.10.5 Two financing/marketplace meeting (part of the annual platform events) to raise awareness of project opportunities, technology solutions and financing approaches and to be to discuss the outcomes of the projects and opportunities for upscaling projects among of EV industry (supply side), local e-mobility service providers (demand side), finance and country project development teams

D 2.10.6 Four Expressions of Interest / preliminary agreements to supply EVs and EV supply equipment to e-mobility projects developed by the Country Child Projects with engagement of the Support and Investment Platform

D 2.10.7 Three e-mobility scale up concepts developed by the Country Child Projects with engagement of the Support and Investment Platform

Complementary deliverables of the EC SOLUTIONSplus project see Figure 5.

2.11 Government and private sector stakeholders are trained and technical support for enhanced capacity and investment is provided through the Central & Eastern Europe, West Asia & the Middle East Support and Investment Platform.

The Platform will create a virtual network for the GEF Agencies implementing e-mobility projects in the region to share project implementation experience. The Platform will coordinate this network to facilitate knowledge sharing of best practices and highlight key issues emerging in implementation. Where project implementation issues emerge across the various projects, the Platform will help this network connect to relevant resources from the Global Programme and the technical expertise in the regional community of practice to build capacity, share best practices and lessons learned. The Platform will collate details of this expertise and provide information on the website, which will enable projects to connect their queries with the relevant partners who could provide support. The Platform, working with the network of GEF Agencies, will seek to keep the details of the network of experts updated to provide continuous support to the e-mobility projects in the region during the programme.

The regional Platform will have a web page under the Global Programme website to post information and help encourage the development of virtual networks and thematic groups under it for the exchange of good practice. It will enable country and city project representatives to share experience of their projects and seek advice of peers. It will also serve as an entry point for the Country Child Project representatives in the region to engage expertise of the Global Programme in relation to specific issues that they are facing. The web page could also advertise relevant training webinars and share their materials, to ensure accessibility and broader participation in e-mobility discussions in the region.

The Platform will support the delivery of training and capacity building on electric mobility. The training and capacity building needs will be discussed as part of the network of GEF Agencies implementing projects in the region. Based on the experience of the project implementation, the experts from the GEF Agencies will prioritise development needs on the ground. They will also discuss best approaches for meeting such needs, such as resources for the website,

peer-to-peer learning between the projects, engaging experts from the Global Programme and industry, or identifying specialist consultants to deliver specific training and capacity building activities. The GEF Agency network can also be used to collect the first set of requests for materials to be forwarded to the Global Thematic Working Groups.

Dedicated training for the Country Child Projects would be delivered either physically through dedicated sessions during the annual Platform meetings or remotely by webinar. The choice of approach will depend on the nature and number of the participants targeted for the training. If the GEF Agency network identifies that the people with the key training needs in the Country Child Projects are likely to attend the Platform meetings, then physical delivery would be prioritised. Where the target participants are unlikely to travel, or too numerous for a face-to-face course, then remote delivery by webinar would be the priority. Subject to sufficient capacity being available, interested external cities and countries could be invited to participate in training events to encourage replication.

The training should reflect the nature of the projects in the region and the most common transport modes. Training activities could include, for example, good practice in tendering and procurement, and financing models for public transport operators or sustainable business models for electric charging infrastructure development. The Central and Eastern Europe, Middle East and West Asia Support and Investment Platform will ensure that at least one of the trainings offered will address the nexus between gender and e-mobility.

Deliverables:

D 2.11.1 Set up helpdesk function – website, email and dedicated phone line will be set up for GEF Agencies, Country Child Projects and Sustainable Cities Impact Programme projects

D 2.11.2 Create a network for the GEF Agencies implementing projects in the region to discuss training and capacity building needs

D 2.11.3 Training materials prepared by the Global Working Group are adapted and a training curriculum / schedule developed

D 2.11.4 Three regional trainings tailored to the needs of the region elaborating, among others, on 1.) e-mobility demonstration project design and data collection, 2.) EV and EV supply equipment procurement operation and maintenance and 3.) sustainability of e-mobility (including the use of renewable power for charging and battery end-of-life issues) delivered

Complementary deliverables of the EC SOLUTIONSplus project see Figure 5.

2.12 Replication of GEF and EC SOLUTIONSplus country project experiences to other countries and cities in Central & Eastern Europe, West Asia & the Middle East is supported

As a multilateral development bank, the EBRD has the ability to provide both direct investment and credit lines for investment in projects in the region. As such, it is well-positioned to incentivise replication and understands the importance of leveraging the programme to help develop sustainable e-mobility investment models.

One of the focuses of the community of practice and marketplace events will be the broader replication of the investments supported by the programme. Given the relatively small number of projects funded by the programme and the relatively modest levels of investment that the GEF Global Programme will support, the events will gain increased traction with the wider e-mobility community if there is a distinct emphasis on replication. As such, the events will aim

to bring together the GEF country projects with potential other countries, cities, corporate fleet operators and municipal transport companies that are interested in replicating the projects or implementing a broader e-mobility programme. Such a mix of projects will provide a strong incentive for marketplace participants, as they will see the broader investment opportunities beyond the GEF projects.

The Platform will seek to build a knowledge base across the region of e-mobility project opportunities, relevant e-mobility projects outside of the GEF Global Programme and engaged companies, municipalities and countries interested in potential replication. Expertise of the GEF agency network and the community of practice should also help develop this knowledge. To support replication, key stakeholders identified in this process will be invited to participate in Platform events.
The replication event is ultimately targeting the development of a number of e-mobility replication and scale-up concepts in the region, for submission to EBRD. It is furthermore aiming at the development of a number of country / city replication roadmaps. This output will be implemented in close collaboration with UNEP and the EC SOLUTIONSplus project.

Deliverables:

D 2.12.1 A workshop to discuss the Platform's replication approach held

D 2.12.2 Two replication events delivered

D 2.12.3 Development of three e-mobility replication concepts facilitated

Complementary deliverables of the EC SOLUTIONSplus project see Figure 5.

Component 3: Tracking progress, EV market monitoring and results dissemination

Outcome 3*: Projects and electric mobility markets are tracked, and key developments, best practices and other lessons learned are shared to promote wider uptake of electric mobility by market actors in programme and non-programme countries.*

Under this component UNEP and IEA will track key developments, outcomes and project progress of components 1 & 2 and above based on the information gathered under the Country Child Projects, and distribute these through a Global Programme website and an on-line toolbox but also through reports, flyers, presentations, webinars, social media channel and through global meetings to national governments, industry stakeholders and beyond. In particular, the IEA's flagship publication "Global Electric Vehicle Outlook" will expand its coverage to additional countries and vehicle modes.
This component comprises the development of a knowledge management system based on an online toolbox, which will be developed on a task sharing basis with the EC SOLUTIONSplus project, and which will be co-branded GEF Global Electric Mobility Programme and EC SOLUTIONSplus. The on-line toolbox will act as repository for knowledge products, Child Country Project and demonstration city outputs and will be designed to ease access to the wealth of information generated by the two programmes, see also Figure 4 and Figure 5.

The component will develop an EV market monitoring framework to collect the necessary data to track the EV market development of the country projects and to consolidate the results for all GEF Country Child Projects. This will build on data and information collection tools and templates already in use by IEA and UNEP to gather information for countries.

This component will also support global meetings. A first global meeting will launch the programme and will involve all GEF and EC SOLUTIONSplus in-country projects and all major partners involved in the two programs, including civil society and private sector partners. A second global meeting will be organised at the end of the project where results are presented and replication and sustainability (i.e. continuation after projects have ended) will be discussed. Both meetings will also present the Global Programme (and in the second meeting: its results) to the outside, including to the media.
Child project countries will be expected to finance the costs to track their own progress and report annually to the IEA and UNEP; capture lessons learned and experiences with project materials and e mobility uptake. As part of this, they will be expected to track emissions reductions from their projects and conduct country assessments on their e mobility markets to establish a baseline and track market uptake.

Outputs:

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

The IEA will be responsible for leading the work under this output. The IEA's Global EV Outlook series (GEVO) will be one means to disseminate information about the progress under the GEF-7 Global Programme. The Global EV Outlook is one of IEA's most downloaded reports and an important deliverable under the Electric Vehicles Initiative (EVI). The GEVO includes a review of the status of major countries through country assessments and the status of regions in their transition to electric mobility. Information and data provided by the GEF-7 countries in accordance with output area 3.2 below will be included in the GEVO. All copyright in the GEVO will remain with the IEA which will continue to produce the publication as part of the IEA publication series, and the GEF Global Programme and the GEF funding will be acknowledged in an appropriate way.
Deliverables
D 3.1.1. Global EV Outlook – supplemented with global electric-vehicle data

D 3.1.2. Global EV Outlook – GEF-7 project implementation progress and highlights included where appropriate

3.2 An e-mobility monitoring framework is established, data on market and policy framework is collected and indicators and targets are tracked.

The IEA will establish a monitoring framework for country EV market development. This market monitoring framework will track a set of indicators to provide a detailed snapshot of the transport sector, and more particularly on the EV and EV supply equipment market development in the GEF Child Project countries. This framework is expected to build on the monitoring and tracking work the IEA is already undertaking through the Electric Vehicles Initiative (EVI) under the Clean Energy Ministerial and the analysis developed every year in the Global EV Outlook series (GEVO). This data will form the basis for additional analyses and assessments which will feed into the GEVO. A template for the monitoring framework is currently being developed by the IEA, which will be shared with the Country Child Projects project management units.
The data to be included in the monitoring framework will be gathered through the annual reporting of the Executing Agencies of the country projects to the GEF Coordination unit of UNEP. IEA will support these activities as needed. UNEP will then forward the raw data to the IEA for consolidation and analysis consistent with what is done for other counties included in GEVO. A template to be used for data collection has been developed and will be shared with the Executing Agencies as part of the Project Implementation Reporting (PIR)
The following indicators are expected to be included in the framework that will be developed:

- Number of newly registered vehicles by mode (incl. LDVs, HDVs, buses, 2 & 3 wheelers) and share of electric vehicles;

- Number of vehicles in the fleet by mode (incl. LDVs, HDVs, buses, 2 & 3 wheelers) and share of electric vehicles;
- Availability of different EV models;
- Fuel prices;
- Case studies and examples of local government activities
- Public charging infrastructure built (units);
- Investments into electric vehicles and charging infrastructure (USD);
- Number of electric mobility policies developed (a) and implemented (b)
- Renewable power generation capacity added (MW);
- Policy-related questions with regards to institutional frameworks and enabling policies to support the sustainable roll-out of EVs and charging infrastructure.

The analysis of the data collected will be disseminated through the Global EV Outlook publication series. It could also be fed back to the Working Groups to refine their tool. Such information can feed in tools such as the Global EV Outlook and/or the Mobility Model to improve the resolution of IEA transport analysis on emerging economies and disseminate findings back to the GEF countries and beyond.

Deliverables

D 3.2.1 Establishing a monitoring framework for tracking EV policy and market development in GEF-7 countries

D 3.2.2 Annual collection of EV data from Global Country projects

D 3.2.3 Establishing a network of data providers in GEF-7 governments

D 3.2.4 Tracking progress of Child Country Project EV market indicators

Complementary deliverables of the EC SOLUTIONSplus project:

EC D 1.4 Data collection plan (WP1, VIF)

EC D 1.6 Impact Assessment Results (WP1, DTU)

3.3. A knowledge management system and a website are established to disseminate materials and results to programme and non-programme countries.

UNEP will be responsible for knowledge management and hosting the GEF Global Programme webpage. The webpage will inform about the programme including the activities of the Global Working Groups, the Regional Support and Investment Platforms and all Country Child Projects. Each Thematic Working Group will have a sub-page. The Global Programme Webpage will also showcase the activities of the Regional Support and Investment Platforms by either directly hosting the Platform's webpage (Africa, Latin America & the Caribbean, Central & Eastern Europe, Middle East and West Asia) or by linking to the

Platform's webpage hosted by the respective executing agency (Asia Support and Investment Platform). The Programme webpage will provide a link to the shared GEF Global Programme / EC SOLUTIONSplus on-line e-mobility toolbox which will be used to make the knowledge products and toolkits developed in the Working Groups accessible. The programme webpage is also expected to highlight key events, trainings and workshops that are planned within the Global Programme, to disseminate progress and updates from the Global Programme and to include links to press releases and links to the communication efforts of other Project Executing Entities, as appropriate. The webpage is furthermore expected to include links to additional analyses and commentaries prepared by partners such as the IEA, CMS and the EC SOLUTIONSplus consortium members. It can also contain links to external resources and websites to highlight the work done by other Agencies in the project, such as the interactive tools that will be hosted at the IEA's website. The Global Programme website will be branded GEF Electric Mobility Programme and will be clearly identifiable as a GEF funded initiative. The co-execution partners will be acknowledged on this webpage, in wording and with the organisations' logos in connection to the knowledge products they are responsible for delivering.
The knowledge management will be handled mainly through the knowledge products and tools uploaded on the shared GEF Global Programme / EC SOLUTIONSplus e-mobility on-line toolbox, by progress updates in reports and through events (Working Group meetings and webinars) organised during the implementation period. The online toolbox, which will be developed and maintained on a task sharing basis in close collaboration with EC SOLUTIONSplus and VTT, will be at the core of the knowledge management system. The on-line toolbox will act as a repository for project documents generated as part of the Global Programme as well as within the Country Child Projects. The e-mobility on-line toolbox will also be the key element to ensure that lessons learnt from the various Country Child Projects will be shared across countries and regions, through granting all GEF 7 Global E-Mobility Programme and EC SOLUTIONSplus project stakeholders and beyond access to project outputs uploaded to the e-mobility on-line toolbox (as appropriate).
The online toolbox will comprise:

· All knowledge products, appropriate and feasible, which are developed by the GEF Global Electric Mobility Programme and by working packages 1 to 3 of the EC SOLUTIONSplus project;

· All project outputs such as studies, reports, analyses, databases etc., as appropriate and feasible, from all GEF 7 Global Electric Mobility Programme Country Child Projects and EC SOLUTIONSplus demonstration and replication cities (work package 4 & 5);

· Brief summaries on innovative e-mobility solutions by application / use case / mobility challenge;

· A search engine to search the combined GEF Global Electric Mobility Programme / EC SOLUTIONSplus repository.

The shared e-mobility on-line toolbox will comprise physical data repositories based on a cloud infrastructure such as MS Azure, a database to map the knowledge products, tools and reports stored in the cloud and a web-based user interface to search the e-mobility online toolbox for content. The e-mobility online toolbox will be structured in a way that content can be displayed using different categories such as region, vehicle mode, type of challenge (e.g. technical, operational, financial, political) and type of knowledge product (e.g. report, tool, factsheet, data etc.)
The on-line toolbox will be co-branded GEF and EC SOLUTIONSplus and other partners such as IEA, ADB, EBRD and CMS will be acknowledged on this webpage, in wording and with the organisations' logos. The on-line toolbox will be clearly identifiable as a GEF funded product.
Deliverables
D 3.3.1 Establishment of a Programme webpage

D 3.3.2 Establishment of an on-line toolbox for knowledge management and as project data repository

Complementary deliverables of the EC SOLUTIONSplus project:

EC D 1.1 Toolbox for efficient e-mobility (WP1, VTT)

EC D 1.5 Data storage repository (WP1, VIF)

EC D 7.3 Data management plan (WP7, UEMI)

3.4 A gender responsive communications and branding programme is developed to communicate and showcase the results of the programme to promote replication and wider use of project tools.

UNEP will be responsible for communications, branding and awareness raising. As part of this component, a comprehensive communications strategy for the entire programme will be developed. UNEP will also develop a series of general communication materials for the project. This will include flyers, presentations and project information packages. Additional communications materials will be developed on the basis of demand during the implementation of the project, for example for specific meetings. This component will also include the development of press releases, media briefings as well as the set-up and maintenance of a dedicates social media channels (e.g. Twitter) to share news from the Global Programme as well as the Country Child Projects in a timely manner. This component also envisages the development of a series of short videos (e.g. capturing key developments in selected Country Child Projects such as the roll-out of a demonstration fleet etc.), which will be disseminated through the programme website and social media.

Deliverables:

D 3.4.1 Development of a comprehensive and gender responsive communications strategy, inclusive branding

D 3.4.2 Physical communication materials - UNEP will develop a series of general communication materials for the project. This will include flyers, brochures, presentations, stickers and badges as part of project information packages and on the basis of demand during the implementation of the project, and including materials focusing at the nexus of e-mobility and gender

D 3.4.3 Press releases, media briefings, presentations, set-up and maintenance of social media channel and other communication materials as needed, and including materials focusing at the nexus of e-mobility and gender

D 3.4.4 Short videos on E-mobility projects in the GEF / SOLUTIONSplus countries, also showcasing the integration of gender aspects, will be developed for dissemination through the programme website and social media

Complementary deliverables of the EC SOLUTIONSplus project:

EC D 6.1 Dissemination, exploitation and replication strategy (WP6, UEMI)

EC D 6.2 Exploitation action summaries (WP6, POLIS)

EC D 6.3 Annual updates on dissemination activities (WP6, ERTICO)

3.5 Programme stakeholders participate in one global project launch meeting and one global end of project electric mobility meeting co-organised with other events.

UNEP will be responsible for the deliverables under output 3.5. The global meeting at the start of the project will be held virtually, or if possible physically in Paris at UN premises. It will be held in the second half of the first year of the project (i.e. quarter 3 or quarter 4 of 2021). Its objective is to bring all GEF (and optional also EC SOLUTIONSplus) country and city project together to discuss the GEF programme. It is intended that the meeting participants will discuss the link between the country projects and the activities at regional level, the Regional Support and Investment Platforms, and at global level, the three Global Thematic Working Groups. The meetings will also be joined by the three leads of the Regional Support and Investment Platforms (UNEP, CMS and ADB). As such, the meeting will support the creation of regional communities of practise.
The global meeting at the closing of the project will be held in Nairobi, at UNEP headquarters, in the last half year of the project (i.e. second half 2025/ first half 2026). The objective of the meeting will be to present the results of the programme, to promote replication and to ensure sustainability of the project. All GEF Global Programme countries as well as EC SOLUTIONSplus city projects will be invited and present their results.
The meetings will also include a communication and media component, showing the concrete progress being made by the programme. In specific, the meeting will discuss the sustainability of the programme and the country projects, including how the regional platforms will continue to promote and support a switch to electric mobility in the regions.
Deliverables:
D 3.5.1 Global launch meeting

D 3.5.2 Global project closing meeting

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

The Global Programme, supported through the Global Child Project, is aligned with Objective 1 of the Climate Change Focal Area to “Promote innovation and technology transfer for sustainable energy break-throughs”, through CCM1-2 - Promote innovation and technology transfer for sustainable energy breakthroughs for electric drive technologies and electric mobility.
The Global Child Project will develop a suite of tools, policy best practices, training materials and strategies to foster large-scale market introduction of electric mobility in GEF recipient countries worldwide. The country child projects on electric mobility under the Global Programme will use the materials to put in place conditions enabling this transformation. The link between the Global Programme and the Country Child Projects, but also between the different Country 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 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.
In particular, the programme, through the support of the Global Child Project, aligns with point two of the objectives to promote “electric drive technologies and electric mobility”. It also contributes to points 112, 113 and 114 of the GEF-7 Programming Directions to accelerate “the speed and scale of sustainable energy investment in developing countries”, to develop “innovative business models that go beyond business as usual” and to foster innovation.
Since many of the Country Child Projects under the Global Programme will develop electric mobility demonstration projects, the programme also aligns with the objective to focus “on the demonstration and early deployment of innovative technologies to deliver sustainable energy solutions that control, reduce or prevent GHG emissions”.
In addition, the programme follows GEF’s advice to deliver focused interventions “through programmatic approaches or regional projects”.

The program's theory of change, through the support of the Global Child Project, addresses the root causes of fossil-fuel dependency in the transport sector in participating low- and medium-income economies (Country Child Projects) and accelerates their processes to achieve low-emission transport sectors. The proposed approach includes generating best practice, creating conditions for investment and scale up of electric vehicles. This approach directly addresses the root causes of the environmental challenge (key barriers noted in the response to 2(a)), namely the high costs of electric vehicles, the lack of information and awareness, the policy and planning challenges, limited institutional capacity, and charging infrastructure and range anxiety. By addressing these head-on, the programme supports countries and the global community to implement short-term (e.g. demonstrations) and long-term (policy frameworks, national strategies) measures for achieving the desired transformation. The outcomes of these efforts will be the multiple environmental benefits of reduced GHG and air pollutant emissions in the countries, regions and globally.

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

Markets are already beginning to respond to e-mobility technologies. The life cycle costs of electric buses are often already lower than least cost alternative technologies, electric 2 & 3 wheelers have relative short payback periods and many companies and consumers in countries with strong e-mobility frameworks are now switching to electric mobility. Furthermore, the prices of electric cars are dropping, and life cycle costs are starting to become at price parity with ICEs. However, except in a few cases, governments in GEF recipient countries do not yet have the knowledge or experience to legislate and regulate electric vehicles. Without support, such countries may be unaware of effective policies or put in place sub-optimal policies that skew the market to attract sub-optimal technologies.

The aim of this programme is to capture and transfer the latest knowledge on electric mobility through the Global Child Project to these countries and to promote best practice options for creating and strengthening their electric mobility markets. The GEF is well placed to tackle this issue, since the Facility is able to fund technical assistance for policy and best practice development, provide risk capital for demonstrations, as well as to engage international development banks and technical assistance agencies in this process.

This GEF programme, through the Global Child Project, will support the removal of the barriers described in section 1 above and demonstrate electric vehicles in GEF recipient countries. Such efforts will build local capacity, support the development of effective and context-specific policies, and reduce the investment risk. This will attract concessional funding for scaling-up the demonstration of electric vehicles, facilitating the transformation to market-wide electric mobility in the long term. The GEF and EC SOLUTIONSplus programs will be the leading global programs to support a shift to electric mobility in recipient countries. The GEF project can therefore significantly accelerate the large-scale market introduction of electric vehicles in GEF recipient countries, which is necessary to support these countries to achieve their nationally determined contributions to the Paris Climate Agreement.

The programmatic approach seeks to bundle demand in the regions and thus reduce investment risk through lower electric vehicle prices. On the other side, the technology risk of for EV suppliers stemming from failure of vehicles will also be reduced through adequate training of vehicle operators and exchange between numerous projects. Thus, a win-win situation for both consumers and suppliers of EVs and EV supply equipment will be achieved.

There is only a short window of opportunity to avoid carbon lock-in, as vehicle fleets in developing countries are growing rapidly, and vehicles are on the road for up to 20 years or more in developing countries. Vehicles introduced today will determine the emissions of the fleet for the coming decades. Without the GEF funding to cover incremental costs of the introduction of electric mobility, it can be anticipated that the shift to e-mobility is delayed and that by 2030 and 2050, these markets will not achieve the market penetration of EVs needed to reach climate targets.

A Global Programme with large, medium and small developing and transitional countries from all over the world has the potential to significantly accelerate market introduction of electric vehicles and hence will contribute to a fast upscale of electric vehicles production numbers. No other Global Programme exists to start the demonstration of electric vehicles in GEF recipient countries and:

· Raise the urgently needed awareness for electric mobility;

· Initiate the knowledge dissemination process on the ground in many countries all over the world, as the existing potential to replicate lessons learnt from developed countries in Europe, North America and Southeast Asia to developing countries is limited.

Last but not least, the programmatic approach seeks to maximize use of GEF funds: generic tools are produced at global level, disseminated though Regional Support and Investment Platforms and adapted to the needs in the country at the country level. Thus, return on investment for development of tools and methodologies is maximized.

6) Global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF)

At the programme level, electric mobility is expected to have multiple benefits and co-benefits. First and foremost, it is intended to achieve the mitigation of significant amounts of CO_2 emissions in the Country Child Projects. In conjunction with the substantial CO_2 emission reductions, a significant reduction of the emissions of air pollutants such as NOx, SO_x, PM and CO will be achieved in the child country projects, as electric vehicles will not generate any such pollutant emissions. Since many of the in-country electric mobility projects will be in urban areas, the programme as a whole will contribute to improved urban air quality, better human health and reduced related deaths.

In, addition, the programme will contribute to significant cost reductions resulting from reduced expenditures by the Country Child Project countries on fuel imports, since the consumption of petroleum-based fuels will be reduced due to the increased deployment of electric vehicles. Therefore, the programme is also expected to improve energy security within the Country Child Project countries, since the share of local energy resources used in the transport sector will grow and dependency on imported fuels will decrease.

Environmental benefits are attributed to the projects under the programme as part of the following categories: 1) Direct benefits; 2) Secondary direct emission benefits; and 3) Indirect benefits. These categories are in line with those defined in the GEF "*Manual for Calculating Greenhouse Gas Benefits of Global Environment Facility Transportation Projects*" (prepared by the Institute for Transportation and Development Policy).

The various mitigation contributions are calculated as follows:

· **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[4].; 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 scale-up of electric mobility. Total emission reductions attributable to the project are based on the cumulative sum of annual emission reductions compared to the baseline scenario over a time frame equivalent to the lifetime of the demonstration assets purchased as part of the project or for a period of ten years after the end of the project[5].

The Global Child Project, including the Thematic Working Groups, and Support and Investment Platforms, will also lead to CO_2 emission reductions:

1. Through direct and indirect CO_2 emission reductions stemming from the EC SOLUTIONSplus project;
2. Through secondary direct CO_2 emission reductions related to replication of e-mobility projects through the Regional Support and Investment Platforms.

Table 10 OVERVIEW OF GHG EMISSION REDUCTIONS ACHIEVED by the Global Child Project

	Direct CO_2 emission reductions	Secondary direct CO_2 emission reductions	Total direct CO_2 emission reductions	Indirect CO_2 emission reductions	Total CO2 emission reductions
EC SOLUTIONSplus	6,800 t CO_2		6,800 t CO_2	7,500,000 t CO_2	7,506,800 t CO_2
Regional Support and Investment Platforms		262,142 t CO_2	262,142 t CO_2		262,142 t CO_2
Total Global Child	**6,800 t CO_2**	**262,142 t CO_2**	**268,942 t CO2**	**7,500,000 t CO_2**	**7,768,942 t CO_2**

In total, **7,8 million tons of CO_2** will be avoided until the year 2036 through the activities of the Global Child Project.

One of the thematic Global Thematic Working Groups will focus on batteries used for electric vehicles, including issues with respect to extraction and processing of raw materials needed for the manufacturing of batteries as well as the re-use, recycling and safe disposal of used EV batteries. To that extent, the Global Programme aims at incorporating environmental issues related to the entire life-cycle of batteries for use in electric vehicles. Thus, the programme not only looks into the mitigation of GHG and air pollutant emissions but also anticipates emerging environmental issues stemming from a large-scale market introduction of electric vehicles worldwide and seeks to develop strategies and policies to mitigate the associated risks.

Finally, one of the Thematic Working Groups will be dedicated to the integration of electric vehicle in the power generation, transmission and distribution systems. Part of that thematic platform will be the development of analysis and tools to evaluate the opportunities and challenges of an increased use of electric vehicles and the options to link-up with better integration of variable renewable power in grids around the world. To that end, the project may result in additional GHG emissions reduction stemming from the possible enabling role of electric mobility for the up-scaled integration of variable renewable power.

Please refer to Annex M for more details on the GHG emission reductions calculations.

7) Innovativeness, sustainability and potential for scaling up

Innovation

Electric vehicles and charging infrastructure are new technologies in all countries. The Global Child Project will support countries in the development of suitable and innovative business models to underpin investment and growth of these technologies. Innovative schemes to finance electric mobility will be developed, combining, for example, commercial and concessional ways of funding. This may also include the development of innovative business and financing models to share investment needs and economic risks when building the necessary charging infrastructure among multiple stakeholders such as charging infrastructure providers, municipalities and EV and EVSE manufacturers. Through the regional support and investment hubs, the Global Child Project will create opportunities for countries and cities to meet with technology providers and financiers to design programmes for investment in upscaling electric mobility.

Replication

Replication of the project outcomes to other cities, regions or countries is a core element of the programme design. While the programme will focus first on replication within child project countries that are using their STAR allocations and EC SOLUTIONSplus budgets, the programme, through the Global Child Project, will also extend to other countries and cities as part of the replication strategy. This will be mainly done through the e-mobility marketplace and replication events of the Regional Support and Investment Platforms. Financiers such as development banks, green funds but also venture capitalists will be invited to closely follow the country projects through the Regional Support and Investment Platform activities to enable successful match-making between replication projects and financial institutions.

In addition, the UNEP Sustainable Mobility Unit is the task leader of work package 5 of the EC SOLUTIONSplus project, which is geared towards the finance and bankability of scale-up and replication projects as well as policy development. WP 5 has a budget of about EUR 1,270,000 for implementation through the Regional Support and Investment Platforms of the global child project[6].

As such, the programme is expected to result in many more countries and cities developing electric mobility projects and programmes.

Sustainability

Sustainability of the Global Child Project will be provided through the Support and Investment Platforms, which will be implemented by financial institutions (ADB, EBRD) and executing agencies (UNEP, CMS) and will continue operation beyond the duration of the GEF programme and provide technical assistance to accelerate the shift to electric mobility to countries and cities within their region. The leads of the platforms, ADB, EBRD, UNEP and the CMS have committed to continue leading and supporting their platforms after the GEF programme. The GEF programme will be closely linked to existing electric vehicles initiatives of UNEP and the IEA, which will also continue after completion of the GEF programme.

Furthermore:

· Development banks have been included in the Global Child Project (ADB, EBRD) and in the Country Child Projects (ADB in India, EBRD in Ukraine, DBSA in South Africa, World Bank in Cote d'Ivoire) since they have interest in generating credit lines to invest in electric mobility in the public and private sector once the preconditions are achieved to do so:

· Electric vehicle manufacturers involved in the programme will see the benefits of transferring lessons learnt from North to South and South to South and will provide more competitive offers, e.g. for electric buses, as they see the market becoming substantially bigger;

· As outlined above, the knowledge management will be sustained by UNEP beyond the lifetime of the project. This includes the maintenance of the programme website for at least another two years beyond project life-time as well as the continued collection and analysis of e-mobility market data in selected GEF Global Programme countries;

· The Support and Investment Platforms will not only integrate countries participating in the GEF Global Programme but will address all countries in their respective region to participate in the knowledge exchange. The Support and Investment Platforms will be sustained beyond the lifetime of the project (mainly by the developing banks and the regional knowledge partners);

· Once EV and EVSE manufacturers see the benefits of the Global Programme they will also participate to sustain these Support and Investment Platforms;

· The GEF Country Child Projects will generate follow-up projects and investments funded by development banks, commercial banks and other funds such as the GCF.

Potential for scaling up

The integral approach of the programme aims for maximizing the potential for scaling-up of e-mobility by covering the whole electric mobility ecosystem to ensure EVs will become competitive sooner. The GEF Global Programme through the Global Child Project and the Country Child Projects, targets activities of step 1 and step 2 out of a three-step approach (Figure 6):

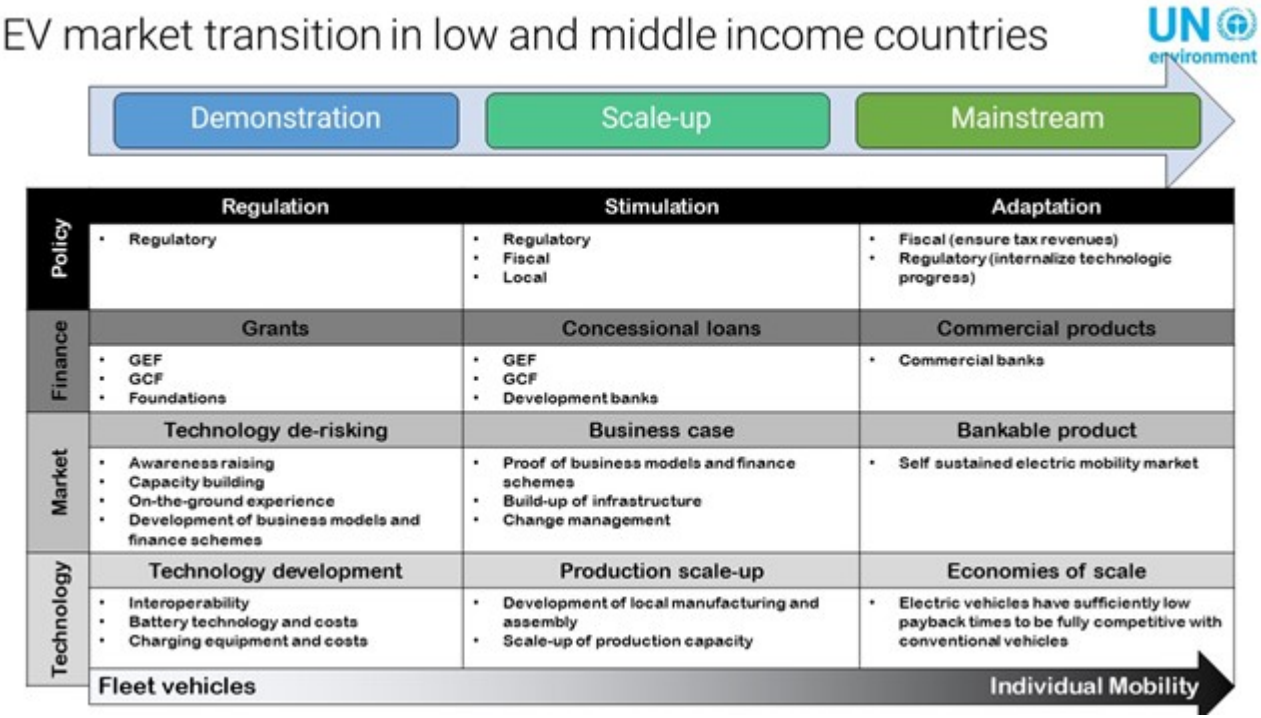


Figure 6 EV MARKET TRANSITION IN LOW- AND MIDDLE-INCOME COUNTRIES

Step 1:

· Demonstrate the technology on the ground and develop the policy framework for EV market integration;

· Build capacity on how to integrate, operate and maintain EVs in transport fleets;

· Raise awareness;

- Learn about charging and grid integration issues and the link to renewable power;
- Develop finance schemes and business models including spreading the higher upfront investment over longer times and multiple partners;
- Reduce the investment risk (DEMONSTRATION)

Step 2:

- Attract concessionary funding to build on the demonstration project and scale-up to large pilot projects;
- Show the economic viability and long-term feasibility with commercial size pilot projects (e.g. the electrification of 10% to 20% of a cities bus fleet);
- Solve charging and grid integration issues and start integrating renewable power;
- Thoroughly test the business models and finance schemes and further develop them to raise the interest of commercial banks;
- Enable scale-up (SCALE-UP)

Step 3:

- Build on the large-scale pilot projects (based on concessionary ways of funding) and develop fully bankable projects using usual ways of financing;
- A sustainable EV market is achieved (MAINSTREAM)

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[1] The duration of the Covid-19 crisis is unknown, but it is possible that travel restrictions will continue and, as a result, Working Group meetings may be organised and held as virtual meetings

[2] The duration of the Covid-19 crisis is unknown, but it is possible that travel restrictions will continue and, as a result, Working Group meetings may be organised and held as virtual meetings.

[3] Note that all in-person meetings are subject to the lifting of COVID-19 related travel restrictions. If the restrictions persist, the events may need to be moved to an online format.

[4] In case of the Country Child Projects these benefits are calculated over the lifetime of the purchased assets (e.g. 15 years for cars and buses, 5 years for 2&3 wheelers and 20 years for EV supply equipment).

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

[6] Deliverables of the EC SOLUTIONSplus WP 5 comprise: E-mobility scale-up concepts for 15 cities; 15 policy advise papers; 5 proposals for National Urban Mobility Programmes; Funding, financing and procurement summaries.

1b. Project Map and Coordinates

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

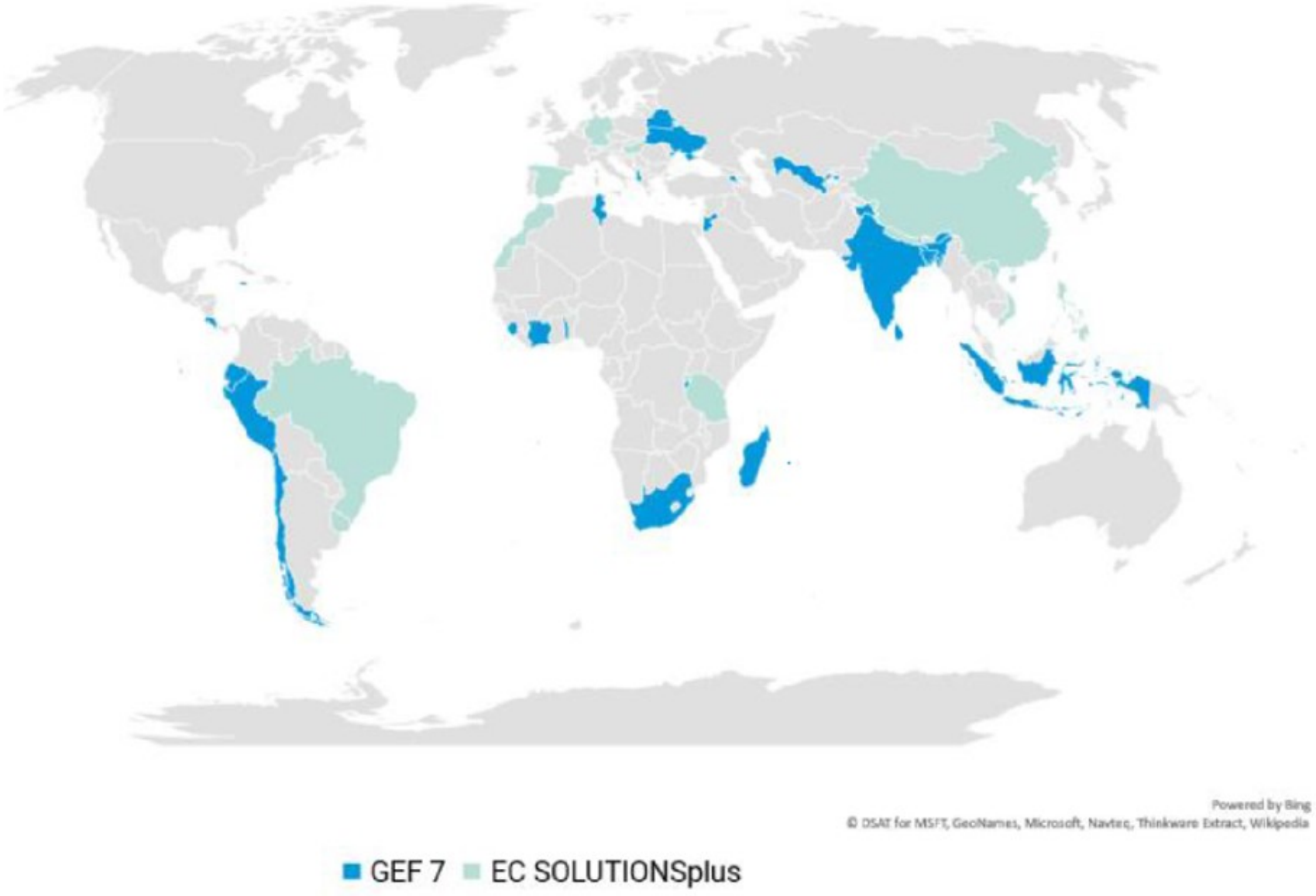

Figure 7 Programme Map

Table 11 Coordinates of the project countries

Child Projects 1st round	Antigua - Antigua and Barbuda	17.0747° N, 61.8175° W
	Yerevan - Armenia	40.1792° N, 44.4991° E
	Bujumbura - Burundi	3.3614° S, 29.3599° E
	Antofagasta, Puerto Montt and Talca - Chile	23.6509° S, 70.3975° W, 41.4689° S, 72.9411° W, 35.4232° S, 71.6485° W
	San José - Costa Rica	9.9281° N, 84.0907° W
	India	To be selected as part of the project implementation
	Abidjan - Ivory Coast	5.3600° N, 4.0083° W
	Kingston – Jamaica	44.2312° N, 76.4860° W
	Toamasina - Madagascar	18.1443° S, 49.3958° E
	Malé - Maldives	4.1755° N, 73.5093° E
	Lima, Iquitos – Peru	12.0464° S, 77.0428° W, 3.7437° S, 73.2516° W
	Canaries - Saint Lucia	13.9047° N, 61.0668° W
	Mahe – Seychelles	4.6827° S, 55.4804° E
	Freetown - Sierra Leone	8.4657° N, 13.2317° W
	Lomé - Togo	6.1256° N, 1.2254° E
	Ukraine	To be selected as part of the project implementation
	Tashkent - Uzbekistan	41.311028° N, 69.29508° E
	Berat and Belsh - Albania,	40.7086° N, 19.9437° E, 40.9795° N, 19.8977° E
	St. George – Grenada	12.0561° N, 61.7488° W
	Jakarta and Bali – Indonesia	6.2088° S, 106.8456° E, 8.3405° S, 115.0920° E
	Amman and 3 other municipalities – Jordan	31.9539° N, 35.9106° E, to be further developed during project preparation
	the Philippines	To be developed during project preparation
	City of Johannesburg, City of Tshwane, and EThekwini Municipality	26.2041° S, 28.0473° E, 25.6051° S, 28.2020° E, 29.8587° S, 31

	ahe, and EThekwini Municipality – South Africa	T S, 28.3929° E, 29.8587° S, 31.0218° E
	Sfax, Bizerte and Djerba – Tunisia	34.7398° N, 10.7600° E, 37.2768° N, 9.8642° E, 33.8076° N, 10.8451° E
Child Projects 2nd round	Dhaka, Chittagong, Khulna and Rajshahi – Bangladesh	23.8103° N, 90.4125° E, 22.3569° N, 91.7832° E, 22.8456° N, 89.5403° E, 24.3745° N, 88.6042° E, to be further developed during project preparation
	Colombo – Sri Lanka	6.9271° N, 79.8612° E
	Ecuador	To be developed during project preparation
GEF 7 Standalone	Minsk – Belarus	53.9006° N, 27.5590° E
	Port Louis – Mauritius	20.1609° S, 57.5012° E
EC SOLUTION Splus	Dar es Salaam - Tanzania	6.7924° S, 39.2083° E
	Hanoi - Vietnam	21.0278° N, 105.8342° E
	Kathmandu - Nepal	27.7172° N, 85.3240° E
	Kigali - Rwanda	1.9706° S, 30.1044° E
	Montevideo - Uruguay	34.9011° S, 56.1645° W
	Pasig - the Philippines	14.5764° N, 121.0851° E
	Quito - Ecuador	0.1807° S, 78.4678° W
	Madrid - Spain	40.4168° N, 3.7038° W
	Hamburg - Germany	53.5511° N, 9.9937° E
	Nanjing - China	32.0603° N, 118.7969° E

1c. Child Project?

If this is a child project under a program, describe how the components contribute to the overall program impact.

The Global Child Project is hosted under the “Global Programme to Support Countries with the Shift to Electric Mobility”, led by UNEP. Under the Global Programme to Support Countries with the Shift to Electric Mobility the following Country Child Project have been submitted for CEO Endorsement: Antigua and Barbuda, Armenia, Chile, Costa Rica, India, Cote d’Ivoire, Jamaica, Maldives, Peru, Sierra Leone, Saint Lucia, Ukraine, Uzbekistan. The following Country Child Project CEO Endorsement Documents are still under the development and have requested an extension of the submission deadline: Burundi, Madagascar, Seychelles and Togo.

In March 2020, a second round of Country Child Project Concept notes has been submitted, which has been approved by the GEF Council in June 2020. The second-round submission included: Albania, Bangladesh, Ecuador, Grenada, Indonesia, Jordan, South Africa, Sri Lanka, the Philippines and Tunisia. These country projects are currently in the Project Preparation phase.
Country Child Projects under the Global Programme have been submitted for implementation by a number of different GEF Agencies, including: UNEP, UNDP, UNIDO, the ADB, the EBRD and the DBSA. In addition, two electric mobility standalone projects have been approved by the GEF Secretariat which are Belarus (UNDP) and Mauritius (UNDP).

In addition, two stand-alone e-mobility projects have been endorsed by the GEF Secretariat – Belarus (UNDP) and Mauritius (UNDP). Both projects will be closely linked to the Global Electric Mobility Programme but will not report to the Programme.

The Global Programme is divided into 4 components:

- Component 1: Global Thematic Working Groups and knowledge materials
- Component 2: Support and Investment Platforms
- Component 3: Country project implementation
- Component 4: Tracking progress, monitoring and dissemination

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

Table 12 Global e-mobility programme monitoring framework

Global E-mobility Programme Monitoring Framework

Global level monitoring | Country level monitoring

Objective level indicators

Indicator A: Direct and Indirect Greenhouse Gas Emissions Mitigated (metric tons of CO_2) mitigated

Indicator B: Direct and Indirect enegy savings (MJ)

Indicator C: Number of direct beneficiaries (disaggregated by Gender)

Component 1 Global thematic working groups and knowledge materials	Component 2 Support and Investment Platforms	Component 3 Country project implementation (Child Projects)	Component 4 Tracking progress, monitoring and dissemination
Outcome 1 Knowledge products are generated to support policy making and investment decision-making through four global thematic working groups	**Outcome 2** Conditions are created for market expansion and investment in electric mobility through support and investment platforms	**Outcome 3** Conditions are created at country and city level for the introduction of electric mobility demonstration projects, and wider up take of electric mobility	**Outcome 4** Projects and electric mobility markets are tracked, and key developments, best practices and other lessons learned are shared to promote wider uptake of electric mobility.
Indicator 1.1 # of knowledge products developed by the four thematic working groups and used by the Support and Investment platforms in their training and outreach activities	Indicator 2.1 % of countries using services and knowledge products offered by the Support and Investment Platform	Indicator 3.1 % of countries with an improved institutional framework and a strategy to promote the uptake of low-carbon electric mobility	Indicator 4.1 % of countries generating and sharing best practices and other lessons learned on low-carbon electric mobility with the global programme
Baseline: 0 / Mid-point target: 10 / End point target: at least 25	Baseline: 0% / Mid-point target: At least 25% of the GEF-approved Country Child Projects / End-point target: At least 85% of the GEF-approved Country Child Projects	Baseline: 0% / Mid-point target: - / End-point target: At least 85% of the GEF-approved Country Child Projects	Baseline: 0% / Mid-point target: - / End-point target: At least 85% of the GEF-approved Country Child Projects
	Indicator 2.2 # of e-mobility scale-up and / or replication concepts facilitated as a result of the match-making	Indicator 3.2 % of countries with nationally generated evidence of the technical, financial and/or environmental benefits of low-carbon electric mobility	Indicator 4.2 # of e-mobility knowledge products refined based on evidence coming from the country projects
	Baseline: 0 / Mid-point target: 2 / End point target: At least 10	Baseline: 0% / Mid-point target: - / End-point target: At least 85% of the GEF-approved Country Child Projects	Baseline: 0 / Mid-point target: - / End point target: at least 8
	Indicator 2.3 # of financial institutions / development banks (national/regional) that have been engaged through the Global Programme and are actively supporting e-mobility projects	Indicator 3.3 % of countries that have improved preparedness to accelerate market transformation towards low-carbon electric mobility	Indicator 4.3 # of non-e-mobility programme countries committing to actively promote the uptake of low-carbon e-mobility
	Baseline: 4 (ADB, EBRD, DBSA, World Bank) / Mid-point target: - / End point target: 12 (+8)	Baseline: 0% / Mid-point target: - / End-point target: At least 85% of the GEF-approved Country Child Projects	Baseline: 0 / Mid-point target: - / End point target: 10
	Indicator 2.4 # of US$ leveraged to scale-up low-carbon electric mobility through the support and investment platforms	Indicator 3.4 % of countries with measures in place to ensure the long-term environmental sustainability of low-carbon electric mobility	
	Baseline: US$ 0 / Mid-point target: - / End point target: US$ 140 million	Baseline: 0% / Mid-point target: - / End-point target: At least 85% of the GEF-approved Country Child Projects	

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

For this purpose and whenever applicable, the global level indicators highlighted in green are translated into a country-level indicator in the Project Results Framework located in Annex A of the Country Child Projects' CEO Endorsement Documents. During project implementation, the Executing Agencies of the Country Child Projects will be requested to report against the indicators of their country Project Results Framework on an annual basis (during the PIR process) and to communicate this information to the Global Child Project's executing partners.

The UNEP Sustainable Mobility Unit (SMU) with support from the UNEP Climate Change Mitigation Unit (CCMU) will aggregate all Country Child Project results framework indicators, which are targeting the Global Programme results framework. In addition, being a Core Indicator for GEF projects in the Climate Change Focal Area, GHG emission reductions from all the Country Child Projects and the Global Child Project will be monitored and compared against the estimates submitted at CEO Endorsement stage. The same principle will apply to the materialized co-financing: UNEP will ensure its Executing Agencies report materialized co-financing contributions as part of their annual co-finance reporting requirement. UNEP will also request all the other Implementing Agencies (ADB, UNDP, UNIDO, EBRD and DBSA) to share the annual co-finance reports of the projects they are implementing on a yearly basis, to be able to keep track and report the co-financing materialized from all Child projects at the Programme level.

2. Stakeholders

Select the stakeholders that have participated in consultations during the project identification phase:

Civil Society Organizations Yes

Indigenous Peoples and Local Communities

Private Sector Entities Yes

If none of the above, please explain why:

Please provide the Stakeholder Engagement Plan or equivalent assessment.

A wide range of stakeholders was consulted in the programme identification phase. Key stakeholders contacted for the development of the Global Programme include IEA EVI members and partners, and leaders, partners and coordinators of initiatives on fuel efficiency improvements and electric mobility, and GEF implementing agencies. In addition, the IEA reached out to the participants of its Mobility Model initiative and selected EVI member countries supporting the IEA in reaching out to businesses involved in e-mobility in their jurisdictions. The IEA also had initial consultations with the OECD working on the due diligence guidance for responsible business conduct and individuals working on the Global Battery Alliance at the World Economic Forum.

During project development, consultations with the consortium members of EC SOLUTIONSplus played a major role. These partners included representatives of the cities under the EC SOLUTIONSplus project, International Organizations such as UN Habitat, Civil Society Organizations such as Institute for Transportation and Development Policy (ITDP) and Clean Air Asia, and the vast network of research institutes and private sector stakeholders (see Table 13).

Key stakeholder consultation events included:

- Two EVI Advisory Board meetings (held in Kobe, Japan, on 28 September 2018, and on 25 May in Malmö).
- A side event of the GEF Sixth Assembly and associated meetings, held in Da Nang on 26 June 2018.
- An ad-hoc stakeholder consultation meeting, following a series of conference calls, targeting specific GEF implementing agencies, held in Paris, at the IEA premises, on 27-28 August 2018.
- The Urban Pathways Actions Planning Days 2019 on February 7 and 8, 2019 in Berlin, Germany. This event brought together the demonstration cities under the EC SOLUTIONSplus project with the EC SOLUTIONSplus consortium to set the scope for the demonstration projects. More than 40 participants joined the planning workshop and the outputs directly fed into the design of the city projects.
- A Project Preparation workshop held on August 28 to 29 2019 at UNEP in Nairobi.
- A Global Programme Development meeting held on October 22nd to 23rd 2019 at the IEA in Paris.
- The EC Solutions kick-off workshop January 21st/22nd 2020 in Berlin.

Table 13 stakeholder Engagement plan

Stakeholder main group	Stakeholder name	Existing activities with potential to be leveraged	Content engagement, contributions to the project (identified by Component)
Inter-Governmental Organization	International Energy Agency (IEA)	Secretariat of the Electric Vehicle Initiative (EVI), IEA hosts the Clean Energy Transitions Programme; IEA hosts the Mobility Model Partnership, which is a private sector group to support the Mobility Model development	Executing agency, steering committee member, knowledge partner Component 1: Lead of 4-wheeler LDV, Battery and Grid Global Thematic Working Groups, Component 3: Collects and analyses data on EV market development in all Country Child Projects
Inter-Governmental Organization	UN Environment Programme (UNEP) – Climate Change Mitigation Unit	Is implementing a wide range of climate change mitigation projects funded by the GEF	Lead implementing agency of the Global Project and the Global Programme, steering committee member, reports to GEF Secretariat Implementing Agency for the child projects in: Antigua and Barbuda, Armenia, Chile, Costa Rica, India, Cote d'Ivoire, Madagascar, Maldives, Seychelles, Sierra Leone, Saint Lucia, Togo, Ukraine, Ecuador, Grenada and Sri Lanka.
Inter-Governmental Organization	UN Environment Programme (UNEP) – Sustainable Mobility Unit	Hosts UNEP Electric Mobility Programme, Partnership for Clean Fuels and Vehicles (PCFV), Global Fuel Economy Initiative (GFEI)	Execution agency, steering committee member, lead implementing agency of the EC SOLUTIONSplus partner programme (WP 5 Task Leader) Component 1: Lead 2&3 Wheeler Global Thematic Working Group Lead HDV Global Thematic Working Group Component 2: Lead of Africa regional Support and Investment Platform, steering committee member Component 3: Leads communication materials development and organization of the global launch and closing meeting
Inter-Governmental Organization	UN Development Programme (UNDP)	Has implemented GEF e-mobility projects in Bhutan, Malaysia and Philippines, h	Steering committee member, knowledge partner

		Malaysia and Philippines, h as country offices in all GE F Child Project Countries	Implementing Agency for the Child Projects i n Bangladesh, Indonesia, Jamaica, Peru and Uzbekistan
Inter-Governmental Organization	UN Industrial Deve lopment Organizat ion (UNIDO)	Has implemented GEF e-m obility projects in South Afr ica and China, has sub-regi onal offices in all Global E-Mobility Programme Regio ns	Steering committee member, knowledge part ner Implementing Agency for the Child Projects Albania, Jordan, the Philippines and Tunisia
Inter-Governmental Organization	European Commis sion (EC)	Has a portfolio of 300 billio n Euros of projects implem ented through its Innovatio n and Networks Executive Agency (INEA), hosts the H orizon 2020 Programme, w hich has a total volume of 80 billion Euros and which funds the EC SOLUTIONSpl us project, has already fun ded the EC SOLUTIONS pro ject	Donor agency of the EC SOLUTIONSplus part ner programme
Inter-Governmental Organization	UN Habitat	Has a portfolio of urban tra nsportation and non-motor ized transport projects, is o ne of the founding partners of the Urban Electric Mobili ty Initiative (UEMI), which e xecutes the SOLUTIONS an d SOLUTIONSplus projects	Lead implementing agency of the EC SOLUTI ONSplus partner programme (WP 2 Task Lea der), knowledge partner Component 2: Co-organizes specific e-mobility trainings and capacity building workshops under the Africa Support and Investment Platform and co-fina nced by the EC SOLUTIONSplus project
Multilateral Develop ment Bank	Asian Developmen t Bank (ADB)	Has supported their develo pment member countries (40 DMCs) through the AD B Sustainable Transport Ini tiative (STI) with the transit ion to a cleaner and more e fficient transport sector	Co-implementing agency, steering committee member, knowledge partner, Component 2 Lead of the Asia and the Pacific Support and Investment Platform India Child Project co-implementing agency
Multilateral Develop ment Bank	European Bank for Reconstruction an	Has a track-record of inves tment in clean technology	Steering committee member, lead of the kno wledge partner,

	d Development (EBRD)	and urban mobility projects in Eastern Europe, West Asia, North Africa and Middle East	Component 2 Lead of the Central and Eastern Europe, West Asia and Middle East Support and Investment Platform Ukraine Child Project co-implementing agency
Multilateral Development Bank	African Development Bank (AFDB)	Has a track-record of investment in clean technology and urban mobility projects in Africa	Knowledge partner Component 2: Participates in market place and replication meetings organized by the Africa Support and Investment Platform
Multilateral Development Bank	World Bank (WB)	Has a track-record of investment in clean technology and urban mobility projects around the World	Knowledge partner Component 2: Participates in market place and replication meetings organized by the Africa Support and Investment Platform Co-financier in the Cote d'Ivoire and Sierra Leone Child Projects
Multilateral Development Bank	West African Development Bank (BOAD)	Has a track-record of investment in clean technology and urban mobility projects in West Africa	Knowledge partner Component 1: Supports the development of e-mobility business models and finance schemes in West Africa Component 2: Participates in market place and replication meetings organized by the Africa Support and Investment Platform
Multilateral Development Bank	Development Bank of Southern Africa (DBSA)	Has a track-record of investment in clean technology and urban mobility projects in Southern Africa	Knowledge partner Component 2: Participates in market place and replication meetings organized by the Africa Support and Investment Platform Implementing agency of the South Africa Child Project
NGO	Centro de Movilidad Sostenible (CMS)	Has a track record of E-Mobility, GFEI and PCFV projects in Latin America and the Caribbean, hosts the Eur	Steering committee member, knowledge partner, project execution partner, implementing partner of the EC SOLUTIONSplus project Component 1:

		oclima funded MOVE platform, supported the introduction of electric buses in Santiago de Chile, is the expert organization with regards to electric buses in Latin America	Expert support to Global Thematic Working Groups in particular on electric buses (HDV WG) and the toolbox development Component 2: Lead of the Latin America and Caribbean Support and Investment Platform, support to Country Child Projects, steering group member Support to Country Child Projects in Latin America and the Caribbean Component 3: Involved in data collection and processing for Latin America and Caribbean e-mobility markets
CSO	Urban Electric Mobility Initiative UEMI	Has a track record of urban mobility projects under the SOLUTIONS project in South East Asia	Steering committee member, EC SOLUTIONSplus Lead: Heads the consortium for EC SOLUTIONSplus, knowledge partner, Task leader EC SOLUTIONSplus: WP 2, D2.6 Collection of good practises for capacity building, WP 4 D 4.2 updates on 9 e-mobility demonstration projects, WP 5 D 5.1 15 scale-up concepts for e-mobility projects, 5 prefeasibility studies Component 1: Supports the coordination of the toolbox development under the expert support to Global Thematic Working Groups and policy and demonstration partners, steering group member Component 2: Supports the delivery of trainings, uses the infrastructure of the Support and Investment Platforms, contributes to Community of Practise with EC SOLUTIONSplus demo projects, contributes to Market Place events through coordination of the networking with the EC SOLUTIONSplus consortium, supports dissemination of results. Supports 5 GEF e-mobility Country Child Projects with replication funds (Armenia, Sierra Leone, Togo, Burundi, Seychelles)

			Component 3: Supports knowledge management and dissemination through the joint on-line e-mobility toolbox
NGO	Clean Air Asia	Has a track record of E-Mobility, GFEI and PCFV projects in Asia, is implementing partner of the ADB, is the expert organization with regards to clean mobility in Asia	EC SOLUTIONSplus implementation partner, knowledge partner Component 1: Expert support to Global Thematic Working Groups Component 2: Expert support for training and capacity building Expert support for project execution in Asia and the Pacific
NGO	Sustainable Transport Africa (STA)	Has a track record of E-Mobility, GFEI and PCFV projects in Africa, is implementing partner of UNEP	Knowledge partner Component 2: Potential expert support for training and capacity building Potential expert support for project execution in Africa
NGO	Centre for Environment and Development for the Arab Region and Europe (CEDARE)	Has a track record of E-Mobility, GFEI and PCFV projects in North Africa and Middle East, is implementing partner of UNEP	Knowledge partner Component 2: Potential expert support for training and capacity building Potential expert support for project execution in North Africa and Middle East
NGO	Caucasus Environmental NGO Network (CENN)	Has a track record of GFEI and PCFV projects in Eastern Europe and West Asia, is implementing partner of UNEP	Knowledge partner Component 2: Potential expert support for training and capacity building Potential expert support for project execution in Eastern Europe and West Asia
NGO	International Council on Clean Transportation (ICCT)	Has a track record of transport projects around the world, is implementing partner of GFEI projects	Knowledge partner, EC SOLUTIONSplus implementation partner – WP3 D3.1 Catalogue of e-mobility solutions Component 1: Expert support to Global Thematic Working Groups

			roups Component 2: Potential expert support for training and capacity building Potential expert support for Country Child Project execution,
CSO	C40	Partnership of cities for clean and efficient transportation	Knowledge partner, Component 2: City network for replication of e-mobility projects in cities around the world, co-organiser of replication event through Latin America & Caribbean Support and Investment Platform as part of ZEBRA initiative
NGO	FIA Foundation	Executing partner of the GFEI projects around the world, track record with hosting and participating high level events on cleaner vehicles and fuels;	Co-financing agency for the Global Programme (as part of the aggregate UNEP co-finance), knowledge partner Potential co-finance partner for e-mobility in Africa. Component 1: Co-finances toolbox development for electric LDVs and HDVs Component 2: Coordination with on-going GFEI projects in various country projects and potential co-finance to African e-mobility Child Country projects.
NGO	Cooperation for urban mobility in the developing world (CODATU)	NGO with a track record of low carbon transportation projects with a focus on West Africa and Asia	Knowledge partner, EC SOLUTIONSplus implementation partner, WP2 Task 2.2. Peer to peer exchange, 2.4 Regional trainings, WP 4 Task 4.2 Demonstration Actions Component 2: Expert support for capacity building and training through the Africa Support and Investment Platform Potential partner for expert support in Country Child Project implementation
NGO	Institute for Transportation and Development Policies	International research institute with a track record of low carbon transportation p	Knowledge partner, EC SOLUTIONSplus implementation partner WP 4, D4.4 Report on demonstration activities; WP 8 Ethics

	(ITDP)	rojects world-wide	Component 1: Expert support for development of global too lbox on electric LDVs Component 2: Expert support for capacity building and train ing through the Africa Support and Investme nt Platform Expert support for Country Child Project exec ution in Africa
CSO	Transforming Urba n Mobility (TUMI)	Global implementation initi ative on sustainable mobili ty	Knowledge partner Component 2: Expert support for capacity building
NGO	REN21	Track record of renewable power projects	Knowledge partner Component 1: Potential expert support to global WG on cha rging network, grid integration, renewable po wer and batteries
CSO	ICLEI – Local Gov ernments for Sust ainability	Partnership of cities for su stainable development	Potential knowledge partner, Component 2: City network for replication of e-mobility proj ects in cities around the world,
CSO	International Asso ciation of Public Tr ansport (UITP)	International public transp ort association with a track record of low carbon public transportation projects wor ld-wide	Knowledge partner, EC SOLUTIONSplus lead i mplementation partner, leader WP 4, WP 3 D 3.1 Technical specifications for demo action Component 1: Expert support for development of global too lbox on electric HDVs, Component 2: Expert support for capacity building and train ing through the Support and Investment Platf orms Expert support for Country Child Project impl ementation
CSO	POLIS - Cities and Regions for Better Transport	Partnership of cities for su stainable transportation	Knowledge partner, EC SOLUTIONSplus lead i mplementation partner, Lead WP2 Capacity b uilding, city-to-city cooperation and professio nal development Component 2:

			City network for replication of e-mobility projects in cities around the world, Expert support for capacity building and training through the Support and Investment Platforms
Government	Canada, Ministry of Natural Resources	EVI member	Co-financing partner for the Global Programme, in particular the expansion of the Global EV Outlook to new assessments and countries; <u>Component 3:</u> Financial contribution to output 3.1
Government	China, Ministry of Science and Technology and Shanghai International Automobile city group		
Government	Finland, Ministry of economic affairs and employment		
Government	France, Ministry for an Ecological and Inclusive Transition		
Government	Germany, Ministry of Economy and Energy		
Government	India, Ministry of Power		
Government	Japan, Ministry of Economy, Trade, and Industry		
Government	Mexico, Secretariat of Energy (SENER)		
Government	Netherlands, Netherlands Enterprise Agency		
Government	New Zealand, Ministry of Energy and Ministry of Transport		

Government	Sweden, Ministry of Environment and Energy		
Government	United Kingdom, Office for Low Emission Vehicles		
Academia	School of Environment (SOE) of Tsinghua University (THU), Basel and Stockholm Convention Regional Centre for the Asia and Pacific Region in China (BCRC-SCRC China).	Research institute with a track record in environmental research	Knowledge partner Component 1: Expert support for development of global toolbox Component 2: Expert support for capacity building and training through the Support and Investment Platforms, in particular in Asia
Academia	German Aerospace Center (DLR e.V.)	International research institute with a track record of low carbon transportation projects world-wide	Knowledge partner, EC SOLUTIONSplus co-implementation partner WP 1, Task leader D. 1.3 User needs assessment Component 1: Expert support for development of global toolbox on electric LDVs, Component 2: Potential provider for data loggers to track demo vehicles, expert support for Country Child Project implementation
Academia	VTT Technical Research Centre of Finland	Research institute with a track record of clean energy and transportation projects, conducted the analysis to introduce e-buses in Santiago de Chile	Knowledge partner, EC SOLUTIONSplus lead implementation partner lead of WP 1, Development of e-mobility toolbox, Component 1: Lead institution for the development of global toolbox on electric LDVs, lead of EC SOLUTIONSplus toolbox development, coordination of input to the EC SOLUTIONSplus project Component 2: Potential expert support for Country Child Project implementation, e.g. e-bus project Component 3: Lead developing agency of the joint on-line e

			Lead developing agency of the joint on-line e-mobility toolbox
Academia	Technical University of Denmark (DTU)	Research institute with a track record of clean energy and transportation projects	Knowledge partner, EC SOLUTIONSplus implementation partner WP 1, D1.6 Impact assessment Component 1: Expert support for development of global toolbox on e-mobility, demo project impact assessment
Academia	University of California (UCD), Sustainable Transportation Energy Pathways Program (STEPS+)	Research institute with a track record of clean energy and transportation projects	Potential knowledge partner Component 1: Expert support for development of global toolbox on e-mobility, demo project impact assessment
Academia	Technical University Berlin	University with a track record of clean energy and transportation projects	Knowledge partner, EC SOLUTIONSplus co-implementation partner WP 2, D2.3 Dedicated training programme on the toolbox for young professionals Component 2: Potential expert support for capacity building and training through the Support and Investment Platforms
Private Sector	BYD	Supplier of electric buses; MoU with UNEP AQMU;	Knowledge partner, supplier of electric buses, Component 1: Expert participant in global HDV WG to develop the e-bus toolbox; Component 2: Participation in marketplace and replication events of the various Support and Investment Platforms Potential supplier of e-buses for demonstration projects in Seychelles, Burundi, Cote d'Ivoire, Peru, Antigua and Barbuda
Private Sector	Honda	Supplier of electric 2&3 wheelers; donated 70 e-scooters for demonstration in Hanoi/Vietnam	Knowledge partner, supplier of electric 2 wheelers, Component 1: Expert participant in global LDV WG to develop the 2&3 wheeler toolbox;

			Component 2: Participation in marketplace and replication e vents of the Asia and the Pacific Support and Investment Platforms Potential supplier of e-2wheelers for demons tration projects in Asia and the Pacific and La tin America
Private Sector	Ampersand	Supplier of electric 2&3 wh eelers locally manufacture d in Rwanda	Knowledge partner, supplier of electric 2&3 w heelers, Component 1: Expert participant in global LDV WG to develo p the 2&3 wheeler toolbox; Component 2: Participation in marketplace and replication e vents of the Africa Support and Investment Pl atform Implementation partner in the EC SOLUTION Splus demonstration project in Kigali Potential supplier of e-2wheelers for demons tration project in Burundi
Private Sector	Kibo Motors	Supplier of electric motorc ycles locally manufactured in Kenya	Knowledge partner, supplier of electric 2&3 w heelers, Component 1: Expert support to review the 2&3 wheeler tool box on local assembly and manufacturing of e-motorcycles; Component 2: Participation in marketplace and replication e vents of the Africa Support and Investment Pl atform
Private Sector	Opibus	Supplier of electric motorc ycles locally manufactured in Kenya	Knowledge partner, supplier of electric 2&3 w heelers, Component 1: Expert support to review the 2&3 wheeler tool box on local assembly and manufacturing of e-motorcycles; Component 2: Participation in marketplace and replication e vents of the Africa Support and Investment Pl

			atform Potential supplier of e-2wheelers for demonstration projects in Africa
Private Sector	TAILG	Supplier of electric 2&3 wheelers; MoU with UNEP AQMU; donated 90 e-motorcycles for demonstration in East Africa; donated a e-motorcycle prototype for testing to UNEP	Knowledge partner, supplier of electric 2&3 wheelers, Component 1: Expert participant in global LDV WG to develop the 2&3 wheeler toolbox; Component 2: Participation in marketplace and replication events of the various Support and Investment Platforms Potential supplier of e-2&3 wheelers for demonstration projects in Burundi, Togo and Peru
Private Sector	Volvo	Supplier of electric buses; industry partner in the Climate and Clean Air Coalition to provide clean vehicles to cities around the world	Knowledge partner, supplier of electric buses, EC SOLUTIONSplus implementation partner WP3 D3.3 Business opportunities and partnerships Component 1: Expert participant in global HDV WG to develop the e-bus toolbox; Component 2: Participation in marketplace and replication events of the various Support and Investment Platforms
Private Sector	Scania	Supplier of electric buses; industry partner in the Climate and Clean Air Coalition to provide clean vehicles to cities around the world	Knowledge partner, supplier of electric buses, Component 1: Expert participant in global HDV WG to develop the e-bus toolbox; Component 2: Participation in marketplace and replication events of the various Support and Investment Platforms
Private Sector	Toyota	Industry partner of the IEA Mobility Model partnership	Potential supplier of EV technology, knowledge partner Component 1: Expert participant in global LDV WG to develop the e-LDV toolbox;
Private Sector	TNO	Research partner with a tra	Knowledge partner, EC SOLUTIONSplus imple

Private Sector	TNO	Research partner with a track record in industry research for clean and efficient vehicles	Knowledge partner, EC SOLUTIONSplus implementation partner WP 1, D1.2 Evaluation framework, Component 1: Expert support for development of global toolbox on electric LDVs
Private Sector	Zaragoza Logistics Centre	Logistics company	Knowledge partner, EC SOLUTIONSplus co-implementation partner WP 1Task 1.1 Toolbox for efficient e-mobility, Task 2.4 Regional trainings; Task 2.5 Global trainings, Community of practice, e-learning Component 1: Expert support for development of global toolbox on e-mobility, demo project impact assessment
Private Sector	Rupprecht Consult	Consulting company with a track record of clean transportation projects	Knowledge partner, EC SOLUTIONSplus co-implementation partner WP 4, Demonstration actions – living labs. Task 4.2.2 Regional implementation Component 2: Expert support for capacity building and training through the Support and Investment Platforms
Private Sector	Centro Ricerche Fiat/ IVECO	Car and HDV manufacturing research institute	Knowledge partner, EC SOLUTIONSplus co-implementation partner WP 2, Task 2.2 Capacity tools and methodologies; Task 2.3 Peer to peer exchange, Task 2.4 Regional trainings; Task 2.5 Global trainings, Community of practice, e-learning, WP 3 Technical and business partnerships Component 1: Expert support for development of global toolbox on electric LDVs
Private Sector	Renault-Nissan-Mitsubishi Alliance	EV and EVSE manufacturer	Potential supplier of e-mobility technology, Component 1: Expert support for development of global toolbox on electric LDVs, Component 2: Potential supplier of demonstration vehicles f

			or Country Child Project implementation, e.g. in Cote d'Ivoire, Jamaica, St Lucia, Peru, Chile
Private Sector	Iberdrola	Utility	Potential knowledge partner Expert support for development of global too lbox on charging network, grid integration, re newable power and battery re-use, recycling and safe disposal Component 2: Potential expert support for Country Child Pr oject implementation e.g. Chile Child Project
Private Sector	E.ON	Utility	Potential knowledge partner Component 1: Expert support for development of global too lbox on charging network, grid integration, re newable power and battery re-use, recycling and safe disposal Component 2: Potential expert support for Country Child Pr oject implementation
Private Sector	Vattenfall	Utility	Knowledge partner, Component 1: Expert support for development of global too lbox on charging network, grid integration, re newable power and battery re-use, recycling and safe disposal Component 2: Potential expert support for Country Child Pr oject implementation
Private Sector	Enel X	Utility	Knowledge partner, Country Child Project co-finance partner in Chile Component 1: Expert support for development of global too lbox on charging network, grid integration, re newable power and battery re-use, recycling and safe disposal Component 2: Potential expert support for Country Child Pr oject implementation e.g. Chile Child Project
Private Sector	ABB B.V.	EVSE manufacturer with tr	Knowledge partner, EC SOLUTIONSplus co-i

		ack record in e-bus projects around the world	mplementation partner D1.1 : Toolbox for efficient e-mobility; WP 2 Task 2.4 Regional trainings; WP 3, Task 3.3 Business models and plans; Task 3.5 Definition functional requirements for e-mobility innovations; WP 4 Task 4.1 Demonstration implementation plans and set-up of regional platforms; ABB will provide charging solutions to Madrid, Hanoi, Montevideo; WP5 - Scale-up, finance, bankability, commercialisation and institutionalisation Component 1: Expert support for development of global toolbox on charging network, grid integration, renewable power and battery re-use, recycling and safe disposal Component 2: Expert support for capacity building and training through the Support and Investment Platforms Potential expert support for Country Child Project implementation Potential supply for EVSE equipment for Country Child Project implementation
Private Sector	Applusplus IDIADA	Automotive technology company	Knowledge partner, EC SOLUTIONSplus lead implementation partner WP 3 D3.8 Standardisation and harmonization specifications related to demo actions; Task 3.1 E-mobility solutions catalogue WP 1 Task 1.2: Evaluation framework, user needs and data requirements; Task 1.3: Impact assessment, data collection and evaluation; D1.1 : Toolbox for efficient e-mobility; Component 1: Expert support for development of global toolbox on charging network, grid integration, renewable power, battery re-use, recycling and safe disposal and electric LDVs; Component 2:

			Expert support for capacity building and training through the Support and Investment Platforms Potential expert support for Country Child Project implementation
Private Sector	Dynniq B.V.	Grid integration company	Knowledge partner, EC SOLUTIONSplus co-implementation partner WP1 - Toolbox and evaluation; WP 2, Task 2.5 Global trainings, Community of practice, e-learning; WP 3 Task 3.3. Business models and plans, Task 3.4 Start-up incubator Component 1: Potential expert support for development of global toolbox on charging network, grid integration, renewable power, battery re-use, recycling and safe disposal and electric LDVs; Component 2: Potential expert support for capacity building and training through the Support and Investment Platforms
Private Sector	ERTICO ITS Europe	ITS Association with a network of ITS experts	Knowledge partner, EC SOLUTIONSplus implementation partner WP3 – Task lead D 3.9 Start-up summary; WP 1 Task 1.2: Evaluation framework, user needs and data requirements, WP 2 Task 2.2 Capacity tools and methodologies; Task 2.5 Global trainings, Community of practice, e-learning; WP 3 Task 3.3 Business models and plans Component 1: Potential expert support for development of global toolbox on charging network, grid integration, renewable power, battery re-use, recycling and safe disposal and electric LDVs; Component 2: Potential expert support for capacity building and training through the Support and Investment Platforms
Private Sector	FIER Automotive	Automotive consulting co	Knowledge partner, EC SOLUTIONSplus lead i

		mpany with a track record of e-mobility projects	mplementation partner Lead WP3 D3.4 Global competitiveness report on electric mo bility solutions; Task 3.4 Start-up incubator D 3.6 Fifteen (15) business models for e-mobili ty solutions (incl. public transport, logistics, c ar/bike-sharing, charging); WP 1 Task 1.2: Ev aluation framework, user needs and data req uirements; Task 1.3: Impact assessment, dat a collection and evaluation; WP 2 Component 1: Potential expert support for development of global toolbox on charging network, grid inte gration, renewable power, battery re-use, recy cling and safe disposal and electric LDVs; Component 2: Potential expert support for capacity building and training through the Support and Investm ent Platforms Potential expert support for Country Child Pr oject implementation
Private Sector	T-Systems	Mobile communication and infrastructure company	Knowledge partner, EC SOLUTIONSplus co-i mplementation partner; WP3 - Technical and business partnerships, models and impleme ntation plans; D3.1 : Catalogue of e-mobility s olutions Use of existing systems and grids for the charging of electric vehicles T-Systems, Component 1: Potential expert support for development of global toolbox on charging network, grid inte gration, renewable power and battery re-use, recycling and safe disposal
Private Sector	Valeo Group	Electric drive train supplier with a track record of e-mo bility drive trains in all kind s of 2&3 wheelers	Knowledge partner, EC SOLUTIONSplus co-i mplementation WP1 Toolbox and evaluation; WP4 - Comparative demonstration actions; Component 1: Expert support for development of global too lbox on charging network, grid integration, re

			newable power, battery re-use, recycling and safe disposal and electric LDVs; Component 2: Potential expert support for Country Child Pr oject implementation; Potential EV drive train material supply for Co untry Child Project implementation;

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

The network of stakeholders is expected to grow during the project implementation. The two mechanism to broaden the stakeholder network are the Global Thematic Working Groups as well as the Regional Support and Investment Platforms.

The Global Programme will focus on engaging manufacturers, financiers and vehicle fleet operators from the onset of the Thematic Working Groups, so that they can provide advice on the development and design of business models that reduce or spread the high upfront costs of EV fleets and allow the feasibility of bulk procurement of EV fleets. The Thematic Working Groups will gather all lessons learned and compile them to share with interested countries and cities. In addition, the Support and Investment Platforms will facilitate the participation of development banks and other financiers to support scaling up in a way that national and local governments will be likely to intensify their efforts to procure EV fleets.

Civil society organizations and / or intergovernmental organizations will actively participate in both the global and regional components as well as in the Country Child Projects, as knowledge partners and for project execution support. This includes Sustainable Transport Africa and the Institute for Transportation and Development Policy (ITDP) for Africa, the Centro de Movilidad Sostenible for Latin America and the Caribbean as well as Clean Air Asia for Asia and the Pacific. The Centre for Environment and Development for the Arab Region and Europe (CEDARE) and the Caucasus Environmental NGO Network (CENN) for the Central and Eastern Europe, West Asia and Middle East. For example, the Centro de Movilidad Sostenible will lead the implementation of the Latin America and Caribbean Support and Investment Platform, participate in the Global Thematic Working Group on heavy- duty vehicles and will also provide tailored in-country support to countries in Latin America and the Caribbean.

National, regional and international civil society groups are essential in i) bringing global experience and good practice to local contexts; ii) transferring expert local knowledge to government agencies and the private sector, leading to more sustainable policy and business practices iii) catalysing skills, experience and knowledge in the design, implementation and evaluation of project activities such as the development of tools, policy best practice etc. ; iv) enhancing recipient country ownership and accountability of project outcomes through close relationships with local stakeholders and v) leveraging co-financing.

In the Thematic Working Groups and Regional Support and Investment Platforms, civil society organizations will:

· Incorporate the voices of women, the elderly, disabled and indigenous groups in programme activities;

· Contribute to the development of analytical tools, training and capacity building materials, policy and identification of best practices to each of the Global Thematic Working Groups

· Contribute to the activities of the Regional Support and Investment Platforms through carrying out training and capacity building events and providing tailored support on a regional and sub-regional level (i.e. Clean Air Asia for the Asia and the Pacific Support and Investment Platform)

Civil society support will play a major role in the Country Child Projects, mainly as on the ground knowledge partners. Additionally, the Country Child Projects will benefit from a wide range of civil society partners active in the global component that have vast networks and expertise in various segments of electric mobility.

A comprehensive but not exhaustive list of key stakeholders involved in the Global Programme, their existing activities as well as engagement in the project is included in Table 13. In addition, stakeholders that are specific for the Country Child Projects are listed in the Country Child Project documents.

Detailed schedules for stakeholder engagement during the project implementation via the Global Thematic Working Groups, the Regional Support and Investment Platforms and the Country Child Projects have been provided in the descriptions of components 1 and 2 above and are contained in the respective country project documents.

Select what role civil society will play in the project:

Consulted only;

Member of Advisory Body; Contractor; Yes

Co-financier;

Member of project steering committee or equivalent decision-making body; Yes

Executor or co-executor; Yes

Other (Please explain)

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

The successful development of electric mobility strategies and wide adoption of electric vehicles requires gender considerations in policy development. The Global Programme, with the support of the Global Child Project will explore options to integrate gender issues in mobility, and work with policymakers in designing gender-responsive policies and solutions.

Gender Gap Analysis

Introduction

Little research has been conducted so far in low and middle-income countries that explores the connection between gender and sustainable mobility. But it is clear that structural disadvantages or underrepresentation for women that are relevant for this project can occur on several levels.

EV ownership

A report by researchers[1] of the US National Center for Sustainable Transportation at the University of California Davies finds evidence that in the US, women were less likely to purchase or lease a plug-in EV than men. While there is no difference in how often women vs men purchase or lease vehicle, data from the California Clean Vehicle Rebate programme showed that for EVs the ratio of women to men is closer to 1:3. This is confirmed by car companies with early EV models (Nissan Leaf, GM Chevy Volt, Tesla) who reported female buyer shares between 10 and 22%. Car ownership in most programme countries is probably skewed towards men in the baseline, compared to California. In the countries of this global programme, the difference might therefore be much more pronounced.

Barriers to the adoption of EVs by women were the unfamiliarity with the technology, electricity supply, maintenance and fuel costs, vehicle safety. For men, such barriers were driving range, charging time, and lifestyle (mis)fits. In the view of the researcher's, early feedback – which will be very influential on the design of future vehicles and infrastructure - will come mainly from men. For example, more women motivate their interest in EVs with the aspects that go beyond the individual driving experience. Statistically significant factors for why women would purchase a zero-emissions vehicle were climate change, air quality, oil imports to the US, implying that a higher female influence might limit aspects like status that men might rank more important. Another dimension might be the optimization for female vs. male travel behavior – with differences in e.g. trip chaining and transport needs (including passengers vs goods), or more psychological aspects like a perceived loss of spontaneity (i.e. the battery might not be charged in the very moment when one wants to leave) particularly for long trips. The study concludes that "a comparative lack of female voices about what females want and need from PEVs and charging infrastructure may perpetuate slower growth of females' participation and therefore slower growth of PEV markets and delayed attainment of the goals underlying policy goals."

Including women as users of vehicles not only in the child projects but also in the knowledge products of the global project, as well as in project management will lead to different results in the projects' impact and should be ensured at all times.

Decision making in the car industry

The automotive industry, generally, is not diversified on the executive or shop floor level. GM's female CEO and CFO notwithstanding,[2] a study by Catalyst[3] showed that over half of the top 20 companies in this industry have zero women in their executive teams, Of all employees in the automotive industry in Europe or the US less than 25% are women. The automotive industry is one of the least successful in attracting and retaining women, and the levels of sexual harassment in the workplace are among the highest in any industry. While the study is silent on the situation in GEF 7 programme countries, it is likely that the situation is similar there.

A recent study conducted by Deloitte ("Shifting diversity into high gear[4]) concluded therefore that women are "an often largely underutilized resource in the automotive sector". The study identified five main barriers for women to avoid careers in the automotive industry (Figure 8).

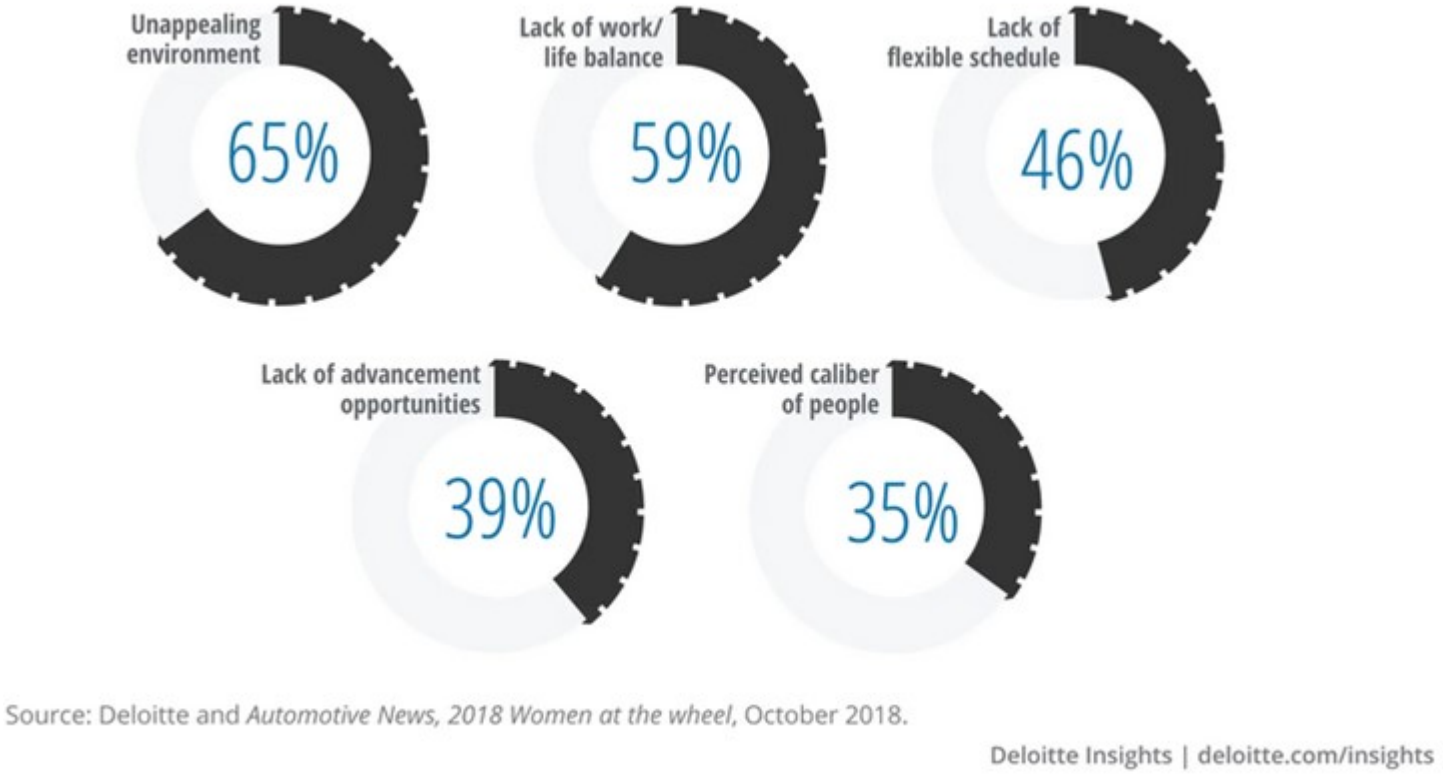

Figure 8 top reasons women avoid careers in the automotive industry[5]

A gender action plan for the global child project should take note of this challenge, and make participation in knowledge exchange around the global future of e-mobility attractive to female automotive executives. Measures for this are proposed in the action plan.

Gender aspects in transportation systems and services

UN Habitat, together with UNEP, is collaborating with Flone Initiative in Nairobi, Kenya, whose objective is to work towards "the creation of safe, sustainable and accessible public transportation spaces for women and vulnerable groups in Africa, by influencing behavioral change, generating knowledge and movement-building" (https://floneinitiative.org/index.php/our-history/). Their work is providing important insights on the relevance of the gender topic for

mobility, transit systems and technological choices. For example, the study “Gender Sensitive Mini-Bus Services & Transport Infrastructure for African Cities: A Practical Toolkit” developed by Flone Initiative with the support of UN Habitat found out that more than half of the female riders using minibuses (“matatus”) in Nairobi are subject to sexual harassment on a daily basis (Figure 9).

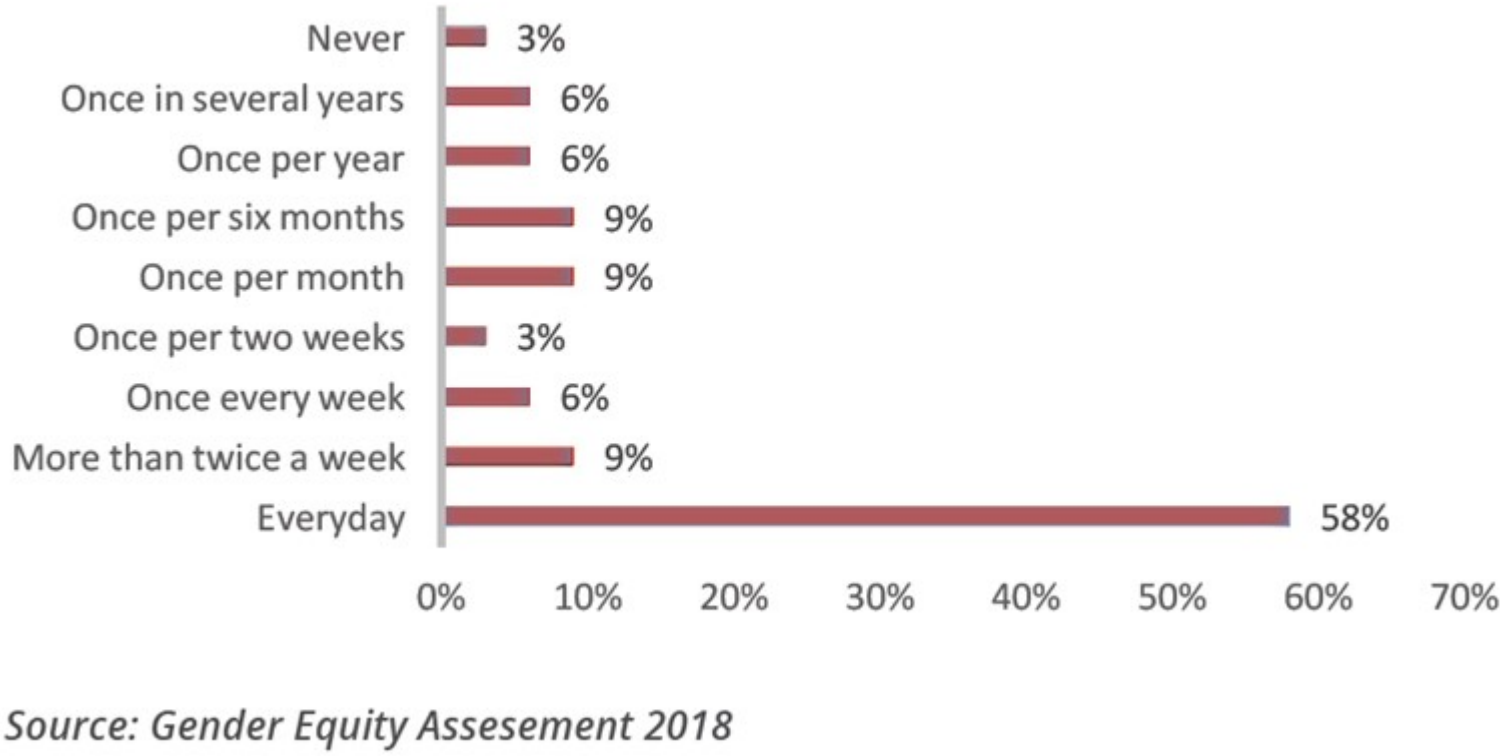

Figure 9 FREQUENCY OF SEXUAL HARASSMENT ON SURVEYED MINIBUS ROUTES (SACCO ROUTES)

The report found out, that this is contributing to a situation whereby more than 40% of the interviewed women are not traveling or do tasks outside the house after dark.

In addition to harassment, a KfW study on transport and gender[6] describe 5 further dimensions of gender impact analysis for transport projects: Care economy (is family-related transport behavior considered?), resources (does the project lead to a balanced distribution of public space and funding between men and women?), androcentrism (are men’s’ views taken as the norm and women’s’ as the deviation from the norm?), gender composition (does the project give sufficient voice to women representatives in designing, planning and decision making processes?), symbolic order (does the project reinforce or use symbols that devalue women?).

The practical toolkit, which is part of the Flone study, has formulated recommendations for public minibus transport service providers aiming at East African countries, but certainly also valid for a larger group of low and middle income countries with similar preconditions around the world. These recommendations include:

1.) Development of “Customer Service Charters” to provide clear guidelines to channel and respond to customer complaints, display of the respective inside vehicles and at bus stages and training of staff on the respective charters;

2.) Introduction of reliable customer feedback system also including the employment of stage attendants at major bus terminals who should be trained in soliciting, receiving and responding to complaints of sexual harassment;

3.) Introduction of a standardized sexual harassment policy, including a written zero-tolerance policy, stickers and signage as well as regular sexual harassment trainings of staff;

4.) Modifications of minibuses, including internal lighting, stop announcements, acceptable music systems, fully transparent windows, among others. Ultimately, minibuses should be modified in order to be usable by persons with handicaps. Therefore, minibuses should be wheelchair accessible by “installing a ramp in the back of the minibus and making the back row of seats foldable”.

5.) Minibus infrastructure considerations. This includes the provision of lit bus stages;

6.) Hiring and retaining of more women workers.

Beyond that, the KfW study is recommending women’s compartments, straps or handrails that are low installed at a height that is appropriate for women (as straps that are too high encourage sexual harassment in compartments that are used by both men and women), boarding facilities that are easy to use with traditional women’s’ clothing, ladies toilets (on trains), en route catering and lighted stations and easy integration into other transport systems.

A specific consideration relates to the gender justice in fare systems – women are not only poorer than men but also more prone to trips with many stops which makes fare structure extremely gender sensitive.

Currently, a similar assessment carried out by Flone Initiative is funded by UNEP to conduct technical assessments of the 2&3 wheeler mobility mode in Kenya to evaluate how gender can be leveraged in into efforts to increase uptake of electric mobility in Kenya, starting with 2&3 wheelers. The analysis includes research on gender demographics across the entire 2&3 wheelers industry ecosystem i.e. riders, passengers, energy providers, manufacturing and assembly, maintenance, registration, service providers, employers, employees, financiers, food vendors, importers, clearing agents etc. This will be done through interviews, customer surveys and literature reviews following the flow of finances across the ecosystem from import of 2&3 wheelers through to disposal of the units after end of life. From the assessments, a baseline report which identifies gaps/opportunities where integrating gender into various 2&3 wheelers fleets in Kenya will result in wider uptake of electric mobility will be developed. Identification of policy gaps to support wider uptake of electric mobility in Kenya given gender-considerations will be part of the package. The results of the analysis will provide valuable insights on gender issues for 2&3 wheeler operations under similar preconditions in other places around the world. These results will feed into the work of the Thematic Working Groups to develop knowledge materials and best practices to provide guidance to the Country Child Project implementation.

Participation in / benefitting from the EV supply chain, integration of women into the workforce

In most countries, underemployment and lack of access to economic opportunities is a particular barrier for women and their empowerment. The car and vehicle business across the world is particularly male dominated. Car dealerships, workshops and professional driving are more often staffed with men than by women. Examples from the solar industry show that integrating women when building up a new (electricity-based) technology can lead to immediate empowerment and income generating effects. The famous electricity distribution and lending company Grameen Shakti in Bangladesh, for example, made a deliberate effort to employ women installers for their solar home systems as well as women electricians for their assembly centers.

This was specifically supported and evaluated by USAID.[7] A strategic motivation of Grameen Shakti at the time was that the employed women would also promote the technology to other potential customers. The women were mainly poor, from rural communities and offered an employment opportunity for the first time, and some were more interested in being employed than in the financial compensation, while others chose not to be employed after the training. Unfortunately, due to the overall market situation which did not sustain the growth of the company in the predicted manner, and this together with the explicit emphasis on women (some of which did not want to continue to work) led to some added costs for human resources as not all trainees could be employed and not all unconscious bias could be overcome. A recommendation for country programs who want to support upskilling and job creation specifically for women that can be derived from this experience is that the programme might consider raising funds for a compensation of companies for training, employing and retaining women in growing segments of their work force, include and apply indicators and reporting on women integration in the work forces and ensure that hiring decisions are made on merits rather than influenced by unconscious bias.

The global program should highlight employment related opportunities and challenges for achieving gender equality (SDG5), provide a meta-study of experiences like the one discussed for Grameen Shakti in Bangladesh as well as possible guidance documents around SDG5, so that child projects can understand and implement their gender plans following global best practice.

Decision making within country governments

Many participating governments have specific gender policies in place. The programme should make sure that these are met with respect to participating in or benefiting from the offerings of the global programme.

Gender Action Plan

The action plan to improve gender equality within the scope of the Global Project includes the definition of the following:

- Gender Manager
- Gender Focal Points
- Gender activities
- Indicators
- Targets
- Means of verification

Through the Gender Action Plan, a number of gender gaps outlined above will be addressed though the Global Project.

1.) Gender Manager:

- In order to ensure that someone is responsible for mainstreaming the gender issue, the Project Manager of the Global Programme will play the formal role of the Gender Manager.
- The Gender Manager will be coordinating advice to Thematic Working Groups, Investment and Support Platforms and other project stakeholders on best practice regarding gender and transport.

· The Gender Manager will receive input to track the gender targets from 1.) the Gender Focal Points of the Thematic Working Groups; 2.) the Gender Focal Points of the Regional Support and Investment Platforms; and 3.) the Focal Point of the Global E-Mobility Programme at the IEA and will compile respective results for annual reporting.

2.) Gender focal points:

· Gender Focal Points will be established in all four Global Thematic Working Groups. The Working Group Lead will take over the role as the Gender Focal Point.

· Gender focal points will be established in all four Regional Support and Investment Platforms. The Regional Support and Investment Platform Focal Point will also take over the role as the Gender Focal Point.

A summary of all gender activities envisaged, indicators tracked, targets defined as well as their means of verification are provided in Table 15.

Table 15 summary of gender actions, Indicators, targets and means of verification

Project Output(s)	Gender activity	Indicator	Target	Means of verification
General / cross-cutting				
All	Ability to monitor women participation in project meetings, trainings and workshops	An attendance sheet template which allows to identify participants by gender is developed and disseminated to all Global Thematic Working Groups and Regional Support & Investment Platforms	Yes (by the end of month 2)	Attendance sheet template is used in all in project meetings, training and workshops
All	Mainstream gender into progress reporting	# of progress reports including an overview of the project's gender mainstreaming activities	2 reports per year (1 half-yearly progress report and 1 PIR)	Gender mainstreaming section in the Half-yearly progress reports and PIRs
Component 1				
Output 1.1, 1.3, 1.5, 1.7	Each Global Thematic Working Group should encourage the participation of women	% of female participants in the Global Thematic Working Groups meetings	At least 30%	- Attendance sheets to the events organized by the Global Thematic Working Groups

Component 2				
Outputs 2.2, 2.5, 2.8 and 2.11	Each Regional Support and Investment Platform should ensure that at least 1 of the trainings offered will address the nexus between e-mobility and gender	# of trainings offered by the Regional Support and Investment Platform covering the nexus between e-mobility and gender	At least 4 (1 per regional Support and Investment Platform)	- Training materials developed - Training report
Outputs 2.1, 2.2, 2.3	The Africa Support and Investment Platform will actively encourage programme countries to send female participants to the regional events and trainings organized	# of female participants in the Africa Support and Investment Platform trainings and events	*At least 250*	- Attendance sheets to the events and trainings organized by the Africa Support and Investment Platform
Outputs 2.4, 2.5, 2.6	The Asia and the Pacific Support and Investment Platform will actively encourage programme countries to send female participants to the regional events and trainings organized	# of female participants in the Asia and the Pacific Support and Investment Platform trainings and events	*At least 190*	- Attendance sheets to the events and trainings organized by the Asia and the Pacific Support and Investment Platform
Outputs 2.7, 2.8, 2.9	The LAC Support and Investment Platform will actively encourage programme countries to send female participants to the regional events and trainings organized	# of female participants in the LAC Support and Investment Platform trainings and events	*At least 250*	- Attendance sheets to the events and trainings organized by the LAC Support and Investment Platform
Outputs 2.10,	The Central and East	# of female participant	*At least 160*	- Attendance sheets

2.11, 2.12	ern Europe, West Asi a & Middle East Supp ort and Investment Pl atform will actively e ncourage programme countries to send fe male participants to t he regional events an d trainings organized	s in the Central and Ea stern Europe, West Asi a & Middle East Suppor t and Investment Platfo rm trainings and event s		to the events and tra inings organized by the Central and East ern Europe, West Asi a & Middle East Sup port and Investment Platform
Component 3				
Output 3.1	The Global EV Outloo k development team will also explore the n exus of gender and e-mobility, based on th e information collect ed from the different country projects	# of Global EV Outlook reports including a sec tion / chapter on the ne xus between gender an d e-mobility	At least 2	Global EV Outlooks published during the implementation peri od of the global e-m obility project
Output 3.3	The project's Commu nications team will e nsure the website inc ludes information on good practices / cas es of gender mainstr eaming into e-mobilit y (based on the exper ience of the country c hild projects)	The project's website h as a section on gender mainstreaming into e-mobility populated with examples of good prac tices / cases from the country child projects	Yes, with at lea st: - 1 example of good practic e - 1 case of gen der mainstrea ming will be sh owcased on th e website	- The project's websi te interface - Good practices, sto ries uploaded on the website
Output 3.4	The project's Commu nications strategy wil l consider providing v isibility to good practi ces / cases of gende r mainstreaming into e-mobility	# of communication pr oducts delivered by the global project displayin g good cases of gende r mainstreaming into e-mobility	At least 3, out o f which: - 1 physical co mmunication material (broch ure, flyer, public ation, etc.) - 1 press releas e or media brie	The communication materials developed and published as pa rt of the project

			fing - 1 short video	

[1] Kenneth S. Kurani, Nicolette Caperello, & Jennifer TyreeHageman, March 2018: Are we hardwiring Gender Differences into the Plug-in Electric Vehicle Market?

[2] https://www.businessinsider.com/gm-becomes-first-car-company-to-have-both-female-ceo-and-cfo-2018-6?r=DE&IR=T

[3] https://www.catalyst.org/research/women-in-the-automotive-industry

[4] https://www2.deloitte.com/us/en/insights/industry/automotive/women-in-automotive-sector-gender-diversity.html

[5] DELOITTE 2020, https://www2.deloitte.com/US/EN/INSIGHTS/INDUSTRY/AUTOMOTIVE/WOMEN-IN-AUTOMOTIVE-SECTOR-GENDER-DIVERSITY.HTML

[6]https://www.semanticscholar.org/paper/Urban-mobility-and-gender-%3A-promoting-the-regional-Spitzner-Weiler/ed133caa9eda41061e74c6daa14600eacb494140

[7]https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjrkfyuuKDsAhXQ2qQKHRJSDDEQFjACegQIAxAC&url=https%3A%2F%2Fpdf.usaid.gov%2Fpdf_docs%2Fpa00k6ms.pdf&usg=AOvVaw1_4DWl4jx4x4BcyAx4H_C3

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

Yes

Closing gender gaps in access to and control over natural resources;

Improving women's participation and decision making Yes

Generating socio-economic benefits or services or women Yes

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

Yes

4. Private sector engagement

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

There are many ways in which the private sector will be involved in this programme. Private sector engagement will take place in work streams of the global component and will also occur in the child-projects. It is envisaged that the support from vehicle, EV charging and battery manufacturers will be mostly in-kind at the beginning of the programme, shifting to substantial in-country investments over the time of the project, when concrete in-country projects will start to take shape and require the introduction of electric vehicles. Industry will play a major role from the beginning in:

· Providing expertise in the Thematic Working Groups;

· Participating in conferences, meetings and trainings carried out by the Support and Investment Platforms;

· Supporting demonstration projects in Country Child Project

Global Thematic Working Groups

The private sector will be encouraged to actively contribute to the activities of each of the four Global Thematic Working Groups (light-duty vehicles, 2&3 wheelers, heavy-duty vehicles, charging infrastructure, grid integration and batteries). Businesses interested to engage may appoint global experts to one or several of the platforms, depending on the business area of each company. The experts will be invited to actively contribute to shaping up the outcomes of the thematic platforms.

The project will offer additional opportunities for private sector stakeholder’s involvement in the programme including to:

· Share data on projected market volumes, penetration rates;

· Cooperate on the assessment of technology development, constraints and opportunities and contribute to the development of decision-making tools and policy recommendations;

· Support the development of technology specifications that are industry and user viable, inter-operable, and allow for technology innovation and development. An important example will be specifications for charging;

· Provide technical and market advise at the Global Thematic Working Groups, Regional Support and Investment Platforms, and, where requested, at the Country Child Projects;

· Support development and refinement of business models for e-mobility applications in the project countries

In April 2020 an e-mobility investor conference was held in collaboration with the Siemens Foundation and the Shell Foundation to investigate investors behavior in e-mobility projects in East Africa. A survey on the e-mobility investment environment had been carried out among 28 participants. Some results of the survey are showcased in Figure 10 below. For example, absence or inadequate policies have been identified as the single most important barrier for investors while on the other side e-mobility piloting activities have been identified the single most important area of collaboration by investors in e-mobility in East Africa. The Global Project will expand such surveys through the user needs assessments planned, and will build on the results to involve private sector investors and technology suppliers to work towards the target of successful e-mobility demonstration project implementation.

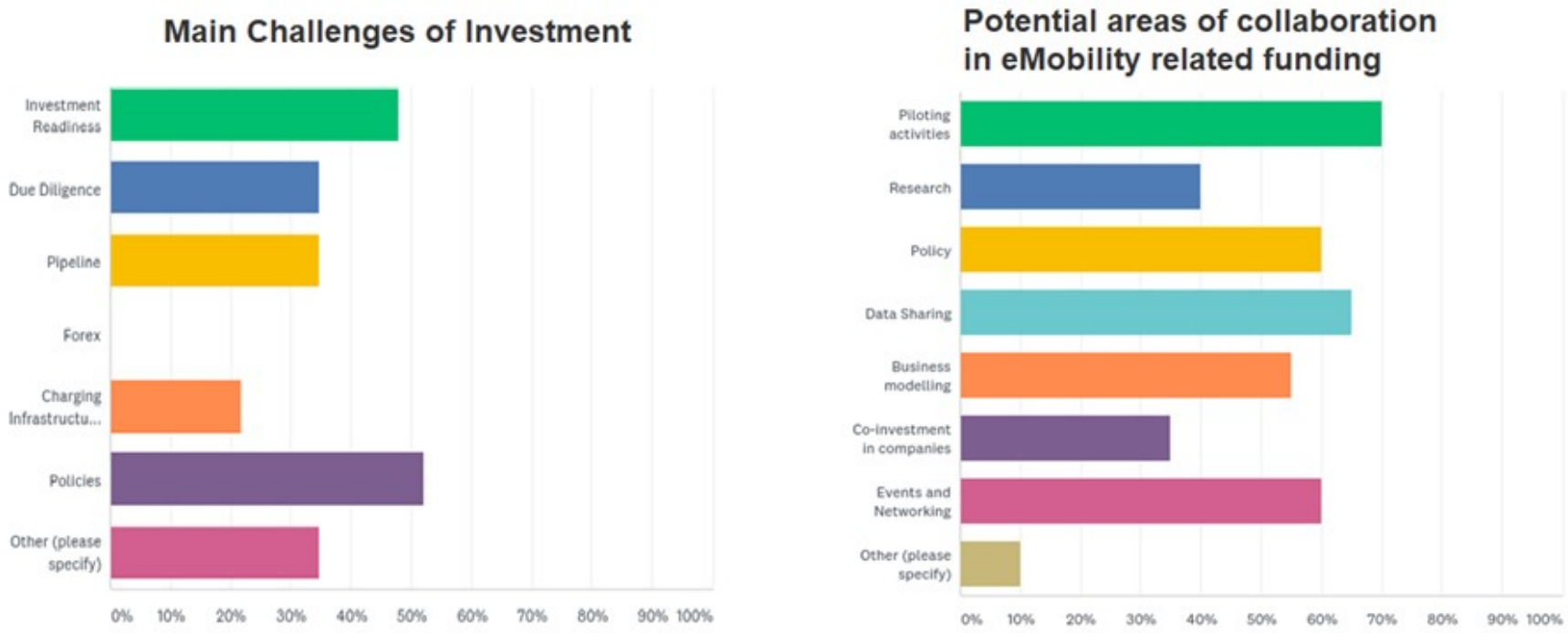

Figure 10 results of the investor conference survey in east africa

Regional Support and Investment Platforms

Through the Regional Support and Investment Platforms (and more specifically the market place events), private sector partners will be invited to supply electric vehicles, and work with fleet operators, such as taxi operators, bus fleet operators, motorcycles and electric bicycle rental companies, courier services, etc. within the Child Country Projects. In many cases, the demonstrated electric vehicles will be operated and owned by a private sector partner, such as a taxi fleet operator (for LDVs but also 2&3 wheelers). Some private sector partners have already indicated an interest to donate electric vehicles for demonstration projects in this programme, or provide these for discounted prices. For example, the e-bus manufacturer BYD has indicated interest to donate electric busses to the Seychelles project while the electric motorcycle company TailG, which is already providing 200 electric motorcycles to demonstration project in Africa and Asia and Latin America, has expressed interest in further involvement in demonstration projects, with a particular focus on Africa and Asia. The Ugandan e-motorcycle manufacturer Ampersand has expressed interest to participate in the 2 wheeler demonstration project in Burundi. In some of the Country Child Projects, utilities will provide co-financing through investment in charging infrastructure or fleet operators investing in electric vehicles as part of the projects. This is the case for the Latin American & Caribbean Projects in Chile (ENEL X) and Saint Lucia (Saint Lucia Electricity Services Limited, LUCELEC).

Private sector partners will present innovative solutions to overcoming some of the operational challenges related to the introduction of electric mobility in low and middle-income countries. This includes charging infrastructure (for example for motorcycle taxis), battery swapping services, battery rental companies, etc. In most cases these will be local companies. Private businesses will also be invited to the dissemination of the knowledge products developed within the

Working Groups via the Regional Support and Investment Platforms.

Through the Regional Support and Investment Platforms, each of the Country Child Projects will have the opportunity to benefit from private sector experience and support in implementing their plans. The Country Child Projects will benefit from a wide and accessible network of companies already active in the global and regional components activities and that have an interest in accompanying electric mobility projects all the way to their implementation phase. International private companies can build on experiences in other regions and, by optimizing between replication and adaptation, provide relevant local solutions.

Private sector financiers will be involved in financing the introduction of electric mobility. For example, during implementation, the programme will reach out to venture capital funds interested in financing replication pilots or up-scaling of e-mobility projects. First discussions have already taken place with the Private Infrastructure Development Group (PIDG), which stated initial interest in working in some of the least developed countries part of the project on e-mobility projects. In addition to this, financial institutions, from the private sector and development banks, will be invited to the Support and Investment Platform e-mobility project meetings, where Country Child Projects will meet with technology suppliers to identify and procure electric vehicles.

Private sector networks

The private sector engagement in the programme is expected to be substantial thanks to the network developed by the IEA and UNEP as well as the EC SOLUTIONSplus. For example, private sector stakeholders regularly attend the biannual EVI Advisory Board meetings, UNEP mobility programs and EC SOLUTONSplus consortium meetings. In the case of EVI, the private sector is also an important partner for the dialogue on EV policy and technology development which brings a value for IEA activities, such as the Global EV Outlook series. This also includes the IEA's Mobility Model partnership, supported by automotive companies that currently include: Bosch, BP, Climate Works, Equinor, ExxonMobil, Honda, International Union of Railways (UIC), Institut Français du Pétrole et Énergies Nouvelles (IFPEN), Institute for Transportation and Development Policy (ITDP), International Council on Clean Transportation (ICCT), KAPSARC, Michelin, Navigant, Saudi Aramco Overseas limited, the Renault-Nissan-Mitsubishi Alliance, Petrobras, Sasol, Shell, Total, Toyota, Volkswagen, U.S. Energy Information Administration (EIA), Greenhouse Gas Inventory & Research Center of Korea). Among the Mobility Model Partnership many leading car manufacturers, vehicle supply equipment manufacturers and energy companies can be found. Electric mobility is a key issue for many of them – either from the perspective of EV supply or through the development of EV charging infrastructure.

Tangible proof of the engagement of private sector stakeholders in EVI activities and the value they see in the initiative to help steering the global agenda on e-mobility is the support offered, in September 2018, to the EV30@30 Campaign by seven major companies active in various aspects of the e-mobility business. This is the case of ChargePoint, Enel X, E.On, Fortum, Iberdrola, the Renault-Nissan-Mitsubishi Alliance and Vattenfall.

This momentum is expected to be further scaled-up in the future, as the EV30@30 campaign becomes better known by electric mobility businesses and further relationships are developed with them. Several occasions will allow for this further scale up. Key examples include:

· The IEA was an institutional partner of the Paris Peace Forum (an initiative developed by the President of France with the aim to foster the activities of innovative and cooperative governance solutions linked to environment, development, and new technologies, promoting multilateralism and collective responsibility with the participation of both governments and international bodies). Its coordination of EVI as selected as its showcased work;

· The multiple opportunities offered by the annual meetings of the Clean Energy Ministerial, where the IEA as the coordinator of EVI has a track record of successes in organizing round tables and exchange events bringing together high-level representatives of the private sector, research and academia, and public authorities.

Experts participating in the Global Thematic Working Groups may also be recruited from the IEA's Technology Collaboration Partnerships, in particular the one on hybrid and electric vehicles.

UNEP has built a network of e-mobility start-ups in low and middle-income countries, with a regional focus on Africa. The start-ups include EV manufacturers such as Opibus in Kenya, Ampersand and Bodawork in Uganda and mobility service providers such as Twende in Kenya and Ethiopia, GOZEM in West Africa etc. (see Table 13).

UNEP also has a long-standing cooperation with the private sector, in specific the fuel and vehicles industry, in promotion cleaner and more efficient vehicles. UNEP is hosting the secretariat of the public- private Partnership for Clean Fuels and Vehicles (PCFV - which has been supporting close to 100 countries with the introduction of cleaner fuels and vehicles). UNEP also has close working arrangements with the local private sector in its country and regional projects. UNEP is working with major bus providers, such as Build Your Dreams (BYD). UNEP is also working with producers of electric motorcycles, in Africa and in China, such as TailG. On the other side of the private sector spectrum, UNEP has access to a large network of more than 10 mobility providers and e-mobility start-ups in Africa.

The EC SOLUTIONSplus project includes a large consortium of industry representatives, about 20 organisations – vehicle manufacturers, part manufacturers, and suppliers (all European). The industry representatives will participate in the 8 working packages of the EC SOLUTIONSplus projects, as follows:

· Working Package 1 of the EC SOLUTIONSplus project which develops a global toolbox (which will work closely with Component 1 of the GEF programme);

· Working packages 2 and 3 on capacity building, and markets & business models, that relate to the GEF7 component 2 - the Support and Investment Platforms;

· Working Package 4 - which is support to the EC SOLUTIONSplus demonstration city projects, which relate to Country Child Projects;

· Industry partners will also be invited in tenders, which are included in Working Package 5 on scale up, finance and bankability. This relates to the Support and Investment Platforms of the GEF programme included in Component 2. Industry partners will provide knowledge, technical support, and equipment to the EC SOLUTIONSplus project, for example through electric vehicles equipment such as chargers but also through EV parts such as electric drivetrains, which shall be tested in locally produced electric 3 wheelers.

5. Risks to Achieving Project Objectives

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

Table 16 Risks and risk mitigation measures

Risk	Rating	Risk mitigation measures
Negative perceptions about e m obility technology and the impac ts this will bring to society and in dustry.	Medium	Awareness raising of the benefits of electrification and capacity building and training to manage the change from ICE to e-mobility
Materials developed are not rele vant for country context and / or project partners do not deliver th e required materials	Low	Countries will be involved in the Thematic Working Groups that will deve lop the materials and a review and control mechanism to track the perfo rmance of project partners is put in place.
Countries do not show the expec ted interest in the Global Progra mme events and the provided kn owledge materials	Low	Countries have budget to participate in the Global Programme events an d will need to report on the use of this budget.
Countries do not provide feedba ck on the knowledge products	Low	Countries will be involved in the Thematic Working Groups and will parti cipate actively in the Regional Support and Platform events, which will b e used to collect and integrate feedback. The annual reporting is set up i n a way that feedback is collected.
Countries are not interested in s econd life and disposal of batteri es so early on in market transfor mation to electric vehicles	Medium	This Global Project is dedicating one Thematic Working Group to the life cycle of batteries, generating guidance for countries and globally to mini mise the environmental impacts of batteries production and disposal. Al l of country projects have outputs on the development of measures for c ollection, re-use and recycling of used EV batteries. If this Working Grou p does not generate country interest it will use experts on this subject in stead
Countries are not interested in s ustainability aspects such as the integration of renewable power t o EV charging so early on in mar ket transformation to electric ve hicles	Low	There is a specific Thematic Working Group on grid integration which wil l help countries to prepare for and avoid this possibility.
Higher upfront cost of electric ve hicles may pose a barrier to impl ementation and scale up of activ ities	Low/Medi um	The Thematic Working Groups will include a finance component and rai se awareness of the total cost of ownership versus the upfront cost per spective. The marketplace and replication events of the Regional Suppo rt and Investment Platforms brings together potential replication and up scaling projects with financiers and e-mobility manufacturers to overco me the financing barrier and to bundle demand for EV and EV equipmen t to receive preferential pricing from manufacturers. The programme supported through the Global Project will help countries to prioritize investment and first scale up actions towards electric mobili ty modes with relatively lower costs and prioritize high utilization vehicle s. The development of business models and finance schemes to overcom

		The development of business models and finance schemes to overcom e higher upfront costs of EVs are part of Country Child Projects, where r elevant.
Objection or low commitment fr om industry to technology chang es.	Low/Medi um	Involving the industry and private sector is a core element of the progra mme. Thematic Working Groups will include strong links to the industry and the development of business models. This will help to understand t he main challenges and barriers faced by the industry and creates a link between national governments and the industry. The EC SOLUTIONSplu s project, which is closely linked to the GEF project build on the involvem ent of about 20 industry partners
Insufficient and incomparable sy stems for tracking results	Low	Indicators and standard guidance for tracking and documenting learnin gs and progress will be established early in the project, and in cooperati on with countries, to ensure there is clarity and comparability between di fferent project sites and timeframes. The strong coupling with EVI activities, enabling access to established p ractices and methodologies for the collection, processing and analysis of data and information, will help countries develop tools allowing them to track progress effectively.
Time lag of results: Major results of the project may not be seen b efore the end of the project perio d.	Medium	The project team will identify interim goals for each engagement to trac k progress and will develop leading indicators of project results. The project includes both strategy and resources for performance mana gement, knowledge management and information dissemination compo nents. This will help ensuring that results of the projects will have early v isibility. Some of the key indicators of success of electric mobility are represente d by variables, such as the change in market share, that have significant impact on the perception of changes, and are parameters that can be ra pidly influenced by policy changes. This limits the likelihood of a percept ion of a lack of tangible results before the end of the project period, eve n if some of the consequences of the project are in long-term developm ents.
Lack of interest or participation f rom market players/private sect or.	Low	There is already a lot of interest from the private sector in electric mobili ty. Most major car manufacturers now produce at least one or more ele ctric car models and some produce many electric models in each segm ent. Tesla is now producing the Model 3 at a comparable price to alterna tive ICE models, and at least 5 bus manufacturers are now producing el ectric buses as well. Country risk is one of the biggest issues for deployment and market tran sformation, and this is precisely the function of the Global Project; to su pport country governments to put in place favourable e-mobility policies to attract investment. Country risk does not stop with mobility policies; c ountry risk is also associated with the broader business environment. T his is where local manufacturers have a better understanding of country risk and can navigate these risks. This is why the Global Programme will engage and work with both international and local manufactures. This w ill be done through the Thematic Working Groups and the Support and In vestment Platforms. In doing so striving towards common standards th at allow inter-operability will be very important.
Lack of linkages with available f unding/financing for EVs fleets.	Medium	The Global Project will be focusing on engaging fleet manufacturers and financiers from the onset through the Thematic Working Groups, so that they can be plugged 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 Thematic Working Groups will gather all positive and successful approaches and compile them to share with all interested countries and cities. In addition, the Support and Investment Platforms will allow the development banks and other financiers to support any upscaling that national and local governments will like to put in place to procure EV fleets.
Inadequacy of the exit strategy and lack of ownership of the program after the end of the GEF funded activities and inability to source resources to continue the program's activities in the medium/long term (including Thematic Working Groups and Support and Investment Platforms).	Low	The programme with support through the Global Project will demonstrate a viable process for market transformation from demonstration, up-take, scale-up and broad diffusion. This expects to conclude when the market is ready for the scale-up phase.. The main project exit strategy will be through the Support and Investment Platforms that will be driven by banks and investment interest generated by the Country Child Projects and other project participating in the meetings. They will be able to continue to provide support and finance to accelerate the shift to electric mobility. However, there might a shift in focus since towards and beyond the end of the project, priorities might change to the large scale introduction of private electric cars, complex grid integration and upstream battery manufacturing policies. Additional funds to sustain the work of the Support and Investment Platforms will be raised during project implementation.
Political changes stall the Country Child Project implementation or impede scale-up	Medium	The Global Programme includes a number of politically instable countries. Executing Agencies have been chosen accordingly to ensure continuity even in case moderate political changes occur.
No non-e-mobility programme countries participate in the Global Programme events	Low	The Global Project cooperates with a number of partner initiatives such as the EC SOLUTIONSplus, ZEBRA / C40, TUMI Volt as well as numerous initiative and projects implemented by development banks.
Lack of supportive government policy environment limits replication due to unattractive business case for e-mobility investments	Medium	EV uptake is strongly influenced by the policy environment in a country, which can influence the economics of switching to EVs (e.g. fuel subsidies, absence of carbon pricing, restrictions on sale of electricity etc.). The Global Project will engage a wide range of stakeholders so will build greater awareness as to the environment needed for successful role out of e-mobility. The experience of the Country Child Projects will be key in developing in country knowledge and understanding of these issues. The Regional Support and Investment Platforms will be able to share knowledge between projects and the Thematic Working Groups will be able to review good practice on these issues.
Limited bankability of potential e-mobility clients reduces opportu	Medium	There can be significant interest and enthusiasm in e-mobility investments among stakeholders, but they may have limited capacity to invest du

nities for replication of e-mobility projects.		e to factors such as poor credit record or a weak balance sheet, which make structuring an investment project difficult. These risks can be mitigated by ensuring that the regional support and i nvestment platforms address issues related to financing EVs from the o utset. This will include building awareness among stakeholders as to th e financial and governance structures necessary for investment and hig hlighting good practice in different sectors such as urban public transpo rt or EV charging infrastructure. The global project can also highlight ar eas where Government policy reform can improve the investment climat e and facilitate stable investment models.
Climate Risk	Low	The Global Project itself has no investment component, and therefore cl imate change related impacts on procured assets cannot be assessed. I mpact of climate change on planned events etc. is assessed to be mini mal in the coming years.

Covid-19 risk and opportunity assessment

The COVID-19 pandemic presents several challenges but also opportunities to the Electric Mobility Programme.

Opportunities

According to today's knowledge, there seems to be a correlation between air quality and COVID-19, whereby COVID-19 incidence and mortality are significantly higher in areas that have high levels of local air pollution. This includes particulate matters (e.g. PM2.5, PM10) as well as N2O from both mobile (e.g. trucks and cars) and stationary (e.g. coal power stations) emission sources. Since electric mobility has the potential to significantly contribute to improved urban air quality, we assume that it will play an important role in countries' strategies to respond to the COVID-19 pandemic.

Similarly, a shift to electric mobility will significantly reduce the dependency of countries to import petroleum petrol fuels. It therefore increases resilience against restrictions or price spikes resulting from international crisis.

While during COVID-19 vehicles sales have plummeted, electric vehicles sales have been relatively less affected. The IEA estimated that global car sales between January and April in 2020 dropped by about one-third from the same period in 2019, with around 9 million fewer cars sold. The IEA expects however that electric cars are likely to have a much better 2020 performance than the rest of the auto industry. Similarly, analysts from Bloomberg New Energy Finance have estimated that the electric segment of car sales will continue to outperform in terms of growth the traditional cars one as we move past the crisis, even though oil prices at a historic low will create some negative headwinds. However, orders of buses are likely to suffer delays if public perception of mass transit as being unsafe will persist.

Furthermore, in terms of green recovery, clean mobility is expected to play a key role in getting the global economy back on track. Continued social distancing measures may have an impact on how transportation services are used, and in particular public transportation, but certain modes of public transport are expected to grow, in particular in low and middle-income countries. These modes include 2&3 wheeler taxis, or usual taxis and ride-hailing providers using passenger cars, to reduce close contact with higher numbers of riders. For many of these modes good electric alternatives are available.

Based on current trends and signals it is expected that after COVID-19 the shift to electric mobility will continue, if not increase. Many city governments around the world are looking at opportunities to take advantage of the significant reduction in urban congestion linked to the COVID-19 mobility restrictions to introduce permanent limitations to the use of private vehicles, especially if using internal combustion engines. Such measures would not only reduce local air pollutants (such as particulates PM2.5 and PM10, but also N2O) and greenhouse gases emissions, but could also increase resilience of transport systems against the current - and any potential future - health crises. The contribution of low-carbon mobility, including electric mobility, to a more resilient economy will be further integrated in the Programme and highlighted throughout the training components to be delivered to participating countries.

Challenges and Risks

At the time of submission of the CEO Endorsement Document, many countries around the world are again imposing measures to control the COVID 19 pandemic, making it almost impossible to organize for physical meetings and travel. At this time, the way forward and the timing to release or impose additional measures is unclear because of the nature of the pandemic, which includes the appearance of regional hot-spots of the pandemic, depending on the season and many more variables.

· **Travel restrictions.** International travel has been significantly impacted and it is uncertain how long the COVID-19 travel restrictions will continue to apply. This includes restrictions such as the possession of negative COVID-19 tests, quarantine upon arrival or even suspension of travel from and to certain countries and regions

· **Restrictions with regards to meetings and meeting size.** Most governments in countries around the world have restricted in-person group meetings. Depending on the dynamics of the pandemic, meetings are suspended completely or only small meetings under certain conditions can be held., such as restrictions with regards to meeting size and distancing. As the COVID19 pandemic evolves at a different pace among countries, regions and continents, it is still uncertain when, in-person meetings will be able to be organized with limited or no restrictions in most of the Global Programme partner countries.

· **Restricted access to offices etc.** Currently, many employees able to work from home are working under telecommuting arrangements worldwide. At this point, it is possible that social distancing measures will lead to changed work schedules including part time work from home.

· **Shift of government priorities**. The COVID-19 related restrictions have had and will continue to have severe impacts on the global economy. At this point it is difficult to make assumptions regarding the extent to which this will affect government priorities with regards to the allocation of budget and work force. What can be said is that there is a clear case to be made for electric mobility to be seen as a key pillar for sustainable and clean transportation investments in the context of for economic recovery plans.

Potential impacts on project implementation

Impacts of the COVID-19 pandemic on project implementation are expected to occur at the Global Child as well as the Country Child Project level, also affecting each other.

At the Global Child Project level, implementation of the Global Thematic Working Groups as well as the Regional Support and Investment Platforms will be affected differently. It is expected that the global Working Groups will be less impacted as first activities do neither require physical travel or missions, nor are they critically depending on Child Country Project participation. In fact, if such delay is limited for example to 6 months, this could be helpful for the overall sequencing of the program activities as it would allow the Global Thematic Working Groups to start ahead of the country projects. Thus, substantive materials such as the toolkits etc., would be available earlier in the lifetime of the Country Child Projects. Delivery of the events planned under Component 2 “Support and Investment Platforms” will indeed require physical meetings and will also depend on the operational readiness of the Child Country Projects. It is therefore envisaged, that the

events under this component will phase delays in line with the Country Child Projects. Apart from delays, the COVID-19 pandemic could severely impact the budget of the Global Child Project. In case travel restrictions prevent a number of events to take place physically, significant savings will be made on travel budgets. These budgets could then be used to organize a larger amount of virtual meetings to go ahead with project implementation where feasible.

It is to be expected that some of the child country projects will see delays in their project inception due to restrictions related to the Covid-19 crisis. If such delay is limited, effect on the overall implementation of the programme will be limited too. Sustained restrictions in combination with severe economic impacts can delay Country Child Project implementation of even lead to project cancellation, in case government priorities shift to more existential issues as a consequence of a very severe economic crisis. As outlined above, delays in Country Child Project implementation affect the schedule of the events of the Regional Support and Investment Platforms since budgets to participate in these events are part of the Country Child Project budgets. Savings on travel budgets within the Country Child Projects could be allocated towards more staff time as a consequence of exacerbated project implementation conditions. In some Country Child Projects, the implementation of the demonstration projects could be hindered by the incapacity of private and public sector stakeholders to make investments. This in turn can affect the Global Child Project implementation in the sense that events, which target demonstration project implementation or which build on the lessons learnt in demonstration projects cannot or not fully be implemented.

If, as a result of severe delays, a significant number of country projects is at stake, the overall success of the Global Programme will be hampered as targets such as the design and implementation of e-mobility projects, the successful implementation of demonstration projects or the targeted numbers of direct beneficiaries will not be reached.

Similarly, outcome level targets of the Global Child Project, directly depending on the successful implementation of the Country Child Projects will not or not fully be met in this case. In this case, it is suggested to adapt the Global Child Project Results Framework to the actual number of implemented Country Child Projects in order to make the results measurable against adapted targets.

6. Institutional Arrangement and Coordination

Describe the institutional arrangement for project implementation. Elaborate on the planned coordination with other relevant GEF-financed projects and other initiatives.

UNEP will be the lead Implementing Agency of the e mobility Programme. UNEP, ADB and EBRD will co-implement the Global Child Project. UNEP, the IEA, ADB and EBRD and CMS will jointly execute the Global Child Project. In addition, the Urban Electric Mobility Initiative (UEMI, on behalf of EC SOLUTIONSplus) will play a crucial role in the implementation of the Global Child Project.

Country Child Projects will be implemented by different GEF Implementing Agencies including the United Nations Environment Programme (UNEP), the United Nations Development Programme (UNDP), the United Nations Industry Development Organization (UNIDO), the Asian Development Bank (ADB), the European Bank for Reconstruction and Development (EBRD) and the Development Bank of Southern Africa (DBSA).

All Implementing Agencies in the programme and Executing Agencies of the Global Child Project will be on the steering committee of the Global Child Project (Figure 11). It will be the task of the Steering Committee to advise the Executing Agencies of Global Programme activities. The project is closely linked to the European Commission SOLUTIONSplus Programme, which will support cities around the world with the introduction of electric vehicle demonstration projects. The two projects will work together to increase impact, country coverage, reduce overlap and duplication, and mutually reinforce each other.

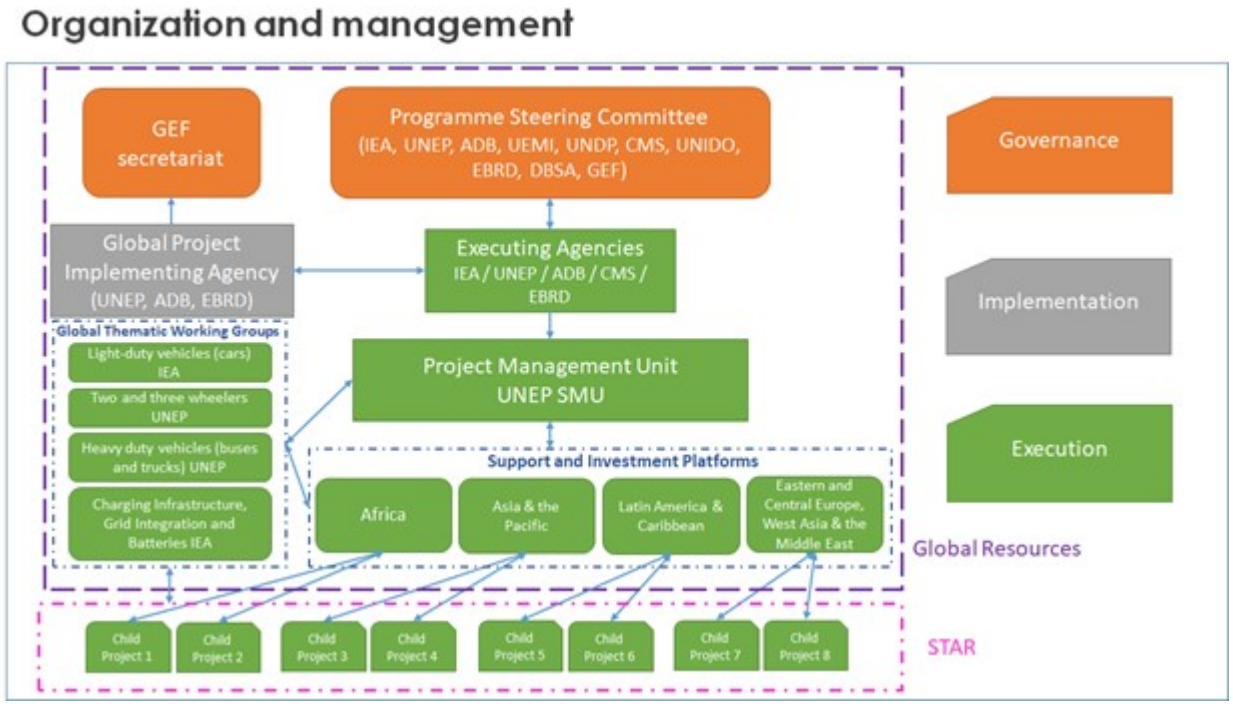

Figure 11 Organizational structure of the global programme

Global Project coordination and management:

The Global Project will be co-implemented by UNEP, the ADB and the EBRD, with UNEP being the lead agency. Each of the Implementation Agencies will receive budgets summarized in Annex I-1 directly from the GEF.

The Global Project will be co-executed by UNEP, the ADB, the EBRD, the IEA and CMS. Funds for co-execution received by IEA and CMS, which are not IAs, will be transferred through UNEP.

UNEP will lead on the Electric 2&3 Wheelers and the Electric Heavy-duty Vehicles Working Groups as well as the Africa Support and Investment Platform. Furthermore, UNEP will host the Project Management Unit (PMU), which will be responsible for the day-to-day management of the project and which will be part of the Sustainable Mobility Unit (SMU). The UNEP SMU will nominate a Project Manager, an Electric 2&3 Wheeler Working Group Coordinator, an Electric Heavy-Duty Vehicle Working Group Coordinator and an Africa Support and Investment Platform Coordinator. All project management costs (PMC) will be received by the UNEP SMU. The PMU also includes focal points for the 1.) Thematic Global Working Groups; and 2.) The Regional Support and Investment Platforms.

The IEA will execute the Electric Light Duty Vehicle and the Charging Infrastructure, Grid Integration and Batteries Working Group. The IEA will nominate a Project Focal Point, an Electric Light Duty Vehicle Working Group Coordinator and a Charging Infrastructure, Grid Integration and Batteries Working Group Coordinator. The Project Focal Point will be responsible for overall supervision of IEA activities and communication with the PMU. Both Coordinators will be responsible for managing the IEA lead Working Groups and for development and delivery of outputs and deliverables specified under Section 3, Alternative Scenario.

CMS will execute the Latin America & the Caribbean Support and Investment Platform. CMS will nominate a Project Focal Point and a Latin America & the Caribbean Support and Investment Platform Coordinator. The Project Focal Point will be responsible for overall supervision of CMSs activities and communication with the PMU. The Platform Coordinator will be responsible for managing Latin America & the Caribbean Support and Investment Platform and for development and delivery of outputs and deliverables specified under Section 3, Alternative Scenario.

The ADB will implement and execute the Asia and the Pacific Support and Investment Platform. The ADB will nominate a Platform Coordinator / Focal Point. The Platform Coordinator will be responsible for managing the Asia and the Pacific Support and Investment Platform and for development and delivery of outputs and deliverables specified under Section 3. The Platform Coordinator will also take over the Focal Point function and will be responsible for communication with the PMU and ADB's Sustainable Development and Climate Change Department (SDCC).

The EBRD will implement and execute the Central and Eastern Europe, West Asia and Middle East Support and Investment Platform. The EBRD will nominate a Platform Focal Point and hire a Project Management Consultant. The Platform Focal Point will be responsible will be responsible for overall supervision of EBRD's activities and communication with the PMU. The Project Management Consultant will be responsible for managing the Central and Eastern Europe, West Asia and Middle East Support and Investment Platform and for development and delivery of outputs and deliverables specified under Section 3.

The overall responsibility for reporting to the GEF will be with the UNEP Climate Mitigation Unit. Project Implementation Reports (PIRs) will be collated by the UNEP Climate Mitigation Unit with input from the ADB and the EBRD focal points, and with the input provided by the UNEP SMU. The IEA and CMS will report to the UNEP SMU.

The UNEP SMU will also coordinate with EC SOLUTIONSplus / UEMI and the respective work package leaders. UNEP SMU will facilitate communication between the Focal Points of the various Executing Agencies of the Global Working Groups and Support and Investment Platforms and the relevant EC SOLUTIONSplus work package leaders to ensure aligned development of knowledge products and delivery of trainings etc. in order to ensure the efficient use of funds of the GEF Global Electric Mobility Programme and the EC SOLUTIONSplus project.

The Project Steering Committee (PSC) will include representatives from:

- All Global Child Project Implementing Agencies – UNEP, ADB, EBRD
- All Global Child Project Executing Agencies (in addition to the IAs) - IEA, CMS
- All Country Child Project Implementing Agencies (in addition to the IAs and EAs of the Global Child Project) – UNDP, UNIDO, DBSA
- The EC SOLUTIONSplus project – UEMI
- The GEF

The PSC will be established to provide overall guidance and to oversee the progress and performance of the project as well as to enhance and optimize the coordination and contribution with various project partners. The PSC will be co-chaired by the UNEP Project Director (from the UNEP Sustainable Mobility Unit) and the UNEP Task Manager (from the UNEP Climate Mitigation Unit) and will convene at least once per year. The PSC might invite other organizations as deemed necessary to participate in PSC meetings.

The PSC will oversee the Programme's progress, including the progress of the Country Child Projects.

Country Child Project implementation:

Country Child Projects will be implemented by GEF Agencies and executed by national partners, such as government agencies, academia and accredited NGOs. All Country Child Projects will have their own institutional governance and involve relevant stakeholders from government, private sector, academia and civil society. All Country Child Project will need to designate a leading agency as well as a project coordinator. Project coordinators of all Country Child Projects will meet once a year under the Global Programme to exchange ideas and experiences and programme coordinated actions.

Coordination with other initiatives:

The Global Programme will coordinate with:

- GEF 6 project on electric mobility in Chile
- GEF 7 Sustainable Cities Projects which have components on electric mobility – these projects will be invited to participate in the events of the Regional Support and Investment Platforms (travel and daily subsistence allowance needs to be paid through the Sustainable Cities Project Budget)
- GEF 7 Standalone project submissions on e-mobility – Since the approval of the concept two e-mobility focused standalone projects funded through the 7th cycle of the GEF have been approved. These are Belarus and Mauritius. Both projects are implemented by UNDP and have dedicated budgets to participate in the events of the Global Programme Regional Support and Investment Platform events
- EC SOLUTIONSplus city projects
- Global Fuel Economy Initiative (GFEI) projects – Relevant materials produced as part of ongoing GFEI projects will feed into Working Groups deliverables as relevant.
- Where relevant, the Global Programme coordinates with activities of the World Bank

7. Consistency with National Priorities

Describe the consistency of the project with national strategies and plans or reports and assesments under relevant conventions from below:

NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc.

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 below table 17.

Table 17 overview of intended nationally determined contributions that correlate with e-mobility

Country	Intended Nationally Determined Contribution (NDC) that correlate with e-mobility
Antigua and Barbuda	Unconditional Mitigation Contribution: Enhance the established enabling legal, policy and institutional environment for a low carbon emission development pathway to achieve poverty reduction and sustainable development Conditional Mitigation Contribution: By 2020, establish efficiency standards for the importation of all vehicles and appliances. By 2030, achieve an energy matrix with 50 MW of electricity from renewable sources both on and off-grid in the public and private sectors In 2014, the transport sector consumed over one quarter of the country's fossil fuel imports, 20% of which were gasoline and 11% diesel. The NEP addresses this emissions sector by inter alia recommending the use of vehicles with higher fuel efficiency and lower emissions, and support for hybrid, flex-fuel for electric vehicles as national targets. Antigua and Barbuda aims to, by 2020, establish efficiency standards for the importation of all vehicles and appliances
Armenia	Unconditional Mitigation Contribution: not stated. Conditional Mitigation Contribution: Achieve ecosystem neutral GHG emissions in 2050 (2.07 tons/per capita annual) with the support of adequate (necessary and sufficient) international financial, technological and capacity building assistance Armenia has identified 6 main sectors that will contribute to climate mitigation, among which is the Transport sector (including development of electrical transport).
Burundi	Unconditional Mitigation Contribution: Reduction of greenhouse gas emissions by 3% compared to the business-as-usual (BAU) scenario for 2030 (i.e. 1,958 Gg CO2e) Conditional Mitigation Contribution: Reduction of greenhouse gas emissions by 20%, beginning in 2016, compared to the business-as-usual scenario for 2030 (i.e. 14,897 Gg CO2e) National programmes associated with implementation of the NDC: "*Mitigation of greenhouse gas emissions and low carbon developments*", which includes the following component: Energy efficiency in production, transport, distribution and consumption (reduction of losses, low energy light bulbs and energy saving equipment) "*Promotion of research & development and technology transfers*", which includes the following component: Urban transit with low GHG emissions

	Unconditional Mitigation Contribution:

Chile	Chile is committed to reduce its CO_2 emissions per GDP unit by 30% below their 2007 levels by 2030, considering a future economic growth which allows to implement adequate measures to reach this commitment Conditional Mitigation Contribution: In addition, and subject to the grant of international monetary funds, the country is committed to reduce its CO_2 emission per GDP unit by 2030 until it reaches a 35% to 45% reduction with respect to the 2007 levels, considering, in turn, a future economic growth which allows to implement adequate measures to achieve this commitment. The transport sector has been identified as one of the priority sectors for mitigation in Chile in the National Greenhouse Gas Inventory (1990-2010). The processes for the implementation and follow-up of Chile's contributions include the following tool (among other)s: Tax on the initial sale of lightweight vehicles pursuant to Law 20.780, which has been implemented since December 28, 2014 and which taxes CO2 emissions indirectly, by charging a higher tax inversely proportional to vehicle performance
Costa Rica	Unconditional Mitigation Contribution: The country is committed to a maximum of 9.37 Mt CO2eq net emissions by 2030, with proposed emissions per capita of 1.73 net tons by 2030, 1.19 Net Tons per Capita by 2050 and -0.27 Net Tons per Capita by 2100. Costa Rica's commitment includes an emissions reduction of GHG of 44%, of a BAU scenario, and a reduction of 25% of emission compared to 2012 emissions. To accomplish this goal Costa Rica would have to reduce 170,500 tons of GHG per year until the year 2030. Conditional Mitigation Contribution: not stated. The mitigation options proposed by Costa Rica in its National Contribution are categorized into four broad policy options, among which: Reducing energy demand and GHG emissions (Energy efficiency & conservation, low emissions development pathways) Fuel switching in end-uses (Buildings, transport, industry) Transport sector: Most of the proposed emissions abatement measures hinge on a greater use of electric transportation, both public and private. These measures had a greater level of consensus in the transport and energy sector dialogues. Public Transportation needs to improve its fleet composition as well as its working design. This can be accomplished through an Integrated Public Transportation system where routes are improved, train service strengthened, and availability of non-motorized transportation enhanced, etc. Costa Rica has made the intercity electric train a priority, which will provide a significant contribution to the country's emission mitigation goals, creating new employment and low emissions mobility. It is necessary to improve the freight sector through multi-modal options. This will require an ambitious investment portfolio in sustainable transportation over the coming decades
Cote d'Ivoire	Unconditional Mitigation Contribution: not stated. Conditional Mitigation Contribution: 28% reduction below a business as usual (BAU) reference scenario by 2030, based on the reduction efforts contained in the strategic sectoral development plans with the support of technical partners and financiers An additional 8% for a total 36% reduction below BAU, is subject to capacity building, technology development and transfer, and financial support that is new, additional and easily accessible In its NDC, Cote d'Ivoire outlines mitigation actions in the agriculture and forestry, energy and transport, and waste sectors. Particularly, the document mentions the following measures and actions for the Transport sector: 1. Improve mobility and develop low-carbon transport solutions; 2. Integrate the energy / climate nexus into territorial planning policy documents in order to limit

	3. distances, working on mixed-use / functionality and proposing efficient public transport policies; 4. Support municipalities in the elaboration of public transport plans; 5. Facilitate the purchase of low-emitting vehicles and phasing out the most polluting ones through no rms, incentives or minimum performance standards.
India	India has a definite plan of action for clean energy, energy efficiency in various sectors of industries, step s to achieve lower emission intensity in the automobile and transport sector, a major thrust to non-fossil-based electricity generation and a building sector based on energy conservation." India communicates its Intended Nationally Determined Contribution for the period 2021 to 2030: 1. To put forward and further propagate a healthy and sustainable way of living based on traditions an d values of conservation and moderation. 2. To adopt a climate friendly and a cleaner path than the one followed hitherto by others at correspon ding level of economic development 3. To reduce the emissions intensity of its GDP by 33 to 35 percent by 2030 from 2005 level. 4. To achieve about 40 percent cumulative electric power installed capacity from non-fossil fuel-base d energy resources by 2030 with the help of transfer of technology and low-cost international finance incl uding from Green Climate Fund (GCF). One of India's key climate change mitigation strategies is the "*Safe, Smart and Sustainable Green Transp ortation Network*" strategy. This strategy includes "*Faster Adoption and Manufacturing of Hybrid & Electr ic Vehicles in India"* (FAME India), which is a scheme formulated as part of the National Electric Mobility Mission Plan 2020 (NEMMP) to promote faster adoption and manufacturing of hybrid and electric vehicl es in the country by providing incentives.
Jamaica	Unconditional Mitigation Contribution: Jamaica's intended nationally determined contribution will mitigate the equivalent of 1.1 million metric to ns of carbon dioxide per year by 2030 versus the BAU scenario. This is a reduction of 7.8% of emissions versus BAU. This target is predicated on the current level of implementation of the National Energy Polic y and the existing pipeline of renewable energy projects Conditional Mitigation Contribution: Jamaica will conditionally increase its ambition to a reduction of GHG emissions of 10% below the BAU scenario, subject to the provision of international support. This reduction target is based on enhanced im plementation of the National Energy Policy. In particular, Jamaica's NDC states that the country seeks support for the expansion of energy efficiency initiatives in the electricity and transportation sectors, in line with sector action plans and policies curren tly under development.
	Unconditional Mitigation Contribution: not stated. Conditional Mitigation Contribution: In 2030, Madagascar aims to reduce approximately 30 MtCO2 of its emissions of GHG, representing 14% of national emissions, compared to the BAU scenario, with projections based of GHG inventory from year

Madagascar	2000 to 2010. In the Energy sector, Madagascar has identified several actions to contribute to the reduction of GHG em issions, among which: Facilitate access to energy by strengthening existing systems and by promoting renewable and alternativ e energies Reinforce renewable energy (hydraulic and solar) from the current level of 35% to 79%) The share of transport related emissions on energy emissions was 33.10% in 2011 and is the fastest gro wing source of emissions
Maldives	Unconditional Mitigation Contribution: In accordance with Decisions 1/CP.19 and 1/CP.20, Maldives communicates that it intends to reduce unc onditionally 10% of its Greenhouse Gases (below BAU) for the year 2030 Conditional Mitigation Contribution: The 10% reduction expressed above could be increased up to 24% in a conditional manner, in the context of sustainable development, supported and enabled by availability of financial resources, technology tran sfer and capacity building. Transportation has been identified as one of the priority sectors for climate change mitigation in Maldive s' NDC.
Peru	Unconditional Mitigation Contribution: The Peruvian State considers that a 20% reduction will be implemented through domestic investment an d expenses, from public and private resources. Conditional Mitigation Contribution: The Peruvian NDC envisages a reduction of emissions equivalent to 30% in relation to the Greenhouse G as (GHG) emissions of the projected Business as Usual scenario (BaU) in 2030 The transport sector is the highest energy consumer, accounting for 45,2% of national energy consumpti on, and the vehicle fleet is growing 9.5% annually. The transport sector has been addressed in Peru's NDC and includes one measure on electric transport, which aims to have 5% of the national vehicle fleet (heavy and light duty) electric by 2030.
Seychelles	Unconditional Mitigation Contribution: The Republic of Seychelles will reduce its economy-wide absolute GHG emissions by 122.5 ktCO2e (21. 4%) in 2025 and estimated 188 ktCO2e in 2030 (29.0%) relative to baseline emissions Conditional Mitigation Contribution: not stated. The country's Energy Policy 2010 has provided guidance regarding energy use scenarios in the power se ctor (electricity production and consumption) and transport to 2030. For the Transport sector, this entails keeping a high penetration of public transport, targeting fuel efficiency and biofuels in import regulation, and moving towards electric vehicles and two-wheelers, have the potential to reduce oil imports for trans port purposes by 15% to 30% (or perhaps more) by 2030 compared to the baseline. Projections have been made in the 2nd National Communication regarding the increase in baseline emiss ions from road transport sector from 66,525 tCO2 in 2005 to 167,087 tCO2 in 2030. The projections corr espond to an increase in the number of vehicles from 10,622 in 2005 to 20,000 in 2030. Fossil fuel consu mption is expected to increase from 21,324 t (2005) to 53,620 t in 2030. Using a target of 30% reduction i n fuel use, the total emissions arising from road transport is expected to be 116.96 ktCO2 in 2030. This t arget corresponds to a GHG reduction of 50.13 ktCO2 in 2030. Assuming a target of 18% for 2025, the co rresponding GHG reduction is expected to be 26.5 ktCO2. Mitigation actions identified in the land Transport sector: 1. 30% of private vehicles are electric by 2030

	2. 15.8 MW of solar PV for meeting the energy demand of electric vehicles
Sierra Leone	Unconditional Mitigation Contribution: not stated. Conditional Mitigation Contribution: Sierra Leone's NDC intends to maintain the emission levels of Sierra Leone relatively Low (close to the world average of 7.58 MtCO2e) by 2035 or neutral by 2050 by reducing her carbon footprint and by following green growth pathways in all economic sectors. Sierra Leone has identified 7 priority climate change response strategies in the area of mitigation of greenhouse gas emissions. Among these, Strategy 6 states the following: Diversification of economic growth through strengthened transport sub-sector, particularly the infrastructure to contribute to the reduction of regional and global emissions of greenhouses and build a stable economy. Present GHG emission contributions as part of Sierra Leone's "Internationally communicated pre-2020 GHG emissions reduction plans under the Copenhagen Accord" related to the transport sector: Development and enforcement of regulations on regular maintenance of vehicles (vehicle emission testing): formulation of transport plans. Improved and promoting use of public transport (e.g. road, rail and water) for passengers and cargo to reduce traffic congestion and GHG's emissions
St Lucia	Unconditional Mitigation Contribution: not stated. Conditional Mitigation Contribution: The mitigation targets are a 16% reduction (121 GgCO2eq) in 2025 and a 23% reduction (188 GgCO2eq) in 2030 compared to BAU projections. The mitigation targets of St Lucia's NDC consider emissions reductions from the Energy Demand, Electricity Generation and Transportation sectors. Proposed Interventions in the Transport sector: 1. Efficient Vehicles 2. Improved and Expanded Public Transit Key National Policies, Legislation and Actions that address Climate Change Mitigation: 1. Introduced a new levy to control importation of used vehicles 2. Reduction of excise tax and duty for importers of fuel efficient vehicles and alternative energy vehicles 3. Escalating taxes on higher engine capacity vehicles 4. Proposed Transport Policy and Strategy
	Unconditional Mitigation Contribution: Under the business-as-usual (BAU) scenario (accounting for the implementation of already programmed measures), the overall reduction rate in 2030 would be 11.14% compared with Togo's total 2030 emissions based on the baseline year (2010). This reduction in emissions is attributed to the implementation of sectoral work. Conditional Mitigation Contribution The conditional target for additional GHG emissions reduction, according to the most ambitious scenario, is estimated at 20% compared to the dynamic BAU. The conditional target for the total reduction would therefore be 31.14% in 2030, compared to the projections if no measures were to be applied

Togo	would therefore be 31.14% in 2030, compared to the projections if no measures were to be applied. GHG mitigation measures and options Togo's GHG mitigation measures in its three priority sectors (energy, agriculture, and land use, land use change and forestry) […] In the energy sector, they pertain to the promotion of household use of biomass, plus solar electricity and road transport. […] In terms of road transport, the planned actions aim to reduce the consumption of fossil fuels in Togo by 20% over the course of the period under review, by improving the road system, promoting the use of public transport, reducing the average age of imported vehicles (to 5-7 years) and promoting active modes of transport (bicycles, walking, bike paths). Current transport-related policies and strategies: The Declaration of General Governmental Policy on the Restructuring of the Transport Sector of 29 May 1996 made operational in 2013 through the definition of the National Strategy for the Development of Transport in Togo. Action to be taken: Revision of current national transport policy; adoption and application of the measures within the national strategy, especially the sections limiting the age and setting standards for the quality of imported used vehicles
Ukraine	Unconditional Mitigation Contribution: Ukraine defines ambitious, but at the same time substantiated and fair target with regards to the level of GHG emissions. It will not exceed 60% of 1990 GHG emissions level in 2030 (i.e. which means a 40% reduction compared to that level). Conditional Mitigation Contribution: not stated.
Uzbekistan	Unconditional Mitigation Contribution: To decrease specific emissions of greenhouse gases per unit of GDP by 10% by 2030 from level of 2010. Conditional Mitigation Contribution: not stated.
Ecuador	Ecuador's strategic positioning on transforming to electric mobility starts with its nationally determined contribution (NDC). The NDC states the need to develop and implement safe and sustainable transport, including through a nationally appropriate mitigation action (NAMA) to reduce GHG emissions in transport in Quito, Guayaquil and Cuenca. Beyond the NDC, in 2018 pilot projects were launched in Loja, with 50 electric taxis (Jaramillo, 2019), and Quito, with one articulated electric bus and two 12m electric buses. Also, in 2019, Guayaquil introduced 20 electric buses.
Grenada	Grenada's strategic positioning to facilitate a transformation to a low-emission and climate resilient transport sector is clear. In 2011 it adopted the National Energy Policy (NEP), with specific goals for the energy and transportation sectors, namely, that 20% of all electricity and transportation energy shall come from renewable sources by 2020 and a 100% by 2030; these goals are also reflected in its Nationally Determined Contribution (Government of Grenada, 2015). Based on this, Grenada has prepared a National Climate Change Policy and Action Plan (plan 2017-2021) through which it commits to promote and incentivize renewable energy and energy efficiency in the transport sector. In this context, in 2015 its licensed electricity provider (Grenada Electricity Services Limited, GRENLEC) launched the country's first electric vehicle pilot programme.
	The proposed project will help meet both the Clean Air 2025 and the Nationally Determines Contributions (NDCs) under Paris Agreement. Following COP-21 in 2015, Sri Lanka's NDC have identified transportation as one of the priority sectors, as shown below: · Establishment of energy efficient and environmentally sustainable transport systems by 2030 - Develop Urban Transport Master Plans (UTMP) to improve the transport system inline with the Megapolis Pl

Sri Lanka	elop Urban Transport Master Plans (UTMP) to improve the transport system inline with the Megapolis Pl an · Enhance efficiency and quality of public transport modes - Electrification of the railways system fro m Veyangoda to Panadura · Encourage and introduce low emission vehicles such as electric and hybrid · As per the Budget proposal 2018, it was proposed that; 1.) all vehicles in the country will be powere d by non-fossil fuel sources by 2040; and 2.) all government vehicles will be converted to hybrid and elect ric vehicles by 2025
Bangladesh	Unconditional Mitigation Contribution: The Nationally Determined Contributions (NDC) is committed to reduce GHG emissions in the power, transport, and industry sectors by 12 MtCO2 by 2030 or 5% below BAU emissions (unconditional). Conditional Mitigation Contribution: The Nationally Determined Contributions (NDC) is committed to reduce GHG emissions in the power, transport, and industry sectors by 36 MtCO2 by 2030 or 15% below BAU emissions for those sectors (wit h support). The draft Clean Air Act is being promulgated alongside of promoting electric vehicles in Dhaka. The Roa dmap and Action Plan for implementing NDC in transport, power and industrial sectors26 considers a br oad framework of low carbon transport approaches with emphasis on innovation, enhanced energy effici ency, fuel switch and potential for integrating EV charging based on renewables.
Indonesia	Unconditional Mitigation Contribution Indonesia's Nationally Determined Contribution (NDC) outlines the commitment to reduce emissions by 29% of BAU by 2030 and Conditional Mitigation Contribution: Indonesia's Nationally Determined Contribution (NDC) outlines the commitment to reduce emissions by 41% with international support. Particularly, 11% (about 314 Mt CO2e) to 14% (398 Mt CO2e) emission re duction from the total BAU in 2030 is expected to stem from energy sector including transport (Indonesi a NDC, 2016).
The Philippines	The Philippines NDC is currently under development, but from the consultation with the counterparts it has been indicated that transport will be one of key elements of the contribution. Draft NDC covers some unconditional, as well as conditional contributions to climate change mitigation from transport sector.
Albania	Albania's Intended Nationally Determined Contribution (INDC targets to reduce CO2 emissions by 11.5 % compared to the baseline scenario in the period of 2016-2030. This reduction is equivalent to 708 kT CO2 emission reduction by 2030 and includes the transport and en ergy sectors.
	Unconditional Mitigation Contribution Jordan's Intended Nationally Determined Contribution (INDC) includes the GHG reduction outcome target of 1.5% by 2030 compared to BAU.

	Conditional Mitigation Contribution: Jordan's Intended Nationally Determined Contribution (INDC) includes the GHG reduction outcome target of at least 12.5% by 2030 compared to BAU. The e-mobility project: · Contributes to the introduction of Zero Emission Electric Vehicles (ZEV) and deployment of 3,000 c harging stations and support of 10,000 ZEVs by the private sector · Contributes to increasing the total number of commuters using public transport to 25% of total num ber of commuters · Reduces fuel consumption in ton/day · Increasing transport sector ridability through adopting and implementing policies related to fleet ch aracteristics to enhance efficiency and reduce emissions thus yielding positive effect on energy consum ptions and reducing CO2 and other greenhouse gases emissions
Tunisia	Tunisia's INDC commits to a 41% reduction in carbon intensity compared to 2010 levels. In the energy sector, the primary contributor to emissions, it aims to reduce carbon intensity by 46 per cent compared to 2010 levels. For this, primary energy demand should decrease by 30 per cent by 2030. Tunisia'strategy on sustainable development, along with the strategy on climate change, and the strategy on green economy, forms the three pillars for the country to achieve its contribution towards Agenda 2030.
South Africa	South Africa's NDC targets an absolute emissions level in the range of 398–614 MtCO2e incl. LULUCF ov er the period 2025–2030 (Government of South Africa, 2016). Assuming LULUCF remains at the average level over 2000–2012 (-17 MtCO2e), this NDC translates to an emissions level of between 415–631 MtC O2e excluding LULUCF, equivalent to a 17–78% increase above 1990 levels excluding LULUCF. The NDC document does not specifically mention whether the emissions range is an unconditional target. In Sept ember 2019, President Ramaphosa announced the government would finalise a 'Just Transition Plan', "in cluding defining a vision compatible with the 1.5 degree Paris temperature goal". He also confirmed Sout h Africa will update its adaptation NDC and enhance its mitigation NDC by 2020 (https://climateactiontra cker.org/countries/south-africa/pledges-and-targets/).

Contribution to Sustainable Development Goals

The Global Programme, including the Global Child as well as the Country Child Projects will contribute to achieving the Sustainable Development Goals and in particular the following:

· 3.9 By 2030, substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination

· 5.5 Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life

· 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix

· 7.3 By 2030, double the global rate of improvement in energy efficiency

- 7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology

- 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons

- 12.4 By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment

- 13.2 Integrate climate change measures into national policies, strategies and planning

- 17.6 Enhance North-South, South-South and triangular regional and international cooperation on and access to science, technology and innovation and enhance knowledge-sharing on mutually agreed terms, including through improved coordination among existing mechanisms, in particular at the United Nations level, and through a global technology facilitation mechanism

8. Knowledge Management

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

UNEP will develop a knowledge management strategy at the start of the project that will be presented in a written document and shared with all relevant project partners so that partners will be part of the development and implementation of the knowledge management component of the programme. The knowledge management strategy will have the following seven components:

Overview of existing lessons and best practice that inform project concept

The IEA, UNEP and UEMI host leading global electric mobility initiatives. The IEA through the EVI, is supporting 15 countries to accelerate the introduction and adoption of electric vehicles. UNEP is supporting close to 45 country projects in all regions with the shift to electric mobility, through analysis of the vehicle fleet and policy gaps (GFEI), through demonstration projects (BMU-IKI, CRUSA) and through country preparedness for e-mobility (GCF Readiness in Latin America). UEMI is the lead agency coordinating the EC SOLUTIONS and SOLUTIONSplus project. The lessons learned from these initiatives have formed the basis for the development of this Global Programme.

For example, the design and topics of the Global Thematic Working Groups address what are considered the key challenges for non-OECD countries: What are the technical specifications of EVs for low and middle income countries in various regions of the world and which manufacturers will be able to satisfy demand at acceptable prices? How can public transport systems be designed and operated to better accommodate electric buses, 2&3wheelers and taxis? How can power supply systems be prepared to cope with the additional power demand and how can EVs be used to enhance the flexibility of the grid to accommodate higher shares of renewable power supply?

The Regional Support and Investment Platforms are designed in such a way that they can provide maximum support to the Country Child Projects – through task assessing the needs for specific and tailormade trainings, through mode-specific training curricula, through help desk support to match the demand for expertise with the available know-how available through the Global Working Groups and beyond, to match-make suppliers of suitable EVs and EV supply equipment with the demand for demonstration vehicles within the Child Country Projects, to develop new e-mobility projects proposals for submission to financial institutions, and to share the knowledge gathered within the Child Country projects with financial institutions, EV and EV supply equipment manufacturers and other interested stakeholders in the region and globally.

Plans to learn from relevant projects, programs, initiatives& evaluations

The Global Programme is designed in a way to maximize opportunities to share lessons learned and best practices among the Country Child Projects, the EC SOLUTIONSplus city projects and beyond. The Global Thematic Working Groups are aimed to develop relevant knowledge, based on demand and based on operating environments of the Country Child Projects. The main purpose of the Support and Investment Platforms is to create a community of practice where countries and cities can share experiences and best practices. By inviting non GEF /EC projects to these communities, the opportunities for countries and cities to share experiences and best practices is maximized.

By inviting multilateral and regional development banks, green funds such as the GCF and private investors, the Global Programme not only aims at the development of capacity within the Child Country Projects but also within the financial institutions. It will be key to involve financial actors throughout all steps of demonstration project planning, demonstration project implementation and development of national e-mobility frameworks through institutionalization, development of e-mobility policies, business models and finance schemes to de-risk the technology.

Proposed processes to capture, assess and document info, lessons, best practice& expertise generated during implementation

Component 3 of the global project is aimed at tracking progress, monitoring and dissemination of project results. Knowledge and lessons will be generated, recorded, and shared at all three levels of the project – in the thematic Global Thematic Working Groups, the Support and Investment Platforms, and in the country projects. An MRV framework will be set up in the project to capture data and lessons (details of this can be found in the section that describes component 3, section 3.4 above).

The e-mobility on-line toolbox, which will be jointly developed by the GEF Global Electric Mobility Programme and the EC SOLUTIONSplus project plays a key role in the processes to capture, assess and document info, lessons learned, best practice& expertise generated during implementation. It will be the repository (as appropriate) for all project documents and knowledge products generated by both projects. As such, it has the potential to become a reference knowledge repository for e-mobility projects in low and middle-income countries around the world. The e-mobility on-line toolbox will also be the key element to ensure that lessons learnt from the various Country Child Projects will be shared across countries and regions, through granting all GEF 7 Global E-Mobility Programme and EC SOLUTIONSplus project stakeholders and beyond access to project outputs uploaded to the e-mobility on-line toolbox (as appropriate).

Proposed tools and methods for knowledge exchange, learning & collaboration

A tracking framework will be developed for the Country Child Projects, based on several indicators, including the number of electric vehicles deployed, charging infrastructure installed, CO_2 emissions and pollutants impacts, and grid integration indicators. Further details about this framework is found under section 4.3 above. The tracking framework will provide a common tool to benchmark progress against each project's targets. Experiences, progress made, and lessons learned may be showcased at the Global Conferences organized by the programme. Project Managers / Chief Technical Advisors of the Country Child Projects will be requested to provide the respective information and data as part of their project implementation reporting (PIR)[1].

The Support and Investment Platforms will collect best practices and tools and disseminate these among the countries in the regions. Building communities of practice at (sub) regional level aims to encourage cities and countries to share their experiences, practices and approaches. These platforms will also facilitate the transfer of knowledge generated in the Thematic Working Groups to the country level.

In addition to physical meetings and workshops, the Global Programme will use on-line elements such as webinars, teleconferences etc. as a key tool to disseminate know-how and trainings.

Proposed knowledge outputs to be produced and shared with stakeholders

The four Thematic Working Groups will develop a set of tools, and in close cooperation with the EC Solution plus project – that are also planning to develop factsheets and tools-, package this into an e-mobility on-line toolbox. The e-mobility on-line toolbox will be made available to all Country Child Projects, plus any other interested parties, to provide concrete and detailed expertise, knowledge and best practices on introducing electric vehicles, - motorcycles, cars and busses – in non-OECD countries.

The Regional Support and Investment Platforms are designed to exchange knowledge and provide training, including on the e-mobility on-line toolbox. The trainings provided follow the schedule proposed under Section 3, Alternative Scenario, and take place at least once per year (target: twice per year) over the course of the programme in each region. Further workshops and trainings may also be organized upon request of the Country Child Projects. These could be sub-regional or issue specific training sessions.

The knowledge products leveraged through the Global Thematic Working Groups and Regional Support and Investment Platforms will be made accessible digitally through the e-mobility on-line toolbox. This digital platform will be continuously fed with content created from the various activities (data, key policy principles by topic stemming from the global thematic platforms, presentations made at workshops/forums, tools for decision-making support, pieces of analysis from the Global EV Outlook or other publications) and from the experiences gathered at the Support and Investment Platforms. The e-mobility on-line toolbox will be linked to the Global Programme website and the websites of the Regional Support and Investment Platforms.

The secretariat of the Working Groups, the coordinators of the Regional Support and Investment Platforms as well as the Management of the Global Programme will have the right to up-load knowledge products and materials to the e-mobility on-line toolbox. The PMUs of the Child Projects are supposed to request the help desk of the respective Regional Support and Investment Platform to upload documents to the e-mobility on-line toolbox.

Both, the GEF Global Programme partners as well as the EC SOLUTIONSplus consortium members have the right to prohibit the sharing of knowledge products through the combined GEF Global Programme / EC SOLUTIONSplus e-mobility on-line toolbox. Therefore, the respective partner and / or consortium member must address himself in writing to the secretariat of the respective Global Working Group, the coordinator of the Regional Support and Investment Platform, the management of the Global Programme or the PMU of the Country Child Project to inform about the proscription to make accessible certain documents to the public via the e-mobility on-line toolbox.

Any commercially sensitive or proprietary data / documents etc. need to be indicated as such and shall not be shared with the e-mobility on-line toolbox without prior written approval by the respective project partner.

Finally, child-project countries will have continuous remote access to experts involved in the programme. This will happen through the helpdesks to be set up at the Support and Investment Platforms and through peers. Thus, countries can seek easily accessible, informal and targeted support when necessary to make progress in their electric mobility projects.

The tools developed, best practices collected and knowledge generated during the project will continue to be available to countries and cities after the Global Programme has ended. UNEP, together with EC SOLUTIONSplus partners and the hosting organizations of the Regional Support and Investment Platforms, will continue to support the regional platforms so that these can take the lead in supporting the shift to electric mobility in their respective regions beyond the Global Programme. It is expected that once operational, the Regional Support and Investment Platforms will proof service to EV and EV supply equipment manufacturers as well as financiers. It is therefore envisaged, that funds will be mobilized during project implementation to further support the Regional Support and Investment Platforms. The role of other green funds such as the Green Climate Fund, needs to be further evaluated.

Contribution of knowledge management to the sustainability of the programme

The knowledge products developed by the Global Programme and the EC SOLUTIONSplus project will be available through the on-line e-mobility toolbox beyond the project duration. Given the scope of the combined GEF 7 Global E-Mobility / EC SOLUTIONSplus programme in terms of 1.) regional coverage; 2.) thematic coverage – policy / business / finance; 3.) variety of demonstration projects; and 4.) range of e-mobility stakeholders, the on-line e-mobility toolbox can provide an outstanding contribution towards accelerating the introduction and scale-up of e-mobility in low and middle-income countries, and thus contributes to the sustainability of the project.

Plans for strategic communications

As this will be the first global electric mobility programme, much interest is expected, especially in the progress that the Country Child Projects make on the ground with shifting to electric mobility. All Country Child Projects will include outputs on communication and reporting, aimed at sharing the progress made in the project.

As outlined in Component 3 of the Global Child Project logframe, two global conferences will be organized over the course of the programme to bring together all stakeholders of the GEF7 electric mobility programme, including the in-country projects, in collaboration with the EC SOLUTIONSplus project. The first conference will be a global launch of the programme and will be a joint launch of the GEF and EC SOLUTIONSplus. It is expected to involve all partners and other interested organisations, will outline the Global Programme, and will start developing partnerships and networks.

The second global conference will take place at the end of the programme and will showcase progress made by the country projects and the programme more broadly. It will be an additional opportunity to exhibit the knowledge and materials generated by the global thematic platforms. It will also ensure continuation and sustainability of the programme after the 4-year project term expires. Both events will also have a communications and media component.

The programme will develop a communication plan at the start of programme implementation, to list planned communication activities at all three levels, global (Working Groups & global meetings), regional (platforms) and country level (Country Child Projects).

The outputs and outcomes of the Global Child Project and the Country Child Projects and in particular the outcomes of the demonstration projects will feed into the development of a Global Campaign initiated by UNEP to establish normative approaches and global targets for the phase out of the sales of new conventional vehicles, and in particular conventional 2&3 wheelers.

The outputs and outcomes of the GEF Global Electric Mobility Programme will be communicated at high level events such as Conferences of the Parties (COPs) under the UNFCCC, the United Nations Environment Assembly, the Clean Energy Ministerials organized by the IEA, the annual Transportation Research Board, the annual International Transport Forum (ITF) Summit, among others.

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[1] Potential data exchange modalities between the stand-alone e-mobility projects implemented by UNDP and the Global Programme will be evaluated during the global e-mobility project's inception phase.

9. Monitoring and Evaluation

Describe the budgeted M and E plan

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

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

The M&E plan will contain the collection and aggregation of all objective and outcome level indicators of both the Global Project and all Country Child Projects and will report against the Programme Results Framework lined out in section 1d) Child Project. This includes, among others, the aggregation of all direct, secondary direct and indirect GHG savings as reported by the 27 Country Chid Projects under the Global Programme. The annual project reports to be delivered by the Project Managers of the Child Projects will be expanded to collect data for e-mobility market monitoring as per the data collection template, which will be developed by IEA under Output 3.1.

The project M&E plan is consistent with the GEF Monitoring and Evaluation policy. The Global Programme Monitoring Framework (refer to section 1.d. Country Child Project) and the Project Results Framework presented in Annex A include SMART indicators for each expected outcome as well as end-of-project targets. These indicators along with the key deliverables included in Annex L will be the main tools for assessing project implementation progress and whether project results are being achieved. The means of verification to track the indicators are summarized in Annex A.

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

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

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

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

Since this is a Full-Size Project (FSP), resources are set aside for a Mid-Term Evaluation (MTE). The UNEP Task Manager will decide when the MTE shall be initiated. The purpose of the Mid-Term Evaluation (MTE) is to provide an independent assessment of project performance at mid-term, to analyse whether the project is on track, what problems and challenges the project is encountering, and which corrective actions are required so that the project can achieve its intended outcomes by project completion in the most efficient and sustainable way. The review will include all parameters recommended by the GEF Evaluation Office for Terminal Evaluations and will verify information gathered through the GEF tracking tools, as relevant. The review will be carried out using a participatory approach whereby parties that may benefit or be affected by the project will be consulted. Such parties are identified in the stakeholder engagement plan (see section 2. above). Members of the project Steering Committee could be interviewed as part of the MTE process and the Project Management Unit (PMU) will develop a management response to the evaluation recommendations along with an implementation plan. It is the responsibility of the UNEP and ADB/EBRD Task Managers to monitor whether the agreed recommendations are being implemented.

In-line with UNEP's, ADB's and EBRD's Evaluation Policies and the GEF's Monitoring and Evaluation Policy the project will be subject to a Terminal Evaluation (TE). Additionally, a performance assessment will be conducted at the project's mid-point. The UNEP Evaluation Office will decide whether a Mid-Term Review, commissioned and managed by the Task Manager, is sufficient or whether a Mid-Term Evaluation, managed by the Evaluation Office, is required.

The Terminal Evaluation will be managed jointly by UNEP, ADB and EBRD Evaluation Offices. The UNEP Evaluation Office will, however, lead the Terminal Evaluation (TE) and will liaise with the ADB and EBDR Evaluation Offices throughout the process. Key decision points in the evaluation process will be made jointly by the Evaluation Offices in a collaborative manner [finalisation of Evaluation ToRs, selection of evaluation consultants, review of draft report and acceptance of final report].

The Terminal Evaluation will provide an independent assessment of project performance (in terms of relevance, effectiveness and efficiency), and determine the likelihood of impact and sustainability. It will have two primary purposes: (i) to provide evidence of results to meet accountability requirements, and (ii) to promote learning, feedback, and knowledge sharing through results and lessons learned among UNEP, ADB, EBRD and GEF, executing partners and other stakeholders. The direct costs of the evaluation will be charged against the project evaluation budget. The UNEP Task Manager will inform the UNEP Evaluation Office of the approaching Terminal Evaluation one year before the operational completion of the project.

The Terminal Evaluation report will be sent to project stakeholders for comment. Formal comments on the report will be shared by the Evaluation Offices in an open and transparent manner. The project performance will be assessed against standard evaluation criteria using a six-point rating scheme. The final determination of project ratings will be made by the Evaluation Offices of UNEP, ADB and EBRD when the report is finalised. The evaluation report will be publicly disclosed and will be followed by a recommendation compliance process".

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

The direct costs of reviews and evaluations will be charged against the project evaluation budget. A summary of M&E activities envisaged is provided in Annex J. The GEF contribution for this project's M&E activities (including evaluations) is US$ 70,000.

M&E Activity	Description	Responsible Parties	Timeframe	Indicative budget (USD)
Inception Workshop (IW)	Report prepared following the IW; which includes: - A detailed workplan and budget for the	Execution: PM Support: PMU	1 report to be prepared following the IW, to be share	GEF: as part of PM budget

	- A detailed workplan and budget for the first year of project implementation, - An overview of the workplan for subsequent years, divided per component, output and activities. - A detailed description of the roles and responsibilities of all project partners - A detailed description of the PMU and PSC, including an organization chart - Updated Procurement Plan and a M&E Plan, Gender Action Plan - Minutes of the Inception Workshop The report should include an attendance sheet (gender disaggregated)	Support: PMU UNEP TM ADB TM EBRD TM	the IW, to be shared with participants 4 weeks after the IW (latest)	
Steering Committee Meeting	Prepare minutes for every Steering Committee Meeting. The minutes should include an attendance sheet (gender disaggregated)	Execution: PM Support: PMU UNEP TM ADB TM EBRD TM	At least 1 per year Minutes to be submitted 1 week following each PSC meeting	GEF: as part of PM budget
Half-yearly progress report	Part of UNEP requirements for project monitoring. - Narrative of the activities undertaken during the considered semester - Analyzes project implementation progress over the reporting period; - Describes constraints experienced in the progress towards results and the reasons.	Execution: PM Support: PMU UNEP TM ADB TM EBRD TM	Two (2) half-yearly progress reports for any given year, submitted by July 31 and January 31 (latest)	GEF: as part of PM budget
Quarterly expenditure reports	Detailed expenditure reports (in excel) broken down per project component and budget line, with explanations and justification of any change	Execution: PM and Financial Officer Support: PMU	Four (4) quarterly expenditure reports for any given year, submitted by January 31, April 30, July 31 and October 31 (latest)	GEF: as part of PM budget
Project Implementation Review (PIR)	Analyses project performance over the reporting period. Describes constraints ex	Execution: PM UNEP TM ADB TM	1 report to be prepared on an annu	GEF: as part of PM budget

	perienced in the progress towards results and the reasons. Draws lessons and makes clear recommendations for future orientation in addressing the key problems in the lack of progress. The PIR shall include the project's achievements vis-à-vis the Global Programme monitoring framework. The PIRs shall be documented with the evidence of the achievement of end-of-project targets (as appendices).	ADB TM EBRD TM Support: PMU	al basis, to be submitted by 15 July latest	
Annual Inventory of Non-expendable equipment	Report with the complete and accurate records of non-expendable equipment purchased with GEF project funds	Execution: PM Support: PMU	1 report per year as at 31 December, to be submitted by 31 January latest	GEF: as part of PM budget
Co-financing Report	Report on co-financing (cash and/or in-kind) fulfilled contributions from all project partners that provided co-finance letters.	Execution: PM Support: co-finance partners	1 annual report from each co-finance partner, and 1 consolidated report, to be submitted by 31 July latest	GEF: as part of PM budget
Medium-Term Evaluation (MTE)	The purpose of the MTE is to provide an independent assessment of project performance at mid-term, to analyze whether the project is on track, what problems and challenges the project is encountering, and which corrective actions are required so that the project can achieve its intended outcomes by project completion in the most efficient and sustainable way. It will verify information gathered through the GEF tracking tools.	Execution: Independent Evaluator Coordination: UNEP EO Support: PM, PMU UNEP TM ADB TM EBRD TM	At mid-point of project implementation	GEF: US$ 25,000
Final Report	The project team will draft and submit a Project Final Report, with other docs (su	Execution: PM	Final report to be submitted no late	GEF: as part of PM budget

	ch as the evidence to document the achievement of end-of-project targets). Comprehensive report summarizing all outputs, achievements, lessons learned, objectives met or not achieved structures and systems implemented, etc. Lays out recommendations for any further steps to be taken to ensure the sustainability and replication of project outcomes.	Support: PMU UNEP TM ADB TM EBRD TM	r than three (3) months after the technical completion date	
Terminal Evaluation (TE)	Further review the topics covered in the mid-term evaluation. Looks at the impacts and sustainability of the results, including the contribution to capacity development and the achievement of global environmental goals.	Execution: Independent Evaluator Coordination: UNEP EO Support: PM, PMU UNEP TM ADB TM EBRD TM	Can be initiated within six (6) months prior to the project's technical completion date	GEF: US$ 45,000
TOTAL M&E COST			GEF: US$ 70,000	

10. Benefits

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

The Global Child Project under the Global Programme will support countries with the introduction of electric mobility which:

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.

3.) 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.

4.) Will contribute to the improvement of gender related aspects such as comfort and safety. 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.

The Global Programme, with the support of the materials developed, the events hold, the networking facilitated as part of the Global Child Project will therefore lead to a whole suite of benefits other than the mitigation of greenhouse gas emissions.

11. Environmental and Social Safeguard (ESS) Risks

Provide information on the identified environmental and social risks and potential impacts associated with the project/program based on your organization's ESS systems and procedures

Overall Project/Program Risk Classification*

PIF	CEO Endorsement/Approval	MTR	TE
	Low		

Measures to address identified risks and impacts

Elaborate on the types and risk classifications/ratings of any identified environmental and social risks and impacts (considering the GEF ESS Minimum Standards) and any measures undertaken as well as planned management measures to address these risks during implementation.

The Global Child Project of the GEF 7 Global E-Mobility Programme is to provide the global strategy, coordination and support for the involved Country Chil d Projects. So, it is considered to be a low risk project. Each country-specific Child E-Mobility Project should be reviewed separately for the potential safe guard risks.

In terms of climate resilience and sustainability, the project team analyzed and committed as following:

" Apart from supporting low and middle-income countries with the introduction of e-mobility to reduce energy use, GHG, air pollutant emissions and costs stemming from the transport sector, the Global Programme, through the Global Child Project support will also lead to increased resiliency of these countri es against various effects such as: 1.) economic shocks through increased prices for petroleum fuels; 2.) reduced dependency on global value chains thro ugh enabling of local assembly and manufacturing; and 3.) extreme weather events.

While points 1 and 2 above are true for all child projects, point 3 is of particular importance for Small Island Developing States (SIDS). Introduction of e-mo bility can enable large scale integration of distributed renewable power generation. The following 6 SIDS are part of the Global Programme, which will be s upported through the Global Child Project: Antigua and Barbuda, Grenada, Jamaica, Maldives, Seychelles and Saint Lucia.

The Global Programme provides a good opportunity to spur strategic thinking at a global scale bringing together policy makers and industry players from around the world."

UNEP ESSF guiding principles-- resilience and sustainability; human rights, gender equality and women empowerment, accountability and leave no one be hind--are still applicable for low risk projects. Special attention should be given to marginalized and vulnerable population to climate changes.

Also, grievance redress mechanism at the project level should be available for any potential complaints and grievance issues. Such information should be widely shared to public to welcome their concerns and fear. UNEP HQ Grievance mechanism also needs to be shared with the public.

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
EM Global_ESERN_2020.12.09	CEO Endorsement ESS	

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

Project Objective	Objective level Indicators	Baseline	Mid-Point Target (if applicable)	End of project Target	Means of Verification	Assumptions & Risks	UN Environment MTS reference
Support countries to design and implement electric mobility programs as part of an overall shift to sustainable, low carbon transport sector	Indicator A: % of countries having designed and implemented electric mobility programmes	0	-	at least 85% of the GEF-approved Country Child Projects	Based on annual PIRs of the Country Child Projects to the Implementing Agencies	Assumption: Up to 15% of the GEF-approved country projects might fail to implement e-mobility programmes due to various reasons. Risk: 1. Political changes stall the Country Child Project implementation or impede scale-up 2. COVID 19 pandemic significantly delays the Global Project and Country project implementation 3. Negative perceptions about e-mobility technology and the impacts brought to society and industry.	UNEP MTS 2018-2021 Climate Change Objective: Countries increasingly transition to low-emission economic development and enhance their adaptation and resilience to climate change
	Indicator B: % of countries with succesful e-mobility demonstrations	0	-	at least 85% of the GEF-approved Country Child Projects	Based on annual PIRs of the Country Child Projects to the Implementing Agencies	Assumption: Up to 15% of the GEF-approved country projects might fail to implement e-mobility demonstrations due to various reasons. Risk: 1. Political changes stall the Country Child Project implementation or impede scale-up 2. COVID 19 pandemic significantly delays the Global Project and Country projects implementation 3. Negative perceptions about e-mobility technology and the impacts this will bring to society and industry. 4. Higher upfront cost of EV may pose a barrier to implementation and scale up of activities	
	Indicator C: # of direct project beneficiaries (women and men)	0	500, out of which: 350 men 150 women	2,880, out of which: 2,012 men 868 women	Based on meeting reports and participant lists from the Global Thematic Working Groups and Regional Support & Investment Platforms	Assumption: All Country Child Projects participate in the Global Programme events and use the provided knowledge materials Risk: 1. Political changes stall the Country Child Project implementation or impede scale-up 2. Country Child Projects do not show the expected interest in the Global Programme events and the provided knwoledge materials	

Project Outcomes	Outcome level Indicators	Baseline	Mid-Point Target (if applicable)	End of project Target	Means of Verification	Assumptions & Risks	MTS Expected Accomplishment
Outcome 1: The four Global Thematic Working Groups generate knowledge products to support policy and investment decisions by governments and private sector stakeholders to promote the sustainable acceleration of e-mobility in country projects	Indicator 1.1: # of knowledge products developed by the four thematic working groups that are used by the Support and Investment Platforms in their training and outreach activities	0	10	At least 25 knowledge products	Based on reports from the regional Support and Investment Plaforms	Scope and quality of the developed knowledge products meet country expectations Risks: 1. Materials developed are not relevant for country context and / or project partners do not deliver the required materials 2. Countries do not show the expected interest in the Global Programme events and the provided knowledge materials 3. Countries are not interested in second life and disposal of batteries so early on in market transformation to electric vehicles 4. Countries are not interested in sustainability aspects such as the integration of renewable power to EV charging so early on in market transformation to electric vehicles	Expected Accomplishment (b): Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies
Outcome 2: Conditions are created for market actors in low and middle-income countries to expand investment in electric mobility through the Support and Investment Platforms.	Indicator 2.1: # of expression of interest / preliminary agreements facilitated to provide demo projects with EVs and EV supply equipment	0	2	15	Based on reports from the regional Support and Investment Plaforms	Demonstration vehicles are provided with the support of the regional platforms Risk: 1. Political changes stall the Country Child Project implementation or impede scale-up 2. COVID 19 pandemic significantly delays the Global Project and Country Child Project implementation 3. Objection or low commitment from industry to technology changes. 4. Lack of interest or participation from market players/private sector. 5. Higher upfront cost of EV may pose a barrier to implementation and scale up of activities 6. Lack of linkages with available funding/financing for EVs fleets.	Expected Accomplishment (b): Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies
	Indicator 2.2: # of e-mobility scale up and/or replication concepts facilitated as a result of the match-making	0	2	At least 10	Based on reports from the regional Support and Investment Plaforms	Experience is gained, policy frameworks are implemented and technology risk is reduced Risk: 1. Demonstration projects show not the required level of maturity for up-scaling 2. Political changes stall the Country Child Project implementation or impede scale-up 3. Higher upfront cost of EV may pose a barrier to implementation and scale up of activities 4. Lack of interest or participation from market players/private sector. 5. Lack of linkages with available funding/financing for EVs fleets.	
	Indicator 2.3: # of financial institutions / development banks (national/regional) that have been engaged through the Global Programme and are actively supporting e-mobility projects	4 (ADB, EBRD, DBSA, World Bank)	-	12 (+8)	Based on reports from the regional Support and Investment Plaforms	Experience is gained, policy frameworks are implemented and technology risk is reduced Risk: 1. Demonstration projects show not the required level of maturity for up-scaling 2. Political changes stall the Country Child Project implementation or impede scale-up 3. Higher upfront cost of EV may pose a barrier to implementation and scale up of activities 4. Lack of interest or participation from market players/private sector. 5. Lack of linkages with available funding/financing for EVs fleets.	

	Indicator 2.4: # of US$ leveraged to scale-up low-carbon electric mobility through the Support and Investment Platforms	0	-	US$ 140 million	Based on reports from the regional Support and Investment Plaforms	A number of child projects leverage funding for upscaling projects through the regional support and investment hubs Risks: 1. Political changes stall the Country Child Project implementation or impede scale-up 2. No or significantly less funds to scale-up the e-mobility projects are leveraged 3. Little participation of financial institutions in regional support and investment platform events 4. A shift in focus of financial institutions leads to less interest in funding e-mobility scale-up projects 5. Time lag of results: Major results of the project may not be seen before the end of the project. 6. Lack of linkages with available funding/financing for EVs fleets. 7. Lack of supportive government policy environment limits replication due to unattractive business case for e-mobility investments 8. Limited bankability of potential e-mobility clients reduces opportunities for replication of e-mobility projects	
Outcome 3: Projects and electric mobility markets are tracked, and key developments, best practices and other lessons learned are shared to promote wider uptake of electric mobility by market actors in programme and non-programme countries.	Indicator 3.1: # of e-mobility knowledge products refined based on evidence coming from the country projects available on the project website	0	-	At least 8	Based on reports from the Global Thematic Working Groups	Child country projects revert lessons learnt which are integrated to the knwoledge products Risks: 1. Global programme materials do not correspond to countries' needs 2. Countries do not provide feedback on the knowledge products	
	Indicator 3.2: % of users surveyed finding the programme materials available on the website "useful" or "very useful" for e-mobility market transformation	0	-	75%	Based on the survey reports from the website	Willingness of countries to share and learn Risks: 1. Global programme materials do not correspond to countries' needs 2. Countries do not provide feedback on the knowledge products	Expected Accomplishment (b): Countries increasingly adopt and/or implement low greenhouse gas emission development strategies and invest in clean technologies
	Indicator 3.3: # of non-e-mobility programme countries committing to actively promote the uptake of low-carbon e-mobility.	0	-	10	Global assessments	Non-e-mobility programme countries participate in the Global Programme events and start actively promoting e-mobility Risk: 1. No non-e-mobility programme countries participate in the Global Programme events 2. Inadequacy of the exit strategy and lack of ownership of the program after the end of the GEF funded activities	

ANNEX B: RESPONSES TO PROJECT REVIEWS (from GEF Secretariat and GEF Agencies, and Responses to Comments from Council at work program inclusion and the Convention Secretariat and STAP at PIF).

Given the size of the files and number of pages of reviews (over 100), we have uploaded these in the "Documents" section of the Portal as separate pdf files which include all responses to the GEF's reviews:

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

The responses to STAP comments and Council comments may also be found below:

Annex B.3 – Responses to STAP comments

UNEP replies to STAP screening:

Part I: Project Information	
GEF ID	10114
Project Title	Global Program to Assist Countries with Shift to Electric Mobility
Date of Screening	27-May-19
STAP member Screener	Saleem H. Ali
STAP secretariat screener	Sunday Leonard
STAP Overall Assessment	Concur

STAP comments	UNEP replies
The e-mobility program has been developed based on a set of 17 child projects, as well as synergies with the EC Solutions Plus program. Partnership with the International Energy Agency gives the proposal a high level of rigor in terms of metrics of energy costing and efficiency measurement criteria. The proposal is also supported by relevant studies from applicable development agencies. The public-private partnership aspect of the project is convincing and likely to deliver the overall desired impact - if well- implemented. Comment 1: Key barriers to the scaling of e-mobility have been recognized in the child projects. However, there are also some system factors around e-mobility that deserve attention, and which should be highlighted as barriers to upscaling. The material needs of e-mobility infrastructur	Reply 1: The project recognizes the issues around provision of raw materials for battery production. Nonetheless, it is not the focus of the project to ensure availability of these materials and subsequent battery supply. It seems to be understood that availability of resources such as lithium, cobalt, nickel and copper and their transformation into reserves (classification based on IEA Global Electric Vehicle Outlook [GEVO] 2019) is not constrained by the natural resource base but rather by the pace of investment to un-tap these resources (see IEA GEVO 2019). The project seeks for acceleration of EV demand, and therefore acceleration of demand for batteries. It is believed that such an accelerated demand will lead to the necessary investment in battery production capacity and hence the provision of raw materials.

e in terms of the availability of battery storage technology, and the link between the price of key metal components needs to be specified more clearly. The project has set up a “batteries working group” to assure a reliable supply of batteries through recycling and criticality assessments, but how such a working group would ensure supply is not clearly articulated. The proposal notes a connection with the Global Battery Alliance of the World Economic Forum which will help to avoid redundancies and build a wide private sector alliance. The project proponents should also monitor the Roland Berger “E-Mobility” Index in terms of key lessons from countries that have achieved high rankings in this index. The Australian government has also set up a new Cooperative Research Centre on Batteries which could be an important resource.	Nonetheless, the project will put focus on the development of regulation and schemes for collection of used EV batteries for re-use, recycling and safe disposal, mainly through the International Energy Agency (IEA) led Global Thematic Working Group on “Charging infrastructure, grid integration, low-carbon power supply and batteries”. The project aims at facilitating re-use and recycling of used EV batteries through “design for recyclability” of EV batteries to ensure that a trajectory leading to some sort of circular economy can be taken in the future. Development of adequate policies will play a major role in the stipulation of high recycling rates to ease pressure on raw material demand and to increase sustainability of e-mobility as a whole. This also includes the development of guidelines and agreements with regards to the social and environmental standards for the sourcing of these materials. Private sector alliances such as the mentioned Global Battery Alliance of the World Economic Forum can help with the facilitation of such agreements and will be included in the design of the relevant operational parts of the Global Child Project. Similarly, literature and indices such as the mentioned Roland Berger “E-Mobility” Index will be included to the extent possible within the work of the relevant Working Groups. It needs to be noted that the Basel and Stockholm Convention Regional Centre for the Asia and Pacific Region in China (BCRC-SCRC China, hosted by the School of Environment of Tsinghua University) will be part of the GEF Global E-Mobility Programme. The Basel Convention regulates the international trade of waste, which might play a key role in the area of used EV battery recycling since large scale battery recycling is likely to depend on international shipping of used EV batteries and / or battery components.
Comment 2: Clearly the E-mobility program has positive interactions with the Sustainable Cities Impact Program because much of the high-density implementation and climate benefits of e-mobility would be realized in an urban context. There needs to be good coordination between the two programs.	Reply 2: For countries that have both an e-mobility and a Sustainable Cities project (i.e. India, etc.), close coordination will be undertaken during project implementation to ensure synergies. Whenever the sustainable cities projects organize events/workshops on urban mobility, the e-mobility project team / proponents will be invited to participate.
Comment 3: A core challenge will be to ensure that the source of electricity for the e-mobility platform is low carbon to maximize the GHG reduction benefit. All calculations for GHG emission	Reply 3: GHG emission saving potentials for all Country Child Projects are evaluated based on 1.) the current local carbon footprint of grid electricity; and 2.) prospects to reduce the average carbon footprint of grid electricity based on commitments and pledges to mitigate climate change. Many of the low and middle-income countries included in the Global E-Mobility Programme already have power mixes based on high shares of low carbon electricity such as hydro, wind, solar PV and nuclear power. This is true for many of the Country Child Projects in Latin America, Africa, Eastern Europe and West Asia. For Country Child Projects with relatively high grid emission factors such as India, most of the SIDS, Indonesia, South Africa, etc. projects have been designed in a way to ensure that sufficient amount of low carbon power will be integrated i

s (cars, buses versus trains etc.) need to be eva luated in terms of life-cycle analysis methodolo gies to ensure full systems-wide GHG benefits and ensure that impacts are internalized.	n the electricity mix used to power the demonstration vehicles to yield net climate benefits. As a general “r ule of thumb” a carbon footprint threshold for grid electricity of around 800 to 900 gCO2/kWh is assumed to mark the line above which additional measures are necessary to reach net reductions of greenhouse ga s emissions. Compared to alternative, technology based transport GHG mitigation measures such as the l arge scale use of biofuels as well as the use of potentially low carbon fuels such as hydrogen and syntheti c fuels, it is believed that the direct use of electricity constitutes the most efficient means of decarbonizin g transportation, alongside implementation of “avoid” (avoid transport demand) and “shift” measures (shif t transport demand to more efficient means of mass transport as well as non-motorized transport). It is th erefore necessary to introduce e-mobility now, in order to be prepared for upscaling once mitigation target s in the relatively low-abatement cost power sector have been achieved.

STAP comments	UNEP replies
Comment 4: The program will generate both cl imate mitigation and air pollution reduction be nefits. If possible, the expected health benefits from air pollution reduction (for example, pre mature death prevention and Disability-Adjust ed Life Years - DALYs) should be estimated du ring project development. This will provide a m ore detailed information on the environmental and socio-economic benefits from the GEF’s i nvestment.	Reply 4: The air pollution reduction and associated expected health benefits will not be measured/quantifi ed by the projects through GEF funding. However, if the countries wish to undertake these estimates, they will be welcome to do it through co-finance contributions.
Comment 5: There is detailed evidence of multi-s takeholder engagement, particularly for training programs, and other activities which connect wit h the OECD’s multi-stakeholder engagement proc esses. It would be helpful to acknowledge that e- mobility has implications for “energy justice”, bec ause growth of this sector has largely been in hig h-income markets, especially for electric cars.	Reply 5: E-mobility has the potential to increase energy justice and to support the development of local v alue chains. While petroleum-based fuels are imported in most of the Country Child Projects, electricity is generated locally, with the potential to include high shares of locally generated renewable power. Introduc tion and up-scaling of e-mobility has therefore the potential to increase energy security and to hedge agai nst the price volatility of the global petroleum fuel market. In many of the Country Child Projects, consum er prices of petroleum fuels are regulated by government and price spikes in the global supply chain has i mmediate effects on countries budgets. Total cost of ownership of electric vehicles, in particular when us ed in fleets such as public transportation fleets (buses, taxis, 2&3 wheeler taxis) are already lower than fo r conventional vehicles today in many of the Child Country Projects. The large-scale introduction of EVs in such fleets can therefore lead to better economics of public transport services, which in turn can lead to better service and lower cost of transportation for the end consumer. In addition, the provision of e-mobili

	ty applications such as electric 2&3 wheelers in least developed countries can un-tap synergies with rural electrification based on renewable micro and mini-grids (e,g, based on solar PV & electricity storage). Las t but not least, the relatively less complex nature of electric vehicles can lead to the creation of green jobs in the local assembly and manufacturing of EVs, notably electric 2&3wheelers.
Comment 6: STAP recommends that project pro ponents review the following study: Sovacool, B. K., Kester, J., Noel, L. & de Rubens, G. Z. Energy In justice and Nordic Electric Mobility: Inequality, Eli tism, and Externalities in the Electrification of Ve hicle-to-Grid (V2G) Transport. Ecological Econo mics 157, 205–217 (2019).	Reply 6: We take note of this recommendation. This will be shared with project proponents and the global thematic working groups.
Comment 7: E-vehicle technology is rapidly evolvin g: it will be important therefore to keep track of an d incorporate innovations in the field. University pa rtners in academia would be recommended in this regard. A few key academic partners are noted su ch as University of California Davis and Technical University of Denmark. These institutions and othe rs should be involved in the M&E program.	Reply 7: The GEF Global E-Mobility Programme will be implemented in close collaboration with the Europ ean Commission funded Solutions Plus project. The Solutions Plus project, which started implementation in January 2020, and which has a total budget of about 18 million EUR, is targeting e-mobility demonstrati on projects in 9 low and middle-income cities world-wide, and includes replication activities of these dem onstration projects in a number of additional cities and countries. UNEP is responsible for the developme nt of replication projects in 8 cities worldwide. It has been agreed that EC Solution Plus funds will be inclu ded in 5 GEF Country Child Projects (around 60k to 80k USD per replication project) to procure charging e quipment and to provide targeted support to local innovators with the installation and operation of this eq uipment. Similar to UNEP, DTU is a consortium member of the EC Solution Plus project and is mainly resp onsible for impact assessment and data collection and analysis of the project. UNEP will make sure that i mpact assessment and data collection and analysis will be closely coordinated between the GEF E-mobili ty Programme and the EC Solution Plus project and that all tools and materials as well as project outcom es and lessons learnt will be shared between both projects. In fact, the GEF and the EC Solutions Plus pro ject target the joint and complementary development of tools, training materials, and events. Academic partners may also include the University of California, Davis, which is a long-standing partner in UNEP's Global Fuel Economy Initiative (GFEI) through the Sustainable Transportation Energy Pathways Pr ogram directed by Lew Fulton.
Comment 8: A recent study which may be helpful i n considering some of the pitfalls of e-mobility is a lso referenced below: Onat, N. C., Kucukvar, M., Ab	

oushaqrah, N. N. M. & Jabbar, R. How sustainable i s electric mobility? A comprehensive sustainability assessment approach for the case of Qatar. Appli ed Energy 250, 461–477 (2019).	Reply 8: We take note of this recommendation. This will be shared with project proponents and the global thematic working groups.

Part I: Project Information	What STAP looks for	Response	UNEP replies
B. Indicative Project Descriptio n Summary			
Project Objective	Is the objective clearly defined, and co nsistently related to the problem diag nosis?	Yes – the program has a very clearly defined ob jective of electric mobility.	-
Project components	A brief description of the planned a ctivities. Do these support the proje ct's objectives?	Yes, the outcomes support the objectives.	-
Outcomes	A description of the expected short-t erm and medium- term effects of an intervention.	These are defined in detail and refer enced through a theory of change. Global environmental benefits of car bon mitigation are noted with key as sumptions about the source of ener gy.	-
	Do the planned outcomes encompas s important global environmental ben efits/adaptation benefits?		
	Are the global environmental be nefits/adaptation benefits likely to be generated?		
Outputs	A description of the products and servi ces which are expected to result from t he project. Is the sum of the outputs lik ely to contribute to the outcomes?	Yes, there is a clear linkage between outputs an d outcomes made through the theory of chang e materials provided.	-
Part II: Project justification	A simple narrative explaining the projec t's logic, i.e. a theory of change.		
1. Project description. Brie			

1. Project description. Briefly describe:			
1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)	Is the problem statement well-defined?	Yes – detailed review of the material from the perspective of development agencies provided. However, academic literature review is not provided.	-
	Are the barriers and threats well described, and substantiated by data and references?		
	For multiple focal area projects: does the problem statement and analysis identify the drivers of environmental degradation which need to be addressed through multiple focal areas; and is the objective well-defined, and can it only be supported by integrating two, or more focal areas objectives or programs?		
2) the baseline scenario or any associated baseline projects	Is the baseline identified clearly?	Yes, baseline of current programs for countries provided as well as the relationship with EC Solutions plus program.	-
	Does it provide a feasible basis for quantifying the project's benefits?		
	Is the baseline sufficiently robust to support the incremental (additional cost) reasoning for the project?		
	For multiple focal area projects:		
	are the multiple baseline analyses presented (supported by data and references), and the multiple benefits specified, including the proposed indicators;		
	are the lessons learned from similar or related past GEF and non-GEF interv		

	related past GEF and non-GEF interventions described; and how did these lessons inform the design of this project?		
3) the proposed alternative scenario with a brief description of expected outcomes and components of the project	What is the theory of change?	Good presentation of theory of change material in Figure 6.	-
	What is the sequence of events (required or expected) that will lead to the desired outcomes?		
	· What is the set of linked activities, outputs, and outcomes to address the project's objectives?		
	· Are the mechanisms of change plausible, and is there a well-informed identification of the underlying assumptions?		
	· Is there a recognition of what adaptations may be required during project implementation to respond to changing conditions in pursuit of the targeted outcomes?		
5) incremental/additional cost reasoning and expected contributions from the baseline, the GEF trust fund, LDCF, SCCF, and co-financing	GEF trust fund: will the proposed incremental activities lead to the delivery of global environmental benefits?	Yes – very detailed cost reasoning and partnerships provided.	-
	LDCF/SCCF: will the proposed incremental activities lead to adaptation which reduces vulnerability, builds adaptive capacity, and increases resilience to climate change?		
6) global environmental benefits (GEF trust f	Are the benefits truly global enviro nmental benefits, and are they me	Yes – electric mobility if implemented with low carbon energy source has clear global environmental benefits	-

und) and/or adaptation benefits (LDCF/SCCF)	asurable?	mental benefits.	
	Is the scale of projected benefits both plausible and compelling in relation to the proposed investment?		
	Are the global environmental benefits explicitly defined?		
	Are indicators, or methodologies, provided to demonstrate how the global environmental benefits will be measured and monitored during project implementation?		
	What activities will be implemented to increase the project's resilience to climate change?		
7) innovative, sustainability and potential for scaling-up	Is the project innovative, for example, in its design, method of financing, technology, business model, policy, monitoring and evaluation, or learning?	The PFD has a short section on innovation (Section 7 on page 68) which largely focuses on the inherent innovation of e- mobility infrastructure as a new technology. Perhaps the most significant innovations in the GEF program itself would be the financing arrangements that are being proposed through a variety of public-private partnerships that are being proposed, building on the vast experience of the International Energy Agency. Regarding' STAP's guidelines on innovation in projects, the wide range of examples provided of innovative start-ups that emanate from the EC's Solutions Plus program are also appropriate. These should be further analysed to ascertain the level of actual success they are having (refer to section starting on page 36 and the table which starts on page 37).	-
	Is there a clearly-articulated vision of how the innovation will be scaled-up, for example, over time, acros		

	s geographies, among institutional actors?		
	Will incremental adaptation be required, or more fundamental transformational change to achieve long term sustainability?		
1b. Project Map and Coordinates. Please provide geo- referenced information and map where the project interventions will take place.			
2. Stakeholders. Select the stakeholders that have participated in consultations during the project identification phase: Indigenous people and local communities; Civil society organizations; Private sector entities.If none of the above, please explain why. In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.	Have all the key relevant stakeholders been identified to cover the complexity of the problem, and project implementation barriers?	The energy justice aspect of this program should be closely monitored as e-mobility uptake continues to favor higher income households	Please refer to our response to the energy justice comment in the 1st section above (reply 5).
	What are the stakeholders' roles, and how will their combined roles contribute to robust project design, to achieving global environmental outcomes, and to lessons learned and knowledge?		
3. Gender Equality and Women's Empowerment. Please briefly include below any gender di	Have gender differentiated risks and opportunities been identified, and were preliminary response measures des	Gender sensitivity analysis and action plans built into program. The uptake of electric motor cycles disproportionately by men for cultural r	All country child projects as well as the global child project include a gender analysis and a gender action plan (in PAR

mensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis). Does the project expect to include any gender-responsive measures to address gender gaps or promote gender equality and women empowerment? Yes/no/ tbd. If possible, indicate in which results area(s) the project is expected to contribute to gender equality: access to and control over resources; participation and decision-making; and/or economic benefits or services. Will the project's results framework or logical framework include gender- sensitive indicators? yes/no /tbd	cribed that would address these differences?	easons is noted as a useful example.	T II section 3. Gender Equality and Women's Empowerment of the CEO Endorsement Document) to mainstream gender during project implementation.
	Do gender considerations hinder full participation of an important stakeholder group (or groups)? If so, how will these obstacles be addressed?		
5. Risks. Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the project design	Are the identified risks valid and comprehensive? Are the risks specifically for things outside the project's control?	A wide variety of risks have been identified especially with reference to critical supply chains.	-
	Are there social and environmental risks which could affect the project?		

	For climate risk, and climate resilience measures:		
	· How will the project's objectives or outputs be affected by climate risks over the period 2020 to 2050, and have the impact of these risks been addressed adequately?		
	· Has the sensitivity to climate change, and its impacts, been assessed?		
	· Have resilience practices and measures to address projected climate risks and impacts been considered? How will these be dealt with?		
	· What technical and institutional capacity, and information, will be needed to address climate risks and resilience enhancement measures?		
6. Coordination. Outline the coordination with other relevant GEF-financed and other related initiatives	Are the project proponents tapping into relevant knowledge and learning generated by other projects, including GEF projects?	Figure 9 presents a good organizational framework for coordinating the project across multiple agencies and private partners.	-
	Is there adequate recognition of previous projects and the learning derived from them?		
	Have specific lessons learned from previous projects been cited?		
	How have these lessons informed the project's formulation?		

	Is there an adequate mechanism to feed the lessons learned from earlier projects into this project, and to share lessons learned from it into future projects?		
8. Knowledge management. Outline the "Knowledge Management Approach" for the project, and how it will contribute to the project's overall impact, including plans to learn from relevant projects, initiatives and evaluations.	What overall approach will be taken, and what knowledge management indicators and metrics will be used?	University partnerships could be better leveraged for knowledge management. Clearer role delineation of university and research partners would be a positive development.	Please refer to our response in relation to UCD and DTU in the 1st section above (reply 7).
	What plans are proposed for sharing, disseminating and scaling-up results, lessons and experience?		
STAP advisory response	Brief explanation of advisory response and action proposed		
1. Concur	STAP acknowledges that on scientific or technical grounds the concept has merit. The proponent is invited to approach STAP for advice at any time during the development of the project brief prior to submission for CEO endorsement.		
	* In cases where the STAP acknowledges the project has merit on scientific and technical grounds, the STAP will recognize this in the screen by stating that "STAP is satisfied with the scientific and technical quality of the proposal and encourages the proponent to develop it with same rigor. At any time during t		

	ith same rigor. At any time during t he development of the project, the proponent is invited to approach S TAP to consult on the design."		
2. Minor issues to be con sidered during project design	STAP has identified specific scient ific /technical suggestions or oppo rtunities that should be discussed with the project proponent as early as possible during development of the project brief. The proponent m ay wish to:		
	(i) Open a dialogue with STAP rega rding the technical and/or scientifi c issues raised;		
	(ii) Set a review point at an early st age during project development, a nd possibly agreeing to terms of re ference for an independent expert to be appointed to conduct this rev iew.		
	The proponent should provide a re port of the action agreed and take n, at the time of submission of the full project brief for CEO endorsem ent.		
3. Major issues to be con sidered during project design	STAP proposes significant improv ements or has concerns on the gro unds of specified major scientific/t echnical methodological issues, b arriers, or omissions in the project concept. If STAP provides this advi sory response, a full explanation w ould also be provided. The propon ent is strongly encouraged to:		
	(i) Open a dialogue with STAP rega rding the technical and/or scientifi		

	c issues raised; (ii) Set a review poi nt at an early stage during project development including an indepen dent expert as required. The propo nent should provide a report of the action agreed and taken, at the tim e of submission of the full project brief for CEO endorsement.		

Annex B.4 – Responses to Council comments

UNEP responses to GEF Council comments on the
Global Programme to Support Countries with the Shift to Electric Mobility (GEFID 10114)

v Comment by Yoshiko Motoyama, GEF Alternate Council Member, Japan, Deputy Director Global Environment Division, International Cooperation Bureau, Ministry of Foreign Affairs of Japan, Council, Japan made on 6/1/2020

The below comments from Japan were provided prior to the Council meeting. An initial agency response was provided and can be found in the list of documents specific to the project in the GEF Portal.

On single-country projects, especially with large stated co-finance ratios, and cyclical-industry-related projects, such as Project 10564 (Environmentally Sustainable Development of the Iron and Steel Industry) and Project 10544 (electric mobility addendum):

· We anticipate that participants of these projects may be severely impacted by the COVID-19 crisis. How realistic are the published co-financing arrangements to be met, and for the industry to meet the higher operating costs - - without de facto subsidization from the GEF?

Response:
The current health crisis related to COVI-19 poses some difficult challenges for the automotive sector, but also, looking more specifically at the electric vehicles segment, it offers some opportunities.

Challenges include delays related to the finalization of the design of some of the national child projects, due for instance to international travel restrictions for the specialists involved in the design and the relative consultations. Broader challenges also include depression of demand for cars, at least in the short term, and potential shift in government priorities to focus limited national budget and workforce to more pressing health-crisis related issues. At this point it is

difficult to make assumptions regarding the extent to which this will affect government priorities with regards to the allocation of budget and work force. What can be said is that there is a clear case to be made for mobility to as a key pillar for sustainable and clean transportation investments in the context of economic recovery plans.

Opportunities: According to today's knowledge, there seems to be a correlation between air quality and COVID-19, whereby COVID-19 incidence and mortality are significantly higher in areas that have high levels of local air pollution. This includes particulate matters (e.g. PM2.5, PM10)[1] as well as N_2O from both mobile (e.g. trucks and cars) and stationary (e.g. coal power stations) emission sources[2]. Since electric mobility has the potential to significantly contribute to improved urban air quality, we assume that it will play an important role in countries' strategies to respond to the COVID-19 pandemic.

Similarly, a shift to electric mobility will significantly reduce the dependency of countries to import petroleum petrol fuels. It therefore increases resilience against restrictions or price spikes resulting from international crisis.
While during COVID-19 vehicles sales have plummeted by half or more, electric vehicles sales have been relatively less affected. Analysts from Bloomberg New Energy Finance have estimated that the electric segment of car sales will continue to outperform in terms of growth the traditional cars one as we move past the crisis, even though oil prices at a historic low will create some negative headwinds. However, orders of buses are likely to suffer delays if public perception of mass transit as unsafe does persist.

Furthermore, in terms of green recovery, clean mobility is expected to play a key role in getting the global economy back on track. Continued social distancing measures will have an impact on how we use transportation services, and in particular public transportation, but certain modes of public transport are expected to grow, in particular in low and middle-income countries. These modes include 2&3 wheeler taxis, or usual taxis and ride-hailing providers using passenger cars, to reduce close contact with higher numbers of riders. For many of these modes good electric alternatives are available.

Based on current trends and signals it is expected that after COVID-19 the shift to electric mobility would continue, if not increase. Many city governments around the world are looking at opportunities to take advantage of the significant reduction in urban congestion linked to the COVID-19 mobility restrictions to introduce permanent limitations to the use of private vehicles, especially if internal combustion engines. Such measures will not only reduce local air pollutants (such as particulates PM2.5 and PM10, but also N_2O) and carbon emissions but can also increase resilience of transport systems against the current - and any potential future - health crises. The contribution of low-carbon mobility, including electric mobility, to a more resilient economy will be further integrated in the Programme and highlighted throughout the training components to be delivered to participating countries.

· What happens to the funds/projects if some participants cease to become going concerns (=i.e. bankruptcy)?

Response:
The information presented in the project documentation (PIFs and PFDs) represents the best available information available at the time of the submission to Council, following the technical review from the GEFSEC. Some level of change in the project design and in the availability of the amount of co-financing estimated ex-ante is possible and sometimes even desirable, considering the additional in depth design analysis conducted during the project preparation phase, including through the PPG-funded activities, between the submission of PIFs/PFDs and the submission of the relative CEO ER. Co-financing arrangements and amounts specified in PIFs/PFDs are best-case estimations that GEF Implementing Agencies and National Executing entities or participating actors provide for the formulation of the project proposals. These up-front estimates are assessed as part of the GEFSEC review process in terms of their relevance and adequacy vis-à-vis the scope and objective of the proposed Project/Program activities.

Once the PIF/PFD is approved by Council, as part of the detailed design process, Agencies and actors listed as other providers of co-financing amounts are asked to reassess and formally confirm that the co-financing volumes which had been included in the PIF/PFD have been approved by the competent authority within each specific organization. This is formalized through the submission of co-financing confirmation letters. In case a specific entity is no longer able to provide the previously stated co-financing amount, either in full or in part, generally Implementing Agency and GEFSEC would work together to assess if the stated co-financing is essential to achieve the project/program's objective. If so, GEFSEC and Agency assess if the expected amount of co-financing that is no longer available can be replaced by existing or additional co-financing from other actors. In case the co-financing is deemed essential, and there is no possibility to source such funds that are considered necessary to achieve the stated objectives, GEFSEC and Agency would consider whether to revise the approved project/program, and if not possible/advisable the project/program would not receive CEO Endorsement.

Given that the development phase will take around 12 months, and that the COVID crisis might trigger some government support to accelerate the further uptake of electric vehicles, as we have seen in France, for example (see quote below) , we hope that the co-finance might not be such an issue in a year from now, when the CEO endorsement documents will be due for submission. In any case, if planned investments and/or co-finance becomes an issue, agencies will work with the project developers to identify other sources of co-finance that can substitute the initial set of co-financiers, while keeping the project scope. If this is not possible, the developers will try to re-adjust the scope to respond to available co-finance that is still aligned with the project objectives. If this fails as well, then the developers might wish to either postpone the project or discuss with the country if the project should/can go ahead.

· We raised at the last council our interest in verifying the ability of GEF and its accredited agencies to conduct independent audits of such contributions, including verifying and assessing the abilities of the involved parties to meet the co-financing obligations of this project. We recognize that this process --- along with many other due diligence procedures --- could be increasingly impaired by the latest COVID-19 crisis. Detailed explanations on how the Secretariat plans to handle these types of issues would be appreciated (preferably in writing to be posted on the GEF website, as it is not clear from the existing material and guidelines on the website)

Response:
In addition to the explanation provided above on the dynamics of co-financing, co-financing is reported on a yearly basis, based on progresses related to the sourcing and use of co-financing amounts. In the case of the e-mobility Programme, the Lead Implementing Agency is UNEP. For each project implemented by UNEP, the Project Manager has responsibility to seek signed co-finance reports from each co-financier of that given project. While the co-financiers are not audited, their signed (by the authorized authority in each entity providing co-financing) co-finance reports are available for the mid-term and terminal evaluators, so that the evaluation process can assess if that given GEF project reached or not the co-finance amounts which had been estimated up-front.

· We would also like to stress the need for transparency and balanced involvement of private sector providers in any of these corporate projects (particularly highly cyclical sector projects such as the ones included in this work program in the steel and automobiles sectors), especially amid the COVID crisis, given that all such industry participants indiscriminately face severe business conditions. Projects should be carefully constructed and communicated, so that they are not deemed to infringe upon rules against subsidization of particular entities, thereby "reinforcing the market power of some targeted companies at the expense of other firms" (as per the rules). For example, "to de-risk investments in …." in the project description/ objectives implies the potential of subsidization, highlighting the need for transparency in their construct and execution, so that they are visibly in line with GEF rules and regulations and the Private Sector Engagement Strategy to be adopted at this Council session. This type of crystal-clear communication/ governance insurance measure is essential for the GEF to credibly raise funding for private sector-driven projects in a tough financial environment.

Response:

We certainly acknowledge the importance of the point being raised here: all projects must be careful to run clear, fair and transparent procurement policies, which Agencies have in place for GEF projects. The recently adopted MINIMUM FIDUCIARY STANDARDS FOR GEF PARTNER AGENCIES Policy (GA/PL/02, of Dec 19, 2019), which covers both the Agency's internal procurement policies and procurement by recipients of funds, provides that:

Specific GEF Partner Agency policies and guidelines promote economy, efficiency, transparency and fairness in procurement through written standards and procedures that specify procurement requirements, accountability, and authority to take procurement actions. As a minimum, these policies and guidelines provide for:

- *Open competition and define the situations in which other less competitive methods can be used; and*
- *Wide participation through publication of business opportunities; descriptive bid/ proposal documents that disclose the evaluation criteria to be used; neutral and broad specifications; non-discriminatory participation and selection principles; and sufficient time to submit bids or proposals.*

UNEP is the GEF agency leading the global e-mobility programme and will take on this guidance in the development of the global project and its own child projects and will also pass it along to all other Implementing Agencies (UNDP, UNIDO, DBSA and EBRD). Of course, the participation of private sector partners and entities is key for the e-mobility programme and UNEP and the other Implementation Agencies will continue to seek their support and participation in the program. The Program objective is to promote a shift towards electric mobility and away from Internal Combustion Engines, and as such all projects will be working with private sector partners that are actively working in this space.

In this context, it may also be useful to refer to the GEF-7 Programming Directions, para 121, as they refer to the Climate Change Focal Area:

121. To take advantage of the GEF's comparative advantage, programming under this objective does not prioritize direct support for large-scale deployment and diffusion of mitigation options with GEF financing only. Rather, GEF-7 resources should be utilized to reduce risks and enhance enabling environments in order to facilitate additional investments and support by other international financing institutions, the private sector, and/or domestic sources to replicate and scale up in a timely manner.

The global e-mobility program is responding to the GEF's grant role to support innovation and technology transfer at key early and middle stages of development, focusing on the demonstration and early deployment of innovative technologies to deliver sustainable energy solutions that control, reduce, or prevent GHG emissions.

v Comment by Kordula Mehlhart, GEF Council Member, Head of Division on Climate Finance, BMZ, Council, Germany made on 6/18/2020

Germany approves the following PIFs in the work program but asks that the following comments are taken into account:

Germany approves the addendum to the global programme that contributes to the adoption of e-mobility by strengthening the technical and financial capacities of countries and taking into account different local prerequisites and requirements.

Suggestions for improvements to be made during the drafting of the final project proposal:

· The introduction of e-busses to local public transportation fleets differs from other e-mobility forms, e.g. from heavy duty long-distance trucks, when it comes to technical aspects, charging infrastructure and the role of public / private investments. Given the unique involvement of public stakeholders in the purchase and operation of e-busses as well as the significant effect e-busses can have in terms of GHG-emission reductions in urban centres, this subject deserves a great amount of attention. Germany therefore proposes, that the significance of the acceleration of ebus adoption be reflected in the program structure, by creating an additional working group focused on e-busses in public transportation.

Response:
Many countries have prioritized the introduction of electric busses in their country projects. Often as part of their efforts to introduce mass transit/ bus rapid transit systems. There will be a key interest in developing tools about the introduction of e-busses in developing country operating environments. There are also many lessons learned and examples (good and bad) in all regions that need sharing (for example the Chile and South Africa pilots). On the other hand, no country projects have prioritized electric trucks in their projects. Generally, this sector is seen as the last sector to switch, after busses, 2&3 wheelers and light duty vehicles (with the exception of the smaller delivery trucks like vans and so). Therefore, our thinking is to focus the HDV working group on busses. With possibly (probably) a smaller sub-group focusing on electric trucks. So rather than having a busses sub-group, we want to focus the HDV working group on busses and have a sub-group on trucks.

· Germany welcomes that information exchange and knowledge management are a substantial part of the programme. We suggest establishing a close working relationship to the new TUMI (Transformative Urban Mobility Initiative) E-Bus mission. The“TUMI E-Bus Mission” follows a similar logic and approach in supporting cities in the uptake of e-busses. As the e-bus implementation in public transport is largely dependent on an involvement of city level decisionmakers, the TUMI E-Bus Mission can contribute to the proposed programme by feeding in local perspectives and requirements.

Response:
UNEP already has existing working relations with the Transformative Urban Mobility Initiative. Coordination with and involvement of the TUMI initiative in the global e-mobility programme will be added to the project document (especially through the activities implemented as part of the Regional Support and Investment Platforms).

v Comment by Anar Mamdani, Director, Environment Division (MSS), Global Issues and Development Branch (MFM), Global Affairs Canada, Council, Canada made on 6/26/2020

· We recommend that there be some consideration to mitigating the environmental impacts of electric vehicles, particularly where facilities for managing batteries don’t exist.

Response:
Component 1 of the global e-mobility project includes a Global Thematic Working Group on “Electric vehicle charging, grid integration, renewable power supply and battery re-use, recycling and safe disposal”. This Working Group’s main objective will be to develop and make available knowledge materials that support governments in their ambitions for advancing a sustainable roll out of electric mobility, including policy instruments to ensure the sustainability of the battery

supply chain and the end-of-life treatment of batteries. It also aims at the facilitation of discussions between regulators, recyclers and battery / vehicle manufacturers to better understand and enhance battery design to improve recyclability of batteries, especially with regards to economic viability.

In addition, Component 4 of the country child projects is usually focused on the long-term environmental sustainability of low-carbon electric mobility, which include outputs/activities to ensure/promote the environmentally sound management of used batteries (i.e. collection, re-use, recycling and disposal).

v Comment by Elizabeth Nichols, U.S. Department of State | Bureau of Oceans, International Environmental and Scientific Affairs (OES), Office of Environmental Equality and Transboundary Issues (EQT), Council, United States made on 7/2/2020

· Within Bangladesh, we recommend additionally coordinating with the State Minister for Power, Energy, and Mineral Resources, and the Dhaka North City Corporation Mayor.

Response:
Comment taken and shared with UNDP project proponents in charge of the Bangladesh child project. This recommendation will be considered during the proposal development phase of the Bangladesh e-mobility project.

· Within Sri Lanka, there was very minimal reference to the project's stakeholders. We look forward to seeing much more clearly defined information on stakeholders and their engagement in the next stage of proposal development.

Response:
Comment taken and shared with UNEP project proponents in charge of the Sri Lanka child project. Engagement of project stakeholders will be further elaborated during the proposal development phase of the Sri Lanka e-mobility project.

v Comment by Dr Katharina Stepping, Deputy Head of Unit Climate Finance, Federal Ministry for Economic Cooperation and Development (BMZ), Council, Germany made on 6/28/2019

Germany welcomes the proposal aiming to support countries to design and implement electric mobility programs as part of an overall shift to sustainable, low carbon transport sector. Germany welcomes the proposal as the first global inter-agency electric mobility programme and appreciates that the project clearly aims at supporting the rapid introduction of electric mobility in GEF recipient countries, herby making a contribution to the low carbon transition in the transport sector. At the same time, Germany has the following comments that it suggests be addressed in the next phase of finalizing the project proposal:

Suggestions for improvements to be made during the drafting of the final project proposal:

· Germany welcomes that the project foresees a clear role for the private sector as a supplier for electro mobility technologies. However, given that private sector investments in electric mobility will be key, Germany would welcome the inclusion of activities that specifically directed at spurring private investments in electric mobility (from the demand side). For instance, some firms have switched parts of their operations to electric fleets. These types of opportunities

could be considered within the PIF.

Response:
Almost all of the Country Child Projects are geared towards the introduction of electric 2&3 wheelers (and sometimes e-passenger cars) as well as e-buses into private or government owned public transportation fleets through: 1) Awareness raising, capacity building and institutionalization of e-mobility; 2) Short term barrier removal through demonstration of e-mobility; 3.) Scale-up and replication through development of e-mobility policies, business models and financial mechanisms; and 4.) Support of environmental sustainability through battery re-use / end-of-life considerations and integration of renewable power for vehicle charging. The Country Child Projects therefore target to spur e-mobility demand in the project countries.

The Regional Support and Investment Platforms under the Global Programme will create market-place events whereby the current as well as potential new projects meet with financiers (development banks, venture capital, green funds) and e-mobility manufacturers. The idea is to bundle demand for EVs and EV supply equipment and to raise interest from manufacturers in regions of the world, which are not yet in the focus of manufacturers, but have a great market potential.

The Global Working Groups and the Regional Supply and Investment Platforms are a means of private sector participation, and invites all major EV and EV supply equipment manufacturers to participate in events, tasks groups, etc. This also includes bringing together multinational EV and EVSE manufacturers with the vibrant mobility service provider start-up scene in low and middle-income countries.

Many Country Child Project also include work streams to incentivize the local assembly and manufacturing of e-vehicles, such as e-motorcycles and e-3wheelers.

· Germany welcomes the comprehensive and overall well-structured project design. To further facilitate an overview of the project´s intended activities, Germany welcomes the inclusion of quantitative indications in the description of component 3 on how many pilot projects, regulatory measures etc are planned.

Response:
Each country child project includes a project results framework with quantitative indicators and end-of-project targets to measure the number of pilot projects, regulatory measures, etc., achieved/developed within the framework of the GEF project. However, at the time of submission of the Global Child Project, not all Country Child Projects (and in particular those 10 Country Child Projects submitted as part of the second round) have been finalized, and thus the exact amount of policies planned, business models envisaged and financial mechanisms to be set-up cannot not be provided.

· While the proposal provides a comprehensive overview of highly relevant initiatives and programmes, Germany welcomes including existent initiatives such as the Transformative Urban Mobility Initiative and the C40 Cities Finance Facility as well as upcoming initiatives such as TUMIVolt to enable exchange of experiences as well as potentials for future collaboration. This is especially relevant considering the planned future expansion of the proposed project to countries like Nigeria and Mexico which are partner countries to above mentioned initiatives.

Response:

UNEP has working relations with both TUMI as well as C40 (in particular through the “Zero Emission Bus Rapid-deployment Accelerator” (ZEBRA) initiative), and coordination with and involvement of both initiatives in the global e-mobility programme, especially through the activities implemented as part of the Regional Support and Investment Platforms, will be added to the project document.

· Germany welcomes the proposal´s reliance on IEA scenarios to lay out the project approach. To even further increase the proposal´s line of argument, Germany would welcome a very brief explanation on why the proposal focuses on the IEA´s B2DS and not on the 2DS scenario when describing the programme´s focus. This could for example be provided on page 26 in the first paragraph.

Response:
Work funded by the GEF working towards Climate Change Mitigation is related to the UNFCCC and the Climate Agreements achieved as part of the Conference of the Parties (COP). The Paris Agreement’s central aim is “to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius”. The IEA Beyond 2 Degree Scenario (B2DS) reflects this. Language can be added as suggested.

v Comment by James Woodsome, International Economist, O□ce of International Development Policy, International Affairs, U.S. Department of the Treasury, Council, United States made on 7/3/2019

Feasibility. The core of this proposal for Armenia deserves further scrutiny. The claim of 5,000 electric vehicles does not fit with other statistics, for example press reports citing the Minister of Nature Protection as saying that 30 electric vehicles were imported into Armenia in 2018. While there may have been a several-fold increase in electric vehicle imports in Armenia since 2016, those imports would have started from extremely low levels. That Armenia would manufacture electric vehicles does not track with the fact there is no real manufacturing industry even for traditional petroleum fuel vehicles at present. Due to the ratcheting duties caused by incremental adoption of the Eurasian Economic Union (EAEU) common external tariff, Armenia will face steadily increasing prices for imports of cars from outside the EAEU, complicating the adoption of such technology. We encourage more background investigation before its basic feasibility can be established.

Response:
Regarding the question on Armenia, unfortunately there is a mistake with the short description of the Armenia child project baseline in Table 2 of the PFD. This will be corrected during the Child Project development and a note will be attached to the PFD to that effect. The 5,000 EVs mentioned and the local manufacturing actually belong to Ukraine. The US Council comment is right and Armenia imported about 30 EVs in 2018 (https://energyagency.am/en/page_pdf/tsragri-anvanoum). The project feasibility in Armenia will be further analyzed during development, but the government has prioritized the promotion of electric vehicles as one of the transport measures in their NDC. Armenia recently waived the VAT on EVs to stimulate the EV market (https://energyagency.am/en/category/noroutyounner-ev-mijocaroumner/elektromobilneri-nermoutsoumy-kazatvi-aah). In general, high import duties for vehicles can be an opportunity rather than a barrier for EV import. In case these duties are waived or reduced for EVs (to some extent that is already the case with the VAT exemption for EVs in Armenia), it provides a meaningful monetary incentive for customers to buy electric vehicles. EV market uptake in Norway is largely due to import and registration tax exemptions for EVs, while import of conventional cars is subject to high taxes. Yerevan has instituted an exemption of parking fees for EV’s and has deployed some recharging infrastructure. Armenia already has a low emissions factor of about 0.4 tons of CO2/MWh and the introduction of EV’s in Armenia would be able to reduce emissions with such a grid profile, and Armenia has introduced several policies to

incentivize renewable power generation investments. For example, projects have been implemented or have been committed to improve energy transmission efficiency and reliability, and investment in renewables is taking off. This GEF project aims to demonstrate light duty vehicles in a government fleet in Yerevan, and in 2019, 23 charging stations will be installed through a GEF-6 funded Small Grant Programs implemented and led by UNDP. Promoting electric vehicles together with renewable energy will improve energy efficiency and further reduce CO2 emissions, air pollution and energy dependence in Armenia. This will be in full alignment with the countries' NDC and its strong commitment to the introduction of clean and sustainable energies.

v Comment by Lauren Céline Naville Gisnås, NORAD, Department for Climate, Energy and Environment, Council, Norway made on 6/29/2019

· We put great emphasis on cutting GHG emissions through electrification of the transport sector. We are of the opinion that if all take concerted action, it will drive down costs because of scale production.

· Every country has to choose their own path. However, an important lesson so far is that one needs to tax emissions. You need carrots and sticks. In line with general GEF principles of an enabling policy framework, one should pay attention to relevant tax policies when designing GEF programs, including policies for reducing fossil fuel subsidies.

Response:
The Child Country Projects all include work on the development of adequate policy frameworks to support the uptake of e-mobility – including regulatory, fiscal and other local measures. For example, some of the country projects include outputs on fiscal reforms in order to base registration and / or import taxation for vehicles on CO2 emissions or fuel consumption. In some of the countries (i.e. in some of the SIDS), work will be brought forward to liberalize the power market and to allow the supply of power by independent power producers, which facilitates the introduction of renewable power generation and breaks the monopoly of subsidized petroleum fuel powered electricity generation.

[1] Harvard University: "COVID-19 PM2.5, A national study on long-term exposure to air pollution and COVID-19 mortality in the United States", available at: https://projects.iq.harvard.edu/covid-pm

[2] Yaron Ogen, 2020, "Assessing nitrogen dioxide (NO2) levels as a contributing factor to coronavirus (COVID-19) fatality", Science of The Total Environment, available at: https://www.sciencedirect.com/science/article/pii/S0048969720321215

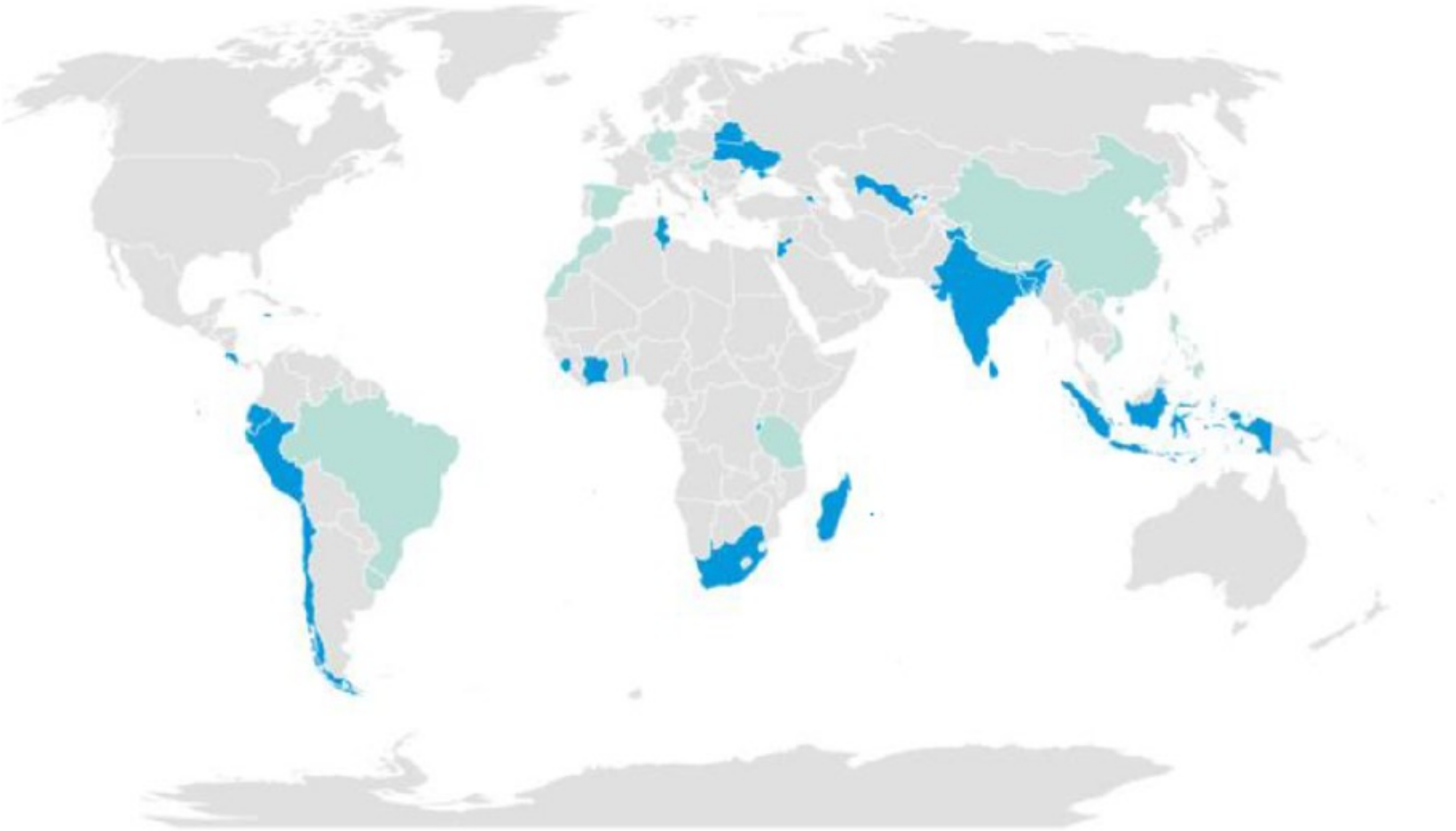
ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

UNEP PPG:

PPG Grant Approved at PIF: **US$ 50,000**			
Project Preparation Activities Implemented	*GETF/LDCF/SCCF Amount (US$)*		
	Budgeted Amount	*Amount Spent to date*	*Amount Committed*
CM Unit Consultant	13,292	13,292	
CM Unit Consultant travel	1,968	2,360	
CM Unit Meeting participants	3,840	3,001	447
SM Unit personnel	21,250	21,250	
SM Unit personnel travel	6,490	7,592	
SM Unit Meeting participants	3,160	658	1,400
Total	**50,000**	**48,153**	**1,847**

ANNEX D: Project Map(s) and Coordinates

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



	Antigua - Antigua and Barbuda	17.0747° N, 61.8175° W
	Yerevan - Armenia	40.1792° N, 44.4991° E
	Bujumbura - Burundi	3.3614° S, 29.3599° E
	Antofagasta Puerto Montt and Talca - Chile	23.6509° S, 70.3975° W, 41.4689° S, 72.9411° W, 35.4232° S, 71.6485° W
	San José - Costa Rica	9.9281° N, 84.0907° W

	San José - Costa Rica	9.9281° N, 84.0907° W
Child Projects 1st round	India	To be selected as part of the project implementation
	Abidjan - Ivory Coast	5.3600° N, 4.0083° W
	Kingston – Jamaica	44.2312° N, 76.4860° W
	Toamasina - Madagascar	18.1443° S, 49.3958° E
	Malé - Maldives	4.1755° N, 73.5093° E
	Lima, Iquitos – Peru	12.0464° S, 77.0428° W, 3.7437° S, 73.2516° W
	Canaries - Saint Lucia	13.9047° N, 61.0668° W
	Mahe – Seychelles	4.6827° S, 55.4804° E
	Freetown - Sierra Leone	8.4657° N, 13.2317° W
	Lomé - Togo	6.1256° N, 1.2254° E
	Ukraine	To be selected as part of the project implementation
	Tashkent - Uzbekistan	41.311028° N, 69.29508° E
Child Projects 2nd rou	Berat and Belsh - Albania,	40.7086° N, 19.9437° E, 40.9795° N, 19.8977° E
	St. George – Grenada	12.0561° N, 61.7488° W
	Jakarta and Bali – Indonesia	6.2088° S, 106.8456° E, 8.3405° S, 115.0920° E
	Amman and 3 other municipalities – Jordan	31.9539° N, 35.9106° E, to be further developed during project preparation
	the Philippines	To be developed during project preparation
	City of Johannesburg, City of Tshwane, and EThekwini Municipality – South Africa	26.2041° S, 28.0473° E, 25.6051° S, 28.3929° E, 29.8587° S, 31.0218° E
	Sfax, Bizerte and Djerba – Tunisia	34.7398° N, 10.7600° E, 37.2768° N, 9.8642° E, 33.8076° N, 10.8451° E
	Dhaka, Chittagong, Khulna and Rajshahi – Bangladesh	23.8103° N, 90.4125° E, 22.3569° N, 91.7832° E, 22.8456° N, 89.5403° E, 24.3745° N, 88.6042° E, to be further developed during project preparation
	Colombo – Sri Lanka	6.9271° N, 79.8612° E

nd	Ecuador	To be developed during project preparation
GEF 7 Standalone	Minsk – Belarus	53.9006° N, 27.5590° E
	Port Louis – Mauritius	20.1609° S, 57.5012° E
EC SOLUTION Splus	Dar es Salaam - Tanzania	6.7924° S, 39.2083° E
	Hanoi - Vietnam	21.0278° N, 105.8342° E
	Kathmandu - Nepal	27.7172° N, 85.3240° E
	Kigali - Rwanda	1.9706° S, 30.1044° E
	Montevideo - Uruguay	34.9011° S, 56.1645° W
	Pasig - the Philippines	14.5764° N, 121.0851° E
	Quito - Ecuador	0.1807° S, 78.4678° W
	Madrid - Spain	40.4168° N, 3.7038° W
	Hamburg - Germany	53.5511° N, 9.9937° E
	Nanjing - China	32.0603° N, 118.7969° E

ANNEX E: Project Budget Table

Please attach a project budget table.

Expenditure category & detailed description	Outcome 1	Outcome 2	Outcome 3	Sub-total	M&E	PMC	Total	Responsible entity
Goods	**0**	**5,000**	**9,000**	**14,000**	**0**	**0**	**14,000**	
UNEP - Communication materials	0	0	9,000	9,000	0	0	9,000	UNEP
ADB - Stationaries for trainings	0	5,000	0	5,000	0	0	5,000	ADB
Contractual Services – Company	**12,000**	**144,315**	**7,000**	**163,315**	**70,000**	**0**	**233,315**	
UNEP - Venue and catering services for trainings, workshops and events	12,000	16,800	7,000	35,800	0	0	35,800	UNEP
UNEP - Translation of WG materials	0	5,615	0	5,615	0	0	5,615	UNEP
ADB - Venue and catering services for trainings, workshops and events	0	40,750	0	40,750	0	0	40,750	ADB
ADB - Publications and Leaflets	0	5,000	0	5,000	0	0	5,000	ADB
EBRD - Venue and catering for the Platform events	0	36,000	0	36,000	0	0	36,000	EBRD
EBRD - Audio-visual, interpretation, translation, communication materials and misc. event support	0	22,650	0	22,650	0	0	22,650	EBRD
EBRD - Webpage creation, translation and maintenance	0	17,500	0	17,500	0	0	17,500	EBRD
Mid-Term Evaluation				0	25,000	0	25,000	UNEP
Terminal Evaluation				0	45,000	0	45,000	UNEP
Sub-contract to executing partner/ entity	**750,000**	**454,250**	**207,575**	**1,411,825**	**0**	**0**	**1,411,825**	
Sub-grant with the International Energy Agency (IEA)	750,000	0	207,575	957,575	0	0	957,575	IEA
Sub-grant with the Centro de Movilidad Sostenible (CMS)	0	454,250	0	454,250	0	0	454,250	CMS
International Consultants	**243,000**	**740,850**	**120,000**	**1,103,850**	**0**	**0**	**1,103,850**	
UNEP - communication assistant (content manager print, web and video)	0	0	90,000	90,000	0	0	90,000	UNEP
UNEP - communication materials staff (design, website programming, printing)	0	0	30,000	30,000	0	0	30,000	UNEP
UNEP - consultant support	0	60,000	0	60,000	0	0	60,000	UNEP
UNEP - International expert 2&3 wheelers general overviews, policy briefs & tools	40,500	0	0	40,500	0	0	40,500	UNEP
UNEP - International expert 2&3 wheelers technical tools	40,500	0	0	40,500	0	0	40,500	UNEP
UNEP - International expert 2&3 wheelers financial tools & business models	40,500	0	0	40,500	0	0	40,500	UNEP
UNEP - International expert HDV general overviews, policy briefs & tools	40,500	0	0	40,500	0	0	40,500	UNEP
UNEP - International expert HDV technical tools	40,500	0	0	40,500	0	0	40,500	UNEP
UNEP - International expert HDV financial tools & business models	40,500	0	0	40,500	0	0	40,500	UNEP
UNEP - Consultant Support LAC	0	135,000	0	135,000	0	0	135,000	UNEP
ADB - Consultant Support	0	50,000	0	50,000	0	0	50,000	ADB
ADB - Expert for Technical Study for e-mobility strategy	0	100,000	0	100,000	0	0	100,000	ADB
ADB - Expert for 5 Regional Trainings (SE, SW, EAST, CW and Pacific)	0	150,000	0	150,000	0	0	150,000	ADB
EBRD - Project management consultant	0	245,850	0	245,850	0	0	245,850	EBRD
Salary and benefits / Staff costs	**169,200**	**433,350**	**40,450**	**643,000**	**0**	**192,743**	**835,743**	
UNEP - Project Manager	0	0	8,250	8,250	0	192,743	200,993	UNEP
UNEP - 2&3 Wheeler WG coordinator	72,000	0	0	72,000	0	0	72,000	UNEP
UNEP - HDV WG coordinator	72,000	0	0	72,000	0	0	72,000	UNEP
UNEP - platform coordinator/help desk/technical advisor	0	229,500	0	229,500	0	0	229,500	UNEP
UNEP - Project assistant	25,200	117,600	32,200	175,000	0	0	175,000	UNEP
ADB - Platform coordinator/help desk/technical advisor	0	71,250	0	71,250	0	0	71,250	ADB
EBRD - Project focal point	0	15,000	0	15,000	0		15,000	EBRD
Travel	**120,000**	**248,000**	**92,400**	**460,400**	**0**	**0**	**460,400**	
UNEP - travel	120,000	123,000	92,400	335,400	0	0	335,400	UNEP
ADB - travel	0	22,000	0	22,000	0	0	22,000	ADB
EBRD - travel	0	103,000	0	103,000	0	0	103,000	EBRD
Other operating costs	**16,326**	**16,575**	**8,066**	**40,967**	**0**	**0**	**40,967**	
UNEP - Operational Cost	16,326	16,575	8,066	40,967	0	0	40,967	UNEP
Grand Total	**1,310,526**	**2,042,340**	**484,491**	**3,837,357**	**70,000**	**192,743**	**4,100,100**	

ANNEX F: (For NGI only) Termsheet

Instructions. Please submit an finalized termsheet in this section. The NGI Program Call for Proposals provided a template in Annex A of the Call for Proposals that can be used by the Agency. Agencies can use their own termsheets but must add sections on Currency Risk, Co-financing Ratio and Financial Additionality as defined in the template provided in Annex A of the Call for proposals. Termsheets submitted at CEO endorsement stage should include final terms and conditions of the financing.

Not applicable

ANNEX G: (For NGI only) Reflows

Instructions. Please submit a reflows table as provided in Annex B of the NGI Program Call for Proposals and the Trustee excel sheet for reflows (as provided by the Secretariat or the Trustee) in the Document Section of the CEO endorsement. The Agencys is required to quantify any expected financial return/gains/interests earned on non-grant instruments that will be transferred to the GEF Trust Fund as noted in the Guidelines on the Project and Program Cycle Policy. Partner Agencies will be required to comply with the reflows procedures established in their respective Financial Procedures Agreement with the GEF Trustee. Agencies are welcomed to provide assumptions that explain expected financial reflow schedules.

Not applicable

ANNEX H: (For NGI only) Agency Capacity to generate reflows

Instructions. The GEF Agency submitting the CEO endorsement request is required to respond to any questions raised as part of the PIF review process that required clarifications on the Agency Capacity to manage reflows. This Annex seeks to demonstrate Agencies' capacity and eligibility to administer NGI resources as established in the Guidelines on the Project and Program Cycle Policy, GEF/C.52/Inf.06/Rev.01, June 9, 2017 (Annex 5).

Not applicable