Integrated adoption of electric mobility in Jordan

Part I: Project Information

Name of Parent Program

Global Programme to Support Countries with the Shift to Electric Mobility.

GEF ID

10605

Project Type

MSP

Type of Trust Fund

GET

CBIT/NGI

CBIT **No**

NGI **No**

Project Title

Integrated adoption of electric mobility in Jordan

Countries

Jordan

Agency(ies)

UNIDO

Other Executing Partner(s)

Global Green Growth Institute (GGGI)

Executing Partner Type

Others

GEF Focal Area

Climate Change

Taxonomy

Focal Areas, Climate Change, Influencing models, Communications, Civil Society, Stakeholders, Type of Engagement, Gender results areas, Gender Equality, Gender Mainstreaming, Integrated Programs, Sustainable Cities, Knowledge Generation, Capacity, Knowledge and Research, Climate Change Mitigation, Sustainable Urban Systems and Transport, Technology Transfer, Energy Efficiency, Renewable Energy, Strengthen institutional capacity and decision-making, Transform policy and regulatory environments, Local Communities, Academia, Beneficiaries, Participation, Awareness Raising, Private Sector, SMEs, Sex-disaggregated indicators, Gender-sensitive indicators, Women groups, Access to benefits and services, Transport and Mobility, Training, Workshop, Capacity Development

Sector
Transport/Urban

Rio Markers
Climate Change Mitigation
Climate Change Mitigation 2

Climate Change Adaptation
Climate Change Adaptation 0

Submission Date
11/29/2021

Expected Implementation Start
6/1/2022

Expected Completion Date
6/1/2027

Duration
60In Months

Agency Fee($)
102,349.00

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	1,137,215.00	7,100,000.00
		Total Project Cost($)	**1,137,215.00**	**7,100,000.00**

B. Project description summary

Project Objective

To catalyze and accelerate the breakthrough of electric mobility in urban areas in Jordan through innovation and technology transfer

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
1: Policy coordination and integration; establishment of an inter-ministerial High-level Forum on E-mobility (HFE) to support an enabling policy environment for e-mobility.	Technical Assistance	1.1: E-mobility policies established, through enhanced inter-ministerial coordination, which integrate fiscal considerations, energy security and environmental goals.	1.1.1: The inter-ministerial High-level Forum on E-mobility (HFE) is established and functional. 1.1.2: Joint public-private roadmap for transitioning towards a more sustainable tourism transport sector developed and submitted for endorsement by Government (Ministry of Tourism and Antiquities) and private sector (Jordan Tourism Transport Association). **1.1.3: Regulations and policies are supported to enable the integrated e-mobility and renewable energy investments and ensure the long-term environmental sustainability of EVs (e.g., guidelines on management of end-of-life batteries)**	GET	253,000.00	1,050,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
2: Technical assistance to ?Petra E-bus Project? to demonstrate replicability and Scaling Up E-mobility interventions	Technical Assistance	2.1: Strategic investment drives proliferation of e-mobility and enables higher public and private investment in e-mobility.	2.1.1: Scalable E-mobility project (Petra E-bus project) in place to demonstrate replicability. 2.1.2: Petra E-bus implementation program delivered. 2.1.3: Strategies and pipeline are developed to scale-up e-mobility and renewable energy in Jordan	GET	440,000.00	4,000,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
3: Capacity building and Knowledge Management for facilitating the adoption of E-mobility	Technical Assistance	3.1: Government and private sector are better prepared and enabled to replicate e-mobility successes in Jordan.	3.1.1: Knowledge and best practice shared through regular exchange of global, regional, and national experiences through the Global Programme. **3.1.2: Capacity building program on integrating e-mobility and renewable energy technologies as well as environmentally sound management of EV batteries conducted for the relevant national stakeholders and the private sector through partnership with local academic/civil society institutions**	GET	260,832.00	1,050,000.00

Project Component	Financing Type	Expected Outcomes	Expected Outputs	Trust Fund	GEF Project Financing($)	Confirmed Co-Financing($)
4: Monitoring and evaluation	Technical Assistance	4.1: Adequate monitoring of all project indicators in line with GEF, UNIDO and Government of Jordan (GoJ) requirements	4.1.1: Monitoring and independent mid-term review. 4.1.2: Independent terminal evaluation conducted.	GET	80,000.00	350,000.00
				Sub Total ($)	**1,033,832.00**	**6,450,000.00**
Project Management Cost (PMC)						
				GET	103,383.00	650,000.00
				Sub Total($)	**103,383.00**	**650,000.00**
				Total Project Cost($)	**1,137,215.00**	**7,100,000.00**

Please provide justification

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($)
Recipient Country Government	Ministry of Environment	In-kind	Recurrent expenditures	200,000.00
Recipient Country Government	Petra Development and Tourism Region Authority	Public Investment	Investment mobilized	4,700,000.00
Other	International Finance Corporation	Loans	Investment mobilized	1,800,000.00
GEF Agency	UNIDO	Grant	Investment mobilized	50,000.00
GEF Agency	UNIDO	In-kind	Recurrent expenditures	150,000.00
Recipient Country Government	Ministry of Transport	In-kind	Recurrent expenditures	50,000.00
Other	Global Green Growth Institute (GGGI)	In-kind	Recurrent expenditures	150,000.00
			Total Co-Financing($)	**7,100,000.00**

Describe how any "Investment Mobilized" was identified

Investment has been mobilized most prominently under Component 2 from Petra Development and Tourism Region Authority (PDTRA) investing in e-bus project in Petra. In addition - and critical for sustainable scale-up after the project ends - subnational entities such as PDTRA will be positioned to crowd in private investments. As part of its project preparation, UNIDO assisted PDTRA with a creditworthiness workshop and a preliminary financial assessment. Building on this, the project will provide technical assistance to strengthen PDTRA?s preparedness to attract private investments, including through a pipeline assessment to scope out financing options, identify revenue streams, pool projects together, develop and supervise public-private partnerships, etc. This approach will enable PDTRA to attract private investments, and will stand out as an example for other municipalities in Jordan. The co-financing availability from the International Finance Corporation (IFC) validates UNIDO?s preliminary assessment and private sector development strategy. It is estimated that the half of the project?s interventions will be aligned with IFC strategies and investment decision which are outside of the direct control of the project. Thus, USD 1,800,000 (half of the amount stated in the letter) that is in principle made available by IFC is considered as a potential source of direct co-financing. Beyond the immediate benefits for PDTRA?s e-mobility project, the technical assistance components will also enable opportunities for private participation across the full spectrum of PDTRA?s infrastructure projects

Component 2 links the pipeline of prepared investments across the tourism transport e-mobility with available financial instruments including the government?s COVID-19 financial recovery package for the tourism sector, as well as the public and private investments in e-mobility. The total government package to support the tourism sector post COVID-19 in direct and indirect cash flow amounts to 190 million Jordanian Dinars (JD) (268 million USD). The package includes facilitating low-interest loans worth 150 million JD from the Central Bank Advance Program with guarantees from the Jordanian Loan Guarantee Company. The loan periods could be up to 42 months, including a grace period of 12 months, where the government bears 2% of the interest on these loans throughout the loan period. As for the remaining 40 million JD, they constitute the ?Tourism Risk Fund? which provides support to the tourism sector in the form of: exemptions of license renewal fees, tax exemptions, and payment of owed income taxes in zero-interest instalments. UNIDO's in-kind co-financing contribution is corresponding to e-mobility knowledge products (e.g., e-mobility best practice guidelines). The project will facilitate the securing of additional co-financing and/or explore alternatives with the partners active in the field in Jordan (e.g., from Jordan Renewable and Energy Efficiency Fund (JREEEF), GCF, Islamic Development Bank, EBRD, WB).

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($)	Fee($)	Total($)
UNIDO	GET	Jordan	Climate Change	CC STAR Allocation	1,137,215	102,349	1,239,564.00
			Total Grant Resources($)		**1,137,215.00**	**102,349.00**	**1,239,564.00**

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 **true**

PPG Amount ($)

50,000

PPG Agency Fee ($)

4,500

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNIDO	GET	Jordan	Climate Change	CC STAR Allocation	50,000	4,500	**54,500.00**
				Total Project Costs($)	**50,000.00**	**4,500.00**	**54,500.00**

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?e (direct)	0	494880	0	0
Expected metric tons of CO?e (indirect)	0	1148785	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?e (direct)				
Expected metric tons of CO?e (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?e (direct)		494,880		
Expected metric tons of CO?e (indirect)		1,148,785		
Anticipated start year of accounting		2022		
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)				

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		15,800		
Male		15,920		
Total	0	31720	0	0

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

Part II. Project Justification

1a. Project Description

Executive Summary

The transport sector causes 28% share of the total greenhouse gas (GHG) emissions in Jordan, thus shift to e-mobility has a significant potential for climate change mitigation as well as improve air quality and reduce noise pollution. The project?s goal is to catalyze and accelerate the breakthrough of electric mobility in urban areas with a focus on tourism sector through technical assistance, policy support, building capacity and scaling-up strategies.

The four components of the project are:
? Component 1: E-mobility policy coordination and integration through an inter-ministerial forum; integrating fiscal considerations, energy security and environmental goals.
? Component 2: Successful implementation of a scalable low-carbon demonstration, the ??Petra E-bus?? pilot project, to create nationally generated evidence of the benefits of low-carbon e-bus services
? Component 3: Capacity building and knowledge management for facilitating the adoption of e-mobility and enabling scaling-up.
? Component 4: Monitoring and Evaluation; establishing and implementing effective project monitoring and evaluation mechanisms as well as capturing progress and lessons learned.

While the uptake of electric mobility has made significant progress in recent times in Jordan, an important barrier hampering a conducive e-mobility strategy in Jordan remains as the lack of supportive policy environment and coordination amongst the various ministries (energy, transportation, environment, and tourism), lack of sufficient charging infrastructure, as well as lack of capacity and knowledge.

Four potential low-carbon e-mobility initiatives with catalytic potential were identified and investigated during the project?s preparation stage in partnership with officials from ministries, municipalities, and other key stakeholders. The primary projects were public transport projects in Amman, Irbid/Zarqa, and Aqaba, as well as the tourism transport project in Petra. After multiple dialogues, meetings, and a multi-criteria evaluation of the possible initiatives' benefits, the ?Petra E-bus project? initiated by PDTRA was prioritized also considering the need for public transportation.

The GEF project will thus support the PDTRA to green the transport route for tourists visiting the Petra UNESCO World Heritage Site through technical assistance and facilitate mobilization of investment. Due to its major contribution to the national economy in Jordan the tourism sector is a sector with the potential to trigger a transformational change towards greening its operations, including transportation. The e-bus transport route will accommodate tourists travelling from the archaeological park to the cultural village in the Little Petra area, and then to the hotels or the tourist bus station in the touristic city of Petra. The GEF increment will complement the existing Petra E-bus Project initiative by mobilizing additional investment, establishing and systematizing monitoring, ensuring that management and planning are coordinated, strategic and sustained. The Petra e-bus project will reduce transport related GHG emissions, boost visitor accessibility while alleviating urbanization pressures and generating major benefits such as employment opportunities and expanded access to services.

UNIDO carried out a preliminary assessment of PDTRA?s financial performance to determine its creditworthiness potential. Having confirmed PDTRA?s sound financial management as a precondition for attracting private financing, and having verified the basic strengths/weaknesses of the Jordanian enabling environment, UNIDO explored co-financing options with private financiers and secured the enclosed co-financing letter by the International Finance Corporation (IFC), the private sector arm of the World Bank. This unique endorsement by the IFC reflects the project?s underlying bankability and its potential to leverage private financing.

This GEF project will support Petra e-bus project by the end of 2023, around the time Jordan?s tourism sector is anticipated to regain pre-COVID momentum to ensure the green recovery from the pandemic. Long-term policy initiatives such as extending tourist services to other touristic areas (e.g., Wadi Rum and Aqaba) to further establish mass transit will be supported through capacity building, scale-up strategies and policy support. The combined effort will translate into effective and sustainable development of tourism related transport and management of touristic sites, and trigger the replication and mainstreaming e-mobility in neighboring tourist destinations in the south of Jordan, and across the country.

The project will closely collaborate with the parent Global Programme to Support Countries with the Shift to Electric Mobility to exchange knowledge and best practices.

As per GEF and UNIDO guidelines, a mid-term review (MTR) in the third year and an independent terminal evaluation at the end of the project will be conducted to evaluate the project, collect best practices and lessons learnt for future projects.

1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description)

The global problem of GHG emissions resulting from fossil-fuel based transportation

- Globally, transport accounts around one-fifth of global carbon dioxide (CO_2) emissions and around one-fourth of CO_2 emissions from energy is included in 2016 [1][1]. The global vehicle fleet is set to double by 2050, and almost all this growth will take place in low- and middle-income countries. By 2050, two out of every three cars will be in developing countries.

- The Intergovernmental Panel on Climate Change (IPCC) stated that to maintain 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 Electro-mobility and Climate Change which calls for 100 million electric cars and 400 million electric two and three wheelers by 2030 [2][2]. The IEA has developed several scenarios for the contribution of the introduction of electric mobility to achieving global climate targets. In addition, 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.

- 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. In addition to climate change mitigation, such measures would generate co-benefits such as improved air quality, reduced noise pollution, reduced fossil fuel dependency, and reduced transportation costs.
- The transport sector is a major contributor to the national GHG emissions in Jordan, corresponding to 28% share of the total emissions in 2016, making it the largest emitter after the energy industries (electricity generation). Within the national energy sector, transport subsector

ranks the second largest GHG emission source which is responsible for 37% as shown in Figure 1 [4][3]. Transport is the largest consumer of energy (49% in 2018) while energy consumes about 20% of the country?s GDP.

•In line with the pandemic recovery, the tourism sector is set to increase its CO_2 emissions by at least 25% by 2030 (UNWTO). Therefore, the need to steer tourism related activities towards sustainability continues to be of utmost importance for the sector to support Nationally Determined Contributions (NDCs) and the international agenda of green recovery from COVID-19.

•Annual mean of $PM_{2.5}$ concentrations in the capital city, Amman was 28 ?g/m^3 in 2017, which is double the national limit of 15 ?g/m^3. Likewise, air quality monitoring stations in downtown Amman measured NO_2 concentration of 118 ?g/m^3; which on its own exceeds the national limit of 100 ?g/m^3 for total nitrogen oxides (NO_x). Therefore, as outlined in the Intended Nationally Determined Contribution (INDC), investments in energy-efficient transport would improve air quality indicators in urban areas.

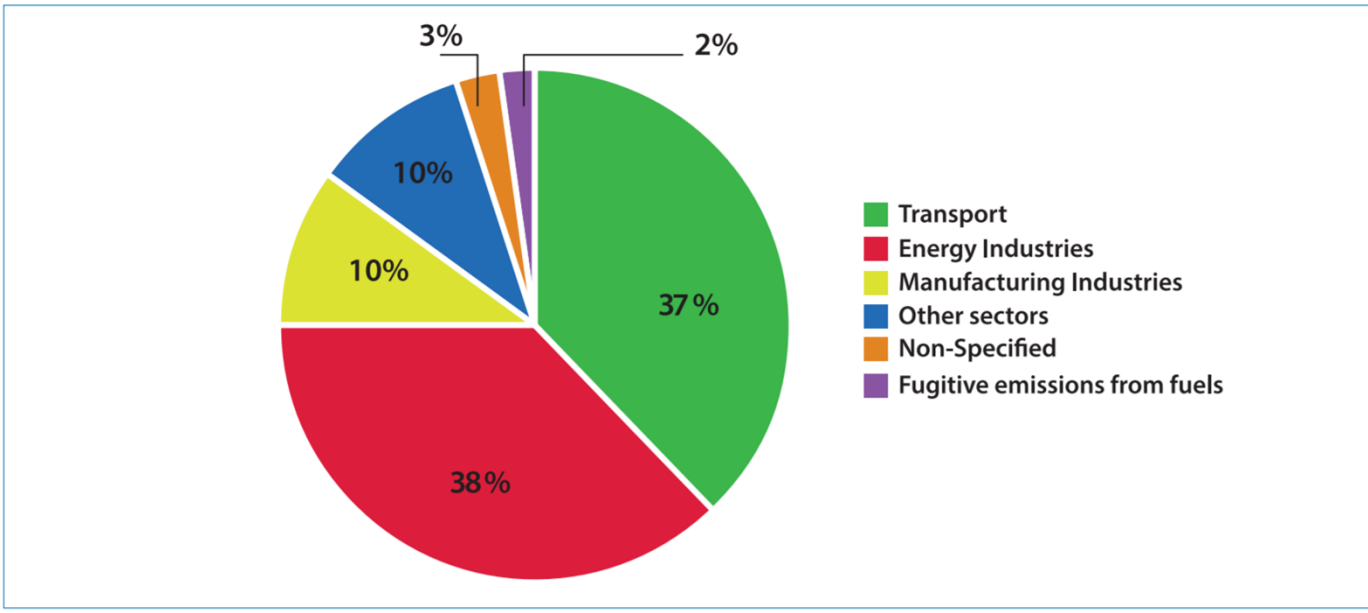

Figure 1: Shares of GHG emissions (%) per subsector within the energy sector, 2016

Barriers to e-mobility adoption in Jordan

Uncoordinated and insufficient policies on sustainable transport: Conflicting priorities within and among ministries undermine the possibilities for the effective and long-term implementation of sustainable transport policies. There is a lack of integrated strategic planning and policy coordination between the topics of environment and climate, infrastructure (energy and transport), and economic (e.g., tourism, industry) sectors. Furthermore, lack of coordination between policy making entities at national and local level can give inconsistent policy signals to the potential investors and entrepreneurs. Private sector is not involved in the transport policy making progress. Jordan lacks vehicular emissions standards for private and public vehicles and there are perverse policy incentives to avoid efficiency upgrades due to high import taxes on new vehicles and spare parts. The planning and implementations

of incentives are insufficient and inconsistent. Policy coordination will be addressed through forming up HFE and capacity building for the inter-ministerial committee on e-mobility (ICE), as well as private sector involvement in strategies and policies on public-private investments. The project will develop public-private roadmap and draft regulations on enabling tourism related transport investments.

Lack of charging infrastructure and nationally generated evidence of e-mobility investments: Grid upgrade needs and lack of charging infrastructure (e.g., adequate charging stations, every 100-150 km are needed) hinders e-mobility adoption in Jordan. In addition, standards on EVs batteries and on charging station performance are required to enhance consumer trust and improve e-mobility performance outcomes. There is a lack of adequate public transport services and infrastructure in urban areas. Private sector appetite is low for investments in electric transport technologies. E-mobility is new in the country which leads local investors (government and private sector) to be risk averse due to the lack of evidence on successful low-carbon electric transport projects. Component 2 of the project will address these barriers by providing technical assistance to the Petra E-bus pilot project, which will create evidence on technical specifications for e-bus transport system and the charging solutions ? including the additional/supportive infrastructure and operational costs to be included in the investment project, routing/scheduling design, fare collection infrastructure and vehicle tracking technology (ITS that is integrated with the MOT national system) cost and operation expenses.

High upfront purchase prices: Even though EVs have lower total cost of ownership (ToC) than ICE (internal combustion engine) vehicles, EVs require a high initial investment cost that hinders the broad adoption of electric mobility. It is noteworthy that the higher upfront costs are highly likely to be recovered from the reduced operating costs and efficiency gains associated with electric power. Low current commission ($0.05/kWh) of fast chargers in Jordan does not cover the operational costs of charging stations. The policy component could investigate the effect of incentives and lowering taxes on the EVs market share. High upfront costs are expected fall significantly in the next decade due to expanding of battery production volume.

Lack of information/awareness and range anxiety: In Jordan, there is limited baseline knowledge on the environmental and technological (e.g., efficiency) benefits of EVs. Consumers, policy makers and vehicle manufacturers are not fully aware of the emission reduction potential and potential economic benefits of shifting to e-mobility, perceiving them as expensive and high-tech vehicles which are not adapted to local conditions (i.e., steep hills, climate and long distances). While there are major opportunities for Jordan to leapfrog to electric mobility, including through the development of manufacturing and assembly capacity, lack of awareness and erroneous perceptions predispose transport planners and other key stakeholders towards dismissing electric options. For example, the current development plans for a Bus Rapid Transport (BRT) system in Amman and beyond the city capital did not seriously consider the integration of e-mobility into the BRT, and independent market research indicating that e-mobility would be financially feasible was not categorically reviewed [5][4]. From an environmental perspective, electric vehicles are sometimes also perceived as providing limited greenhouse gas savings in countries with carbon-intensive grids (despite their overall efficiency gains that render this assumption to be incorrect in most cases) [6][5]. EVs still have a lower range compared to petrol vehicles, although this difference is reducing quickly. The drivers and user may have psychological ?range anxiety? effect which can be targeted by changing perspectives through good pilot projects with high visibility such as Petra e-Bus project.

Lack of capacity and inefficient knowledge sharing: E-mobility is an emerging topic in Jordan and in the MENA region. There is general lack of expertise and technical know-how about EV technology, charging infrastructure requirements, enabling regulatory frameworks, best international examples and e-waste and battery management in institutional and expert level. Building capacity among stakeholders on EVs technologies and facilitating knowledge sharing will be carried out in a dedicated component (Component 3) during project implementation and further strengthening the capacity of government stakeholders and local experts in the tourist transport sector on e-mobility in a participatory approach. Enhanced capacities and efficient knowledge management will contribute the scaling-up of project`s interventions.

2) The baseline scenario and any associated baseline projects

BASELINE SCENARIO ?on energy and mobility

- Jordan is a lower middle-income country, with a population of 9.5 million, of which 2.9 million are non-citizens, including refugees. It is a resource-poor, food-deficit country with limited agricultural land, no energy resources and scarce water supply. According to the Jordanian Department of Statistics, unemployment soared to 24.7% during the fourth quarter of 2020 - representing an increase by 5.7%- when compared to the fourth quarter of 2019. Unemployment rate among men stood at 22.6% and even higher among women at 32.8% during the fourth quarter of 2020 [3][6].
- The total electricity generated in Jordan in 2019 amounted to 20,996 GWh increased from to 20,476 GWh in 2018, reflecting a growth rate of 2.5%. Electricity consumption in 2019 amounted to 20,143 GWh, so there is a surplus in production. The share of renewable energy generation from renewable energy sources has increased significantly (+40% from 2019 to 2020) with the installation of 345MW from 3 RE projects. [7][7].

- Despite rising energy demand, electricity is currently oversupplied and effective balancing mechanisms are not foreseen in the short to medium term. An oil-shale production plant and an oil-shale generation plant are currently under development in Attarat um Ghudran in central Jordan. In total, the plants will generate 554 MW of power to the grid and will thereby be the second largest oil-shale plants worldwide [8][8]. At present, peak electricity demand is 3.2 GW while installation is approximately 6 GW [9][9]. National Electric Power Company (NEPCO) has already met its national goal to have 20% RE in the grid by 2020, and it has committed to 100 MW for solar projects which indicates that they are on track for 30% RE by 2030. Within this context, NEPCO is not keen on increasing RE share in the foreseeable future until higher demand for electricity is evidenced. Excess electricity supply is also a burden on the national debt because it has been commissioned on a pre-purchase agreement.

- While e-mobility is not systematically embedded in national strategies, section 2.6 of the Ministry of Energy and Mineral Resources (MEMR)?s Master Strategy for Energy (2030) mentions 4 key project/policy priorities in e-mobility, namely: EVs charging station establishment, incentives to encourage EVs, increasing EVs in public sector fleets, and increasing investment in electric public transport vehicles. The Ministry of Transport (MoT)?s Long-term National Transport Strategy merely mentions EVs or hybrid vehicles on p.105 stating ?the promotion of alternative fuels and vehicles [...] should also be taken into consideration? with no specific policies or frameworks described. The Ministry of Environment (MoE)?s Green Growth National Action Plan (2021-2025) sets national and sectoral targets for 6 green growth sectors detailing seven e-mobility opportunities. Although the Green Growth National Action Plans is a step in the right direction, institutional coordination mechanisms remain weak. Sector ministries often lack the basic understanding of donor programs and demonstrate weak ownership of results.

- The public transport fleet?s average operational life is around 10 years. Women [10][10] and youth [11][11] identify the need for public transportation as their top priority request, given the link between transportation and job accessibility. The current transportation systems and plans continue

to ignore gender needs and gaps that lead to unequal access to transportation services. This inability to provide quality services is preventing fuller returns on investment and even impacting the country?s economy by negatively affecting women?s labour market participation. The Transport Sector National Green Growth Action Plan (2021-2025) [12][12] highlights the need to develop a public-private dialogue and roadmap for improving road transport services linked to the tourism sector (Action number 6).

•Jordan's tourism sector accounted for about 12.5% of the GDP in 2018, according to the Ministry of Tourism and Antiquities (MOTA). In comparison to the same quarter of 2018, the number of tourist arrivals increased by 6.5% in the third quarter of 2019. The percentage was expected to rise, but the reverse occurred due to the outbreak of the COVID-19 virus and the lockdowns that occurred around the world. Jordan's tourism revenue dropped from 4.1 billion JD ($5.7 billion) in 2019 to one billion JD ($1.4 billion) in 2020. In Jordan, international tourists? arrivals are 4.5 million in 2019 as presented in Figure 3 below.

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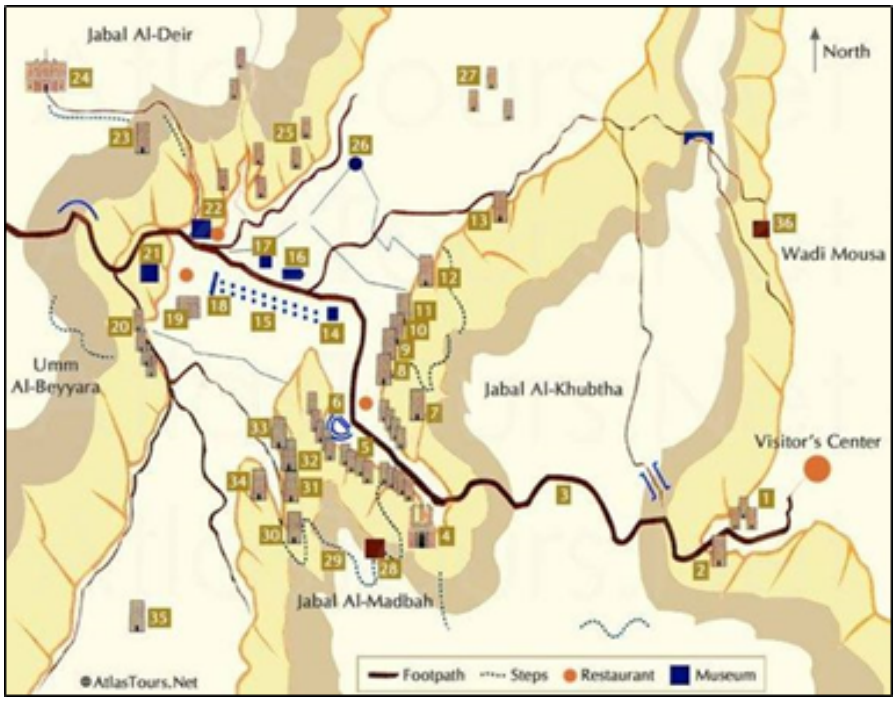


Figure 2: Map of Petra

Figure 3: International Tourist Arrivals from 2011-2019

Tourism employment reached 53,389 people in Q3 of 2019. Travel and tourism constitute 4.5% of Jordan?s labor force (World Economic Forum, 2017). According to the Travel & Tourism Competitiveness Index, Jordan ranked 84th out of a total of 140 economies in 2019 as presented in Figure 4.

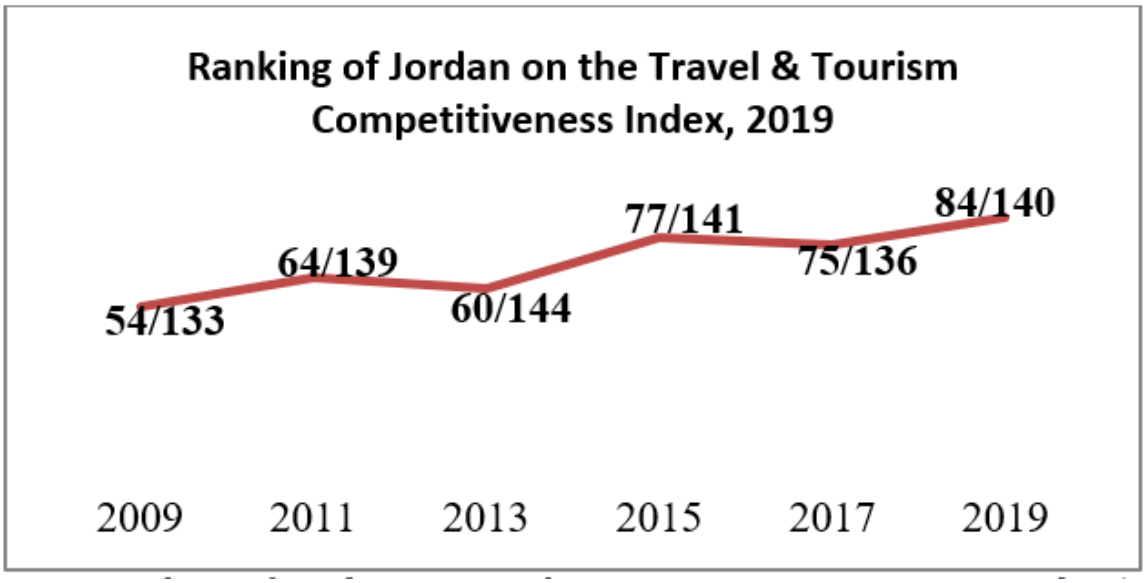


Figure 4: Ranking of Jordan on Travel & Tourism Competitiveness Index (2019)

Sustainable tourism needs to be promoted, and firms should make their best to reduce the environmental effects of their activities by adopting sustainable transport in tourism sector since tourism relies heavily on transportation. According to several studies, tourists spend about 30% to 40% of their vacation budget on transportation. By 2030, CO2 emissions from tourism-related transport are projected to account for 5.3% of all man-made CO2 emissions, up from 5% in 2016. The transport-

related CO2 emissions from tourism are expected to grow by 25% between 2016 and 2030, from 1,597 million tons to 1,998 million tons. In 2016, tourism-related transport emissions contributed for 22% of all transportation emissions, and this trend is expected to continue in 2030 (21%) [17][13]. CO2 emissions from tourism-related transport pose a significant challenge, necessitating strong collaboration between tourism and transport sectors to promote the industry's pledge to accelerate decarbonization. The average CO2 emissions per passenger km using ICAO?s emissions calculator by bus was 0.0300 kg of CO2 per passenger km in 2016 and are estimated to be 0.0244 kg of CO2 per passenger km in 2030. Air and car modes of transportation are estimated to emit similar amounts of CO2 per passenger km. Rail transportation remains to be the least carbon-intensive mode of transportation. All in all, from the period 2005-2016, the total transport-related emissions from tourism over the total man-made emissions ranged from 3.7% to 5%, while this percentage is expected to increase to 5.3% from 2016-2030 (see Figure 6).

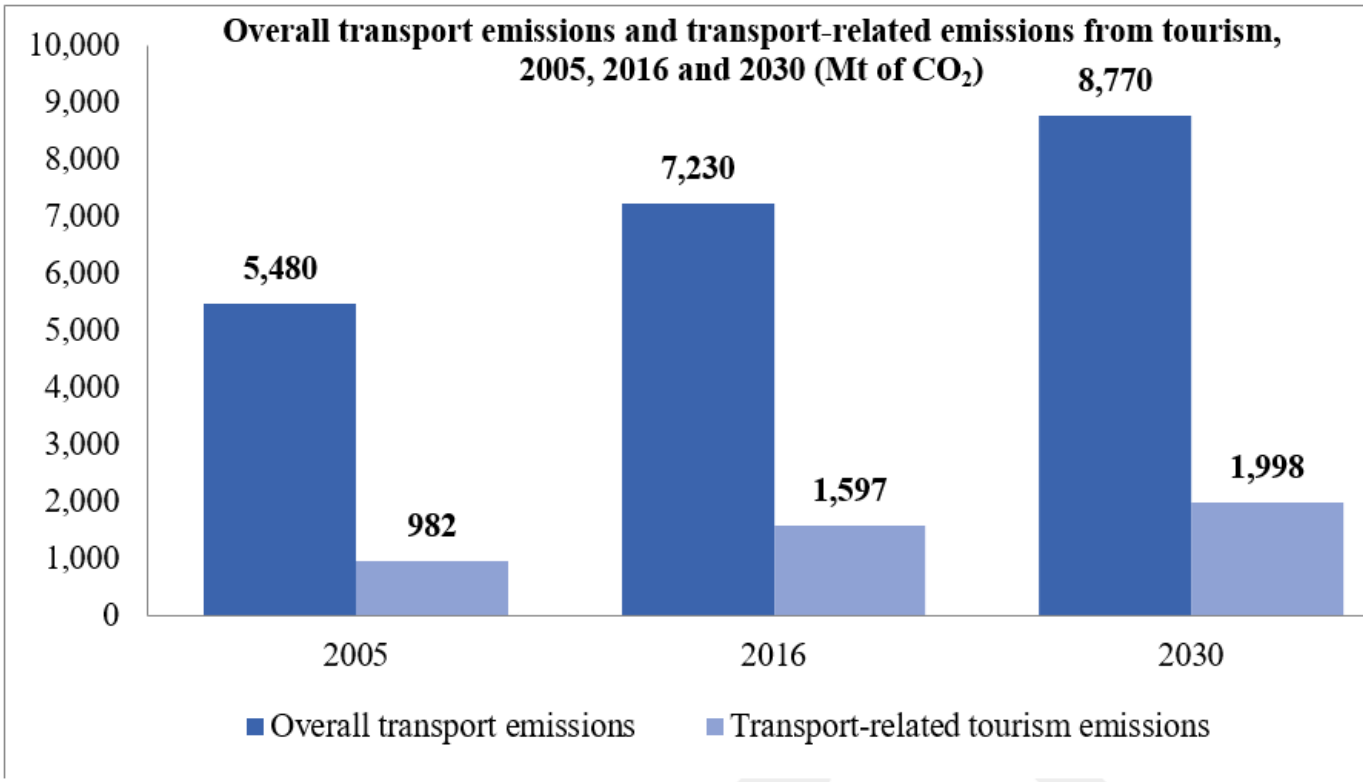


Figure 6: Total Transport Emissions and Transport-Related Emissions from Tourism

Tourists and tourist destinations benefit greatly from the availability of rapid, low-emission transportation. Many projects nowadays focus on how the detrimental effects of increasing tourism-related transport could be minimized. Sustainable transport or "soft mobility" play a major role in the growth of sustainable tourism, since road transport has a significant contribution to increasing emissions. Thus, e-mobility has a high potential in sustainable tourism-transport as demonstrated by the successful case studies from around the world. As a benchmark to Jordan e-bus project, the Alpine

touristic regions encourage tourists to use EVs even in mountainous roads [18][14]. The South Tyrol Alpine province, in Northern Italy, is working on introducing several strategic initiatives to navigate the socio-technical shift to e-mobility and implementing an efficient management structure [19][15]. In the US, Oregon city is a leading tourist destination to introduce the use of EVs (Nissan Leaf and the plug-in hybrid Prius) for their operations. In addition, 22 fast charge stations are implementing at the state's two major tourist attractions; the Oregon Coast and the Columbia River Gorge [20][16]. Similarly, 14 electric powered streetcars in San Antonio, Texas provide a sustainable heritage tourism experience and serve as an alternative to large-capacity engines operating on gasoline or diesel.[21][17] Another example is from Cordoba, Spain, where an EV service is available for disabled tourists. This project allows tourists with reduced mobility to explore sights of the historic city center with different types of electric vehicles available on 10 tourist routes around the center [22][18].

Tourism related transport in Jordan:

- According to the Specialized Tourism Transport Association[23][19], there are 10 specialized tourist bus companies in Jordan, with a total fleet of 780 buses, of which:
  - Large Buses (50 passengers)? 530
  - Medium Buses (31 passengers)? 45
  - Small Buses (10-22 passengers) ? 127
  - Vans (up to 10 passengers) ? 45
- In 3 years, with the implementation of the amended transport regulation, 494 of these buses are expected to be out of service:
  - Large Buses ? 366
  - Medium Buses ? 30
  - Small Buses ? 66
  - Vans - 32

As a preliminary evaluation of the costs of electrification of the national fleet of tourism vehicles, four scenarios were explored:

- Scenario 1 ? 100% electric
- Scenario 2 ? 50% electric
- Scenario 3 ? Electrifying the Large and Medium Buses only
- Scenario 4 ? Increase 10% of number of vehicles

The marginal costs associated with each scenario in USD are summarized in Table 1.

	Scenario 1: 100%		Scenario 2: 50%		Scenario 3: Large & Medium Buses only		Scenario 4: 10% Growth on All Fleet	
Type of Vehicle	Number of Vehicles	Cost of Electrifying	Number of Vehicles	Cost of Electrifying	Number of Vehicles	Cost of Electrifying	Number of Vehicles	Cost of Electrifying
Large Bus (50 passengers)	366	73,200,000	183	36,600,000	366	73,200,000	403	80,600,000
Medium Bus (31 passengers)	30	1,500,000	15	750,000	30	1,500,000	33	1,650,000
Small Bus (10-22 passengers)	66	1,650,000	33	825,000	-	-	73	1,825,000
Vans (up to 10 passengers)	32	256,000	16	128,000	-	-	36	288,000
	Total	76,606,000	**Total**	38,303,000	**Total**	74,700,000	**Total**	84,363,000

Table 1: Electrification Marginal Costs of National Tourism-related Transport Fleet (USD)
Sustainable Tourism is ?tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities" (World Tourism Organization -WTO). Sustainable Tourism strikes a balance between environmental protection, cultural identity, social equity, and economic benefits, while addressing the needs of the host community in terms of improved living conditions in the short and long terms [13][20]. The WTO and the United Nations Environment Program (UNEP) set 12 main objectives for sustainable tourism in as follows[14][21]:

1. Economic Viability: Ensure tourism companies' profitability and competitiveness in order to achieve long term benefits.
2. Local Prosperity: Increase the contribution of tourism to the economic development of the host; including local expenditure of the visitors.
3. Employment Quality: Enhance number and quality of local touristic employment, including salaries, service conditions and their availability for everyone without discrimination.
4. Social Equity: Seek to distribute the economic and social benefits of tourism equitably in the recipient community, including increased wages and opportunities.
5. Visitor Fulfillment: Provide visitors a unique, satisfying, and safe experience available to all without discrimination by gender, race, disability, or in other ways.
6. Local Control: Engage and empower local communities in the planning and decision-making processes for potential tourism development and management in their region.
7. Community Wellbeing: Preserve local community quality of life including social structures, access to facilities and services, and prevent any kind of social degradation.
8. Cultural Richness: Promote and respect cultural heritage and values.
9. Physical Integrity: Preserve and enhance landscape quality and prevent any physical or visual environmental deterioration.
10. Biological Diversity: Support the protection of natural areas, habitats, and wildlife, as well as mitigate damage to them.
11. Resource Efficiency: Reduce the use of limited and non-renewable resources for tourist services and facilities.
12. Environmental Purity: Reduce air, water, and land pollution, as well as waste production caused by tourism enterprises and tourists.

All of these 12 objectives will be addressed and considered when designing and implementing the Petra E-bus project. Also, a tangible measurement system will be put in place to enable Petra to determine its progress towards sustainability.

There are three dimensions of sustainable tourism: environmental, economic and social impacts. There are links between the three aspects of tourism as shown in Figure 5. There are relations between economic development, environmental protection, and social equity, where each component enhances the other [15][22].

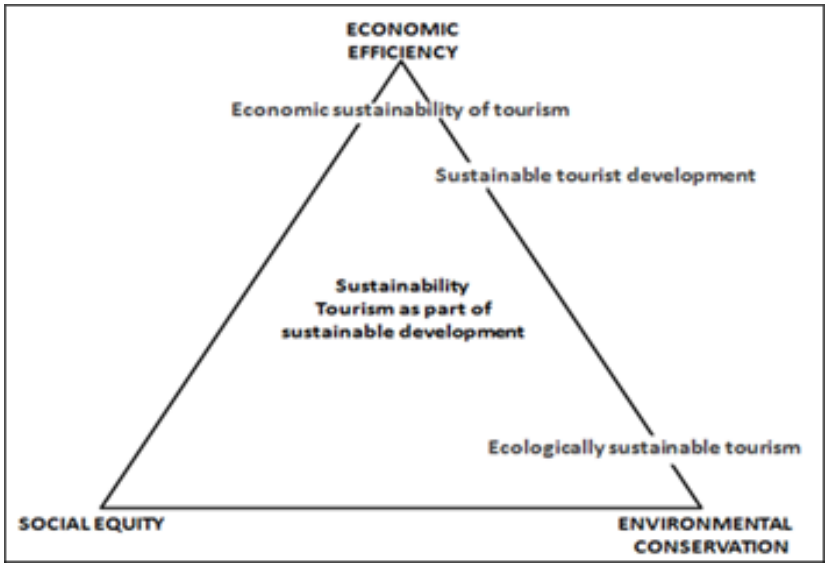


Figure 5: Dimensions of Sustainable Tourism

The Environmental aspect focuses on the natural resources, the natural environment, the farmed environment, the built environment, and the wildlife. The Economic dimension concentrates on the benefits which result from tourism in various ways such as job creation, local economic growth through the multiplier effect, keeping local businesses viable, infrastructure development, and attracting foreign direct investments. There are also economic costs of tourism like low-paid and seasonal jobs, opportunity costs, congestion, under-utilized expensive infrastructure which may only be required for part of the year, and over-reliance on tourism makes the host economy vulnerable. The social dimension of sustainable tourism does not attract the same attention as the economic dimension because social consequences arise steadily over time and are not as tangible or visible. There are several factors which determine whether or not the social-cultural impact results in a specific location will be positive or negative, including: strength and coherence of the local community and culture, the nature of tourism, the level of economic and social development of the host population in relation to tourists, and the measures taken by the public sector to manage tourism [16][23].

BASELINE POLICIES

The project's interventions and outputs are in line with Jordan's strategies towards greening the transport and electricity supply. The targets and action plans related to these strategies are stated in major policy documents including NDC, A National Green Growth Plan (NGGP) developed by the Ministry of Environment (MoE) and supported by the German Federal Ministry of Environment (BMUB) and the GGGI, and The Green Growth National Action Plan 2021-2025 (GG-NAP) for transport sector (e.g., Target Action TR11 and TR12) which was developed by the MoE with the support of the GGGI.

First Nationally Determined Contribution (NDC) of Jordan, October 2021 updated version put forwards relevant targets such as;

i) Promoting hybrid and electric cars at national level -including 50% of the Public fleet will be EVs- and assuming annual increase in private cars adoption by 2%

ii) increasing the percentage of electricity generated from renewables to have a share of more 35% by 2030

iii) Future electric bus fleet: provide new bus services for the cities of Irbid and Zarqa with a public sector funded mode

iv) Improving efficient energy consumption in all sectors by 9%

One of the main energy-related national policies is the 'Renewable Energy & Energy Efficiency (Law No 13)' that is put in force in 2010. Under Law No 13, the Jordan Renewable Energy & Energy Efficiency Fund (JREEEF) was established and became operational in 2015 to provide funding and technical assistance for EE and RE investments at end-user?s level. It is hosted by the Ministry of Energy and Mineral Resources (MEMR), one of the PSC members of the project. The fund supports any program and financial mechanism allowing renewable energy (RE) and energy efficiency (EE) users to access financing from banks, local and international financial institutions. This includes loan interest rate subsidy, revolting funds, financial risk mitigation, credit guarantees, equity participation, subsidy to investment in innovation projects and soft investment. Both national and foreign private companies are allowed to apply for the Fund`s support when setting up RE and EE projects in Jordan.

The list of relevant national policies and plans is given in the Section 7. Consistency with National Priorities.

Table below provides further information on recommendations baseline policy environment of Jordan?s transport sector.

Document name	Key points/recommendations
A National Green Growth Plan for Jordan	? The Amman ? Zarqa (30km) BRT model can be replicated on other routes such as Amman ? QAIA (35km), similarly electric vehicle corridors can be implemented in Zarqa, Irbid or as part of the Aqaba Special Economic Zone with the expansion of the charging station network. ? BRT user subsidies: BRT ticket prices should be affordable and competitive with the full costs of driving ? Tax concessions should be offered on vehicle road tax for EV or low emission vehicles. Electricity at charging stations should also be subsidized. ? Public transport standards and accountability: quality and reliability of public transport should be guaranteed by standards ? Vehicle scrappage scheme is recommended to improve fleet efficiency Source: GGGI, 2017
Green City Policy and Action Consultation ? Amman Green City Action Plan	? Free bus services should be considered in one of Amman?s major streets ? Develop a map of existing transport and leisure walking routes. ? Formalize public transport routes and times ? Purchase of 150-300 new buses by the Greater Amman Municipality (GAM) for public transport ? Develop a sustainable urban mobility strategy that will expand upon the BRT ? Install Intelligent Transport Systems (ITS) can improve traffic flows Source: EBRD, 2019

Document name	Key points/recommendations
Recommendations on E-Mobility in Jordan	**Recommendations to MoT and MoEnv:** Infrastructure policies: ? Diversify transportation modes ? including EVs. Transition from the focus on car ownership, to smaller sized electric vehicles and public transport. Electric scooters and two-wheelers should be encouraged e.g. through promotional programs ? Enable the investment in more charging stations by encouraging private sector involvement and minimizing governmental procedures and bureaucratic processes. ? Emphasize on the importance of connectivity and electrification, by extending charging infrastructure and public transportation networks ? Establish a high-level national e-mobility committee to follow up on updates in electrification of private and public transport Financial policies: ? Proportionate taxes/customs based on car size; large cars such as SUVs shall pay higher taxes due to their higher emissions ? Assess EVs financial impacts on national budgets as EVs can reduce income coming from fuel taxation, as well as the costs incurred by customs and/or tax exemptions ? Utilize available international funds related to climate change and linking them to the leading case of EVs in Jordan Private sector and economic policies: ? Raise awareness and accountability of fuel consumption and vehicle efficiency by using fuel efficiency labels on cars ? Confirm the importance of collecting and sharing data related to e-mobility. **Recommendations to MEMR and EMRC:** Infrastructure policies: ? Adopt a new scheme in cooperation with different parties to improve the e-mobility charging infrastructure. ? Reduce complexity of installing new charging stations. This includes simplified regulations from both EMRC and the electricity distribution companies. ? Develop a concept how EVs in Jordan can be used as battery storage during oversupply in electricity ? Allow innovative charging solutions like investing in street lighting poles as charging points.- ? EMRC putting specifications and standards for these charging stations ? Using renewable energy for EVs charging stations to help reduce the cost per kWh. Financial policies: ? Change the charging tariff (increase end user charging cost, users are ready to pay more) to attract investors for charging stations. Only 12 charging station for 18.000 cars in Jordan is not appropriate and leads to high waiting periods to charge cars ? EMRC can serve as a regulatory body for the charging tariff however without setting the tariff itself. ? Introduce zero-tax policy on all EVs supply chain, for example chargers and maintenance parts. Research and awareness policies: ? Adopt and approve a smart grid transition plan to enable better usage, simulation, operation, understanding, research and development (R&D) of the electrical transmission grid. ? Build a new local center of R&D for e-mobility, and increase academic research by opening or extending programs and branches in universities. This serves to educate the concept, techniques, logistics of e-mobility in cooperation with international expertise and research. ? Increase the awareness of people about the ongoing and upcoming plans in e-mobility, and correcting some common misunderstandings as well as misleading information about the government policies and initiatives. Private sector and economic policies: ? Allow the market to use different charging, including portable charging stations.

BASELINE PROJECTS ? International Financing Institutions

- The World Bank is currently undertaking a study ?Unlocking the Electric Mobility Development Potential in MENA Region?. The project will take place from May to December 2021 to provide support to the World Bank to deliver technical assistance to the governments of Egypt, Jordan and Morocco with the aim to scaling up the implementation of e-mobility strategies and solutions at the national and regional (MENA) levels.
- The Islamic Development Bank (IsDB) has recently completed an investigation of Electric Bus systems (and the context of e-mobility in general) in three countries of the MENA region: Egypt, Morocco, and Jordan. The aim was providing recommendations for multilateral development banks (specifically the IsDB) with regards to the areas of interest for further future investigations and identifying possible synergies with other activities/initiatives elsewhere. The activity is structured under two components: 1) situation analysis and preliminary market overview, and 2) stakeholder consultation interviews and development of policy recommendations.
- The European Bank for Reconstruction and Development (EBRD) is piloting 15 e-buses for the public transport of GAM?s Amman Bus and supporting project preparation for electrifying a portion of the new planned bus fleet in the municipalities of Irbid and Zarqa. These are two important first steps in readying the local market, but much more technical assistance and knowledge exchange is needed.
- The public transport sector is under-developed, wherein the majority of high-occupancy vehicles are privately owned and do not adhere to their assigned routes and schedules. The Bus Rapid Transit (BRT) system for Amman is due for completion by 2021, and there is the ongoing construction of the 22 km inter-urban BRT line linking Amman with the nearby city of Zarqa. However, the Amman BRT project has been repeatedly delayed and interviews with its engineers and urban planning experts all emphasized that its launch would not mark a radical reform in public transportation, but rather a very limited first step towards introducing two exclusive busways (2 trunk lines) between a limited number of terminals and intermediate stops. Line 1 (Green Line) is a 17 km line connecting Sweileh with the Mahatta Terminal via The University of Jordan and Sports City (21 bus stops). Line 2 (Red Line) is a 9 km line connecting Sports City with Fountain Square (Ras El-Ain) via 5th Circle and Princess Basma Street (11 bus stops).

- Petra was granted two e-buses with two e- high-speed charging stations by Hyundai - Jordan (Unity Trading Est.) for tourist tours in 2019. However they are not operational because the government does not have the route plan or the capacity to operate or maintain them. In addition, as pre-feasiility study points out that Petra requires 15 e-buses whereas 2 buses are simply insufficient. Nevertheless, they will be ncluded in the operational plans of the PDTRA project.

BASELINE PROJECTS ? private sector

- The tourism sector is a significant contributor to the national economy has the opportunity to embark on greening its activities, including the transportation. Despite the complexity of Jordan?s public transport system financing, planning, regulation, and perceived levels of risks involved, the tourism and logistics sectors provide excellent candidates for e-mobility pilot project opportunities, including through a PPP. For example, the Shams Ma?an Solar Photovoltaic Project, is a successful private participation in investment (PPI) project and the largest privately owned solar photovoltaic power plant in Jordan and the Middle East. The project covers a two million square-meter area in the south of Jordan [24][24]. The investment of approximately USD 170 million, generates about 52.5 MW at which 605,400 solar panels were used to produce about 160 GWh per year. This project was designed using sustainable photovoltaic cells for the production of electricity from solar energy, as Jordan is privileged to have one of the highest sunlight rates in the world. The 160 GWh produced per year is equivalent to 1% of the current electric power production in Jordan, preventing the emission of 90 thousand tons of CO2 gas, using a limited amount of water during operations. The project had a positive socio-economic impact on the south

of Jordan in general and the Governorate of Ma?an, in particular, as it has created around 1400 job opportunities during the construction phase, in addition to 25 permanent jobs during the Operation and Maintenance phase [25][25].

- The multinational logistics, courier and package delivery company Aramex currently operates 10 BYD e-vans in Jordan with plans to further expand its fleet of EVs. There is currently no policy or roadmap to support such a shift, and accordingly very few or no examples. The project will build on the promising example in Petra and develop it as a best practice example in terms of technology, financing and private sector participation that can be replicated across the tourism sector both nationally and beyond.

- Jordan has had some success in improving other key transport-related infrastructure, notably with the completion of the upgrade and expansion of Queen Alia International Airport (QAIA) in Amman ? a successful public-private partnership (PPP) example ? and the relocation of the Aqaba port in southern Jordan [26][26].

- From a market assessment of EVs, by 2019 there were 21,511 registered EVs in Jordan, the majority in Amman (77% in 2019). The most common distributors were Nissan (88%), Tesla, Renault, Fiat, Ford, BMW, Mercedes, and BYD.

Additional baseline projects and initiatives related to e-mobility in Jordan are presented in Coordination section.

3) The proposed alternative scenario with a brief description of expected outcomes and components of the project.

The baseline scenario depicts a public transport sector that is under-developed and difficult to reform, with continually more highly congested cities and a rapid increase in private vehicle ownership. Existing national policies are enumerated and described in the table in section 7. Baseline projects and lessons learned from previous research on transportation initiatives in Jordan have been detailed in Table 1 and Table 2, respectively. The overarching finding from the project preparation phase is that despite a range of energy and transportation policies in the right direction, the root causes of the fossil-fuel based transport problem are; the lack of policy coordination between policy making entities at national and local level, gaps in regulations and strategies, lagging charging infrastructure coverage, low private sector participation, insufficient knowlege and evidence-based data extracted from successful technology demonstration projects, as well as lack of capacity and low awareness on e-mobility.

The project addresses these root causes through:

1) Establish a policy coordination forum and provide policy and regulatory support to achieve consistent policy environment

2) Support investment and implementation of a demonstration-scale pilot project for e-mobility in the tourism sector

3) Enhancing capacities through trainings

4) Set the enabling environment for the scale-up of e-mobility investments through increased private sector participation

5) Monitoring, data collection and disseminate lessons learned

The project design draws from the priorities identified during initial stakeholder consultations and a literature review of past work on reforming the Jordanian transport sector to reduce emissions and air pollution. As a medium-scale project, the ability to catalyze sustainable change in the national transport sector will likely be most effective through policy and capacity support, alongside with the technical

assistance to pilot pipeline project that can be scaled in the future. During the project?s preparation stage, four pilot projects were investigated in collaboration with representatives from ministries, municipalities and other relevant stakeholders that are described below:

Priority Pilot Projects

I. The first project in Amman is to link the urban Amman Bus Rapid Transit (BRT) terminal with the inter-urban terminal of the Amman-Zarqa BRT through a feeder network of e-buses. The Amman BRT is in line with the overall policy of the government to achieve GHG reductions, energy efficiency, increase public transport mode share, and reduce traffic congestion. The construction was initiated by Greater Amman Municipality (GAM). The construction of the inter-urban BRT project linking Amman with Zarqa was initiated by the Ministry of Transport (MoT). The concept of the project is to connect the end of Amman BRT Line 2 (Fountain Square) with the Mahatta Terminal (end of the Line 1 Amman BRT & terminal of Amman-Zarqa BRT) with a feeder network of EVs. GAM suggested replacing 60 white taxis that currently operate in the downtown area by 20 E-minibuses/E-medium sized buses.

II. The second project considered introducing a portion of e-buses in the two municipalities of Irbid and Zarqa. The aim is to incorporate e-buses in the new planned fleet of 100 buses in the two cities (59 for Irbid and 41 in Zarqa), which are to be funded by The European Bank for Reconstruction and Development (EBRD). The charging system could be placed in the depots and/or terminals in the two cities in coordination with the Ministry of Transport (MoT) and the Land Transport Regulatory Commission (LTRC). Irbid has 9 lines planned by the municipality with 132 km total length of routes, while Zarqa has 9 lines planned by the municipality with 138 km total length of routes.

III. The third project is in the city of Aqaba which is located in the south of Jordan on the coast of the Red Sea, about 330 km away from Amman. Aqaba is regulated by the Aqaba Special Economic Zone Authority (ASEZA) which is mandated with all the authorities to manage, regulate, and operate as a municipality for Aqaba. ASEZA owns Aqaba Transport Company (ATC) which provides all public transport services in the city. The project aimed to introduce a shuttle E-bus service connecting the North and South areas of the city with the city center.

IV. The fourth and final project is to provide an e-mobility transport solution in the touristic Petra region, given its continuous growth in tourism and planned developments. Petra is a historic site and the main destination for tourists in Jordan, which received over one million foreign visitors by 2019.

After stakeholder dialogues and multiple meetings with international donors, as well as a preliminary multi-criteria assessment of the benefits of the potential projects, the three public transport projects in the four governorates were eliminated and the main focus concentrated on the tourism transport project in Petra (see Figure 2). Therefore the fourth project Petra E-Bus Project is selected to be supported by the project. The main target is to support the PDTRA with the design and tailored technical assistance to the electric bus line investment and operations plan for a new transport route for tourists visiting the Petra UNESCO World Heritage Site. By offering tourists an alternative exit to the site, the proposed route will substantially reduce foot traffic on the site, promote economic opportunities and transport access for surrounding communities, and provide proof of concept for sustainable transport technologies in Jordan?s tourism sector.

Prioritized Pilot Project Description: Petra E-Bus Project

The project will provide technical assistance based on the international best-practices to support Petra E-Bus project to successfully achieve its goals to demonstrate replicability and scaling up e-mobility interventions in the country. The information on the project is given below:

The city of Petra is the main tourist destination in Jordan and described by UNESCO as one of the most precious cultural properties of man's cultural heritage. Petra is located 240 km south of the capital

Amman. The number of foreign tourists has increased in Petra over the years surpassing 1 million tourists in 2019 before the spread of the COVID-19 pandemic, as illustrated in Figure 7.

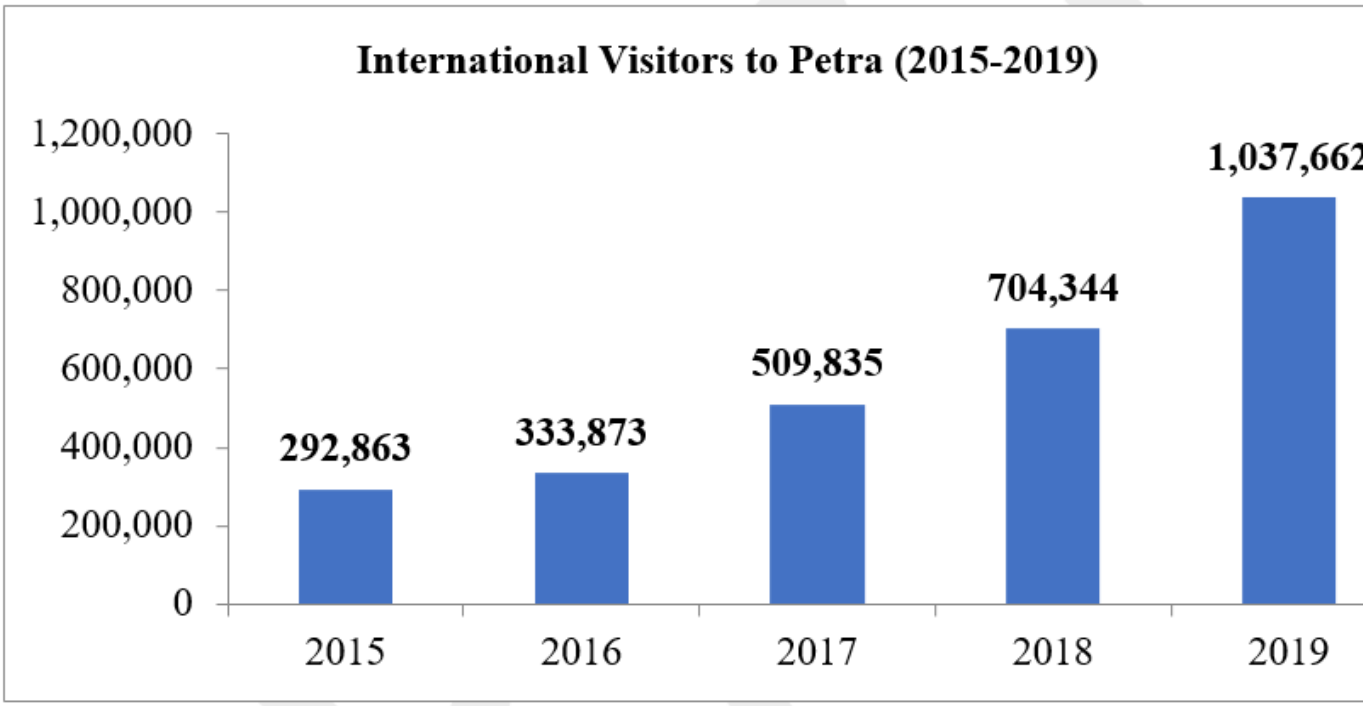


Figure 7: Number of International Visitors to Petra 2015-2019

Petra Visitors Center is the main entrance to the archeological park; it takes approximately 30 minutes to travel to the Ancient City walking through the Siq to the Treasury (or a 15-minute horse ride). Entrance fees (tickets) to the Archaeological Park generate 90% of PDTRA's revenue, particularly from foreign visitors.

The public transport system in Petra-Wadi Mousa consists mainly of buses and taxis. There are seven main bus routes in Petra from Wadi Mousa to other towns and cities, namely: Amman, Ma?an, Aqaba, Taybeh, Al Rajef, Um Sayhoun, and Al Karak. As for the taxi service, there are two licensed taxi offices with a total of 40 taxi vehicles in operation. The proposed BEB transport routes are planned to transport visitors from the archaeological park through three options:

•? Option 1: Basin (tourists assembly area) to Commercial/ Eco-Park to Little Petra to Visitors Center
•? Option 2: Basin (tourists assembly area) to Visitors Center
? Option 3: Wadi Mousa Gate to Visitors Center

The three investigated routes aim to reduce the foot traffic within the historic site, improve Petra visitor?s experience and have positive social and economic effects. The first route (Figure 8) provides services to transport tourists from the basin area which is the major tourist assembly location to little Petra with a stop at the commercial/Eco-Park and return to the Visitors Center. The proposed route is about (7.2 km) while the proposed way back to the Visitors Center from Little Petra is about (8.75 km) as shown in Figure 9. The terrain affects the buses? performance and the battery driving range. The

maximum upgrade ground slope from the Basin area to Little Petra is 24% while the average upgrade slope is 7.5%. As for the trip from Little Petra to the Visitors Center, the maximum upgrade ground slope is 23% and the maximum downgrade slope is -20% with an average upgrade slope of 6%.

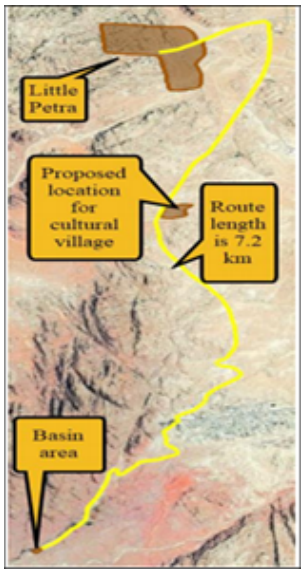


Figure 8: Route 1 from the Basin Area to Little Petra **Figure 9: Route 1 from Little Petra to the Visitors Center**

Route 2 provides the same service as Route 1 but doesn?t provide a service to Little Petra or the cultural village. This route will reduce the foot traffic within the historic site but would not have the same positive social and economic impacts on the local community. This route is 5.4 km long from the Basin area to the Visitors Center as shown in Figure 10. The terrain for this route is also mountainous with a maximum upgrade ground slope of 23%. The average upgrade ground slope along the route is 8%.

Figure 10: Route 2 from Basin Area to the Visitors Center

Finally, Route 3 provides tourist transport services from the Wadi Mousa Gate to the Basin Area as shown in Figure 11. The route length is 4.4 km and it has a maximum grade of 25% with an average ground slope of 5%.

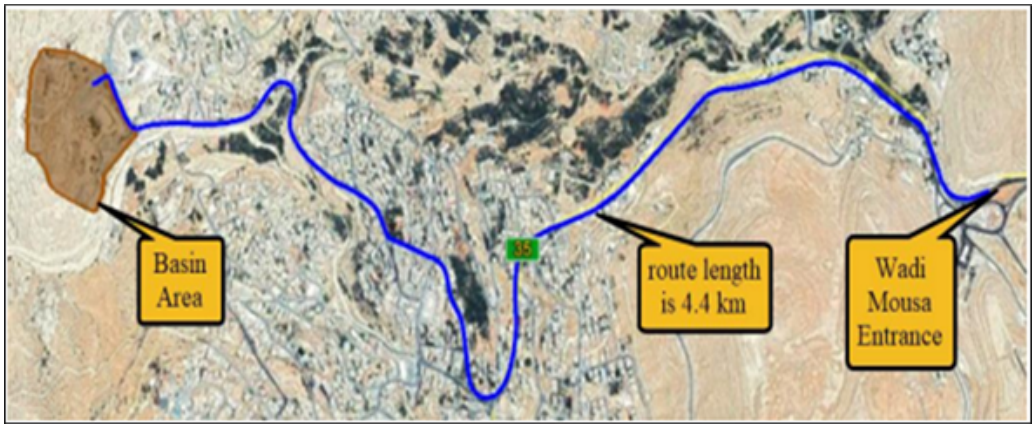


Figure 11: Route 3 from Wadi Mousa Gate to the Basin Area

The share of demand for transport services in different locations is an important element in designing the operational plan for the different tourist service routes. Based on the information provided related to the numbers of tourists in Petra in the figure below, the number of tourists are highest in the months of April, October, and November as provided in Figure 12. In 2019, April witnessed the largest number of visitors ever in one day, with 9,133 visitors. The average daily number of tourists is almost as high as 3,800 tourists per day.

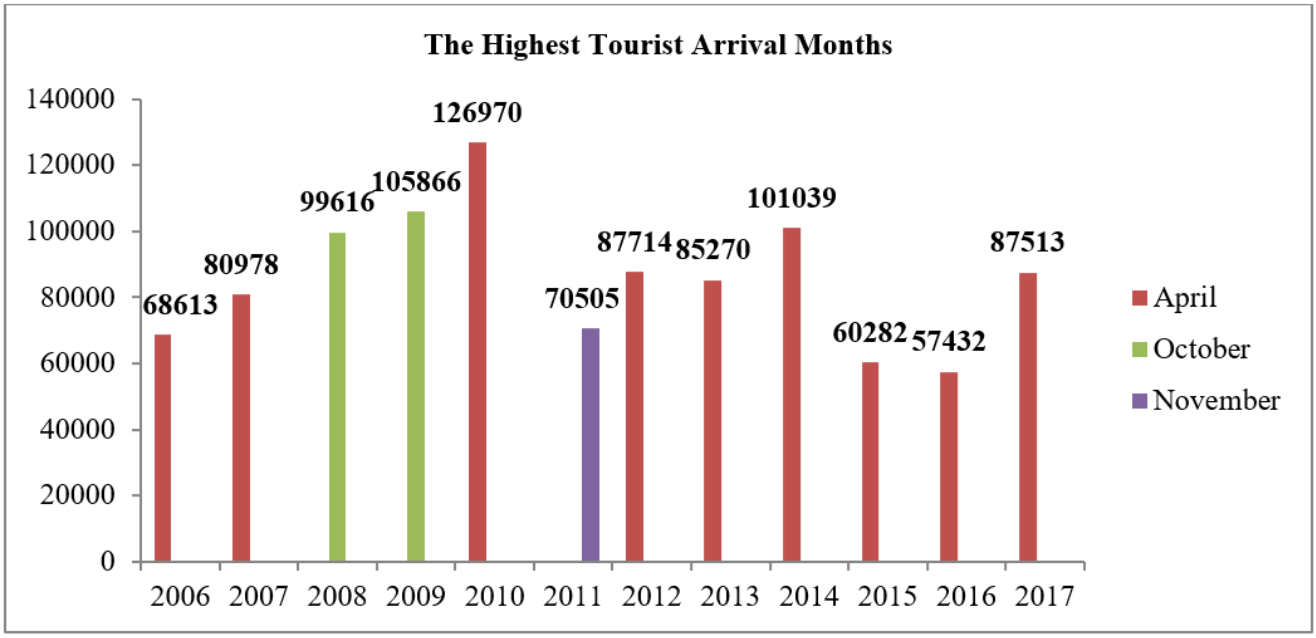


Figure 12: The Highest Tourist Arrivals Months between 2006 and 2017

The demand for e-bus service is calculated based on the highest tourist arrival month visitors as it is expected that it will take some time for the annual tourist arrival numbers to recover back to their pre-COVID 19 levels.

The Project Structure

The project is structured on four key components each targets one or more root causes namely, policy support, technical assistance and scale-up, capacity strengthening and monitoring and evaluation. The logical pathways between root causes, outputs and outcomes are shown in the theory of change diagram. The project's structure aligns with its parent Global Programme. The project will draw from the past experiences and ongoing efforts to mitigate the impact of transport sector through enabling and accelerating the shift to e-mobility.

The components along with their outputs and activities are outlined below.

COMPONENT 1: Policy coordination and integration; and establishment of an inter-ministerial high-level forum on e-mobility (HFE) to support an enabling policy environment for e-mobility.

Component 1 focuses on improving policy environment and strengthening coordination between national stakeholders (e.g., through HFE), private sector on and local experts in a participatory approach to increase the ownership of the e-mobility agenda. The participatory approach will increase ownership of the e-mobility agenda in the country, improving the longer-term institutional capacity to manage further reforms and scale-up. Jordanian policy-makers will be given ample opportunity to learn from lessons learned and feature national successes in the e-mobility sector. Under this policy focused component, the project will benefit from Global Programme?s toolbox including guidance materials, analytic tools, strategies, factsheets, cost benefit analyses, roadmaps, policy packages, business models and financing schemes for promoting and supporting electric mobility is developed.

Outcome 1.1 E-mobility policies established, through enhanced inter-ministerial coordination, which integrate fiscal considerations, energy security and environmental goals.

The succesful completion of outputs under the Component will lead to the establishing and updating policies on the environmental and climate related targets and fiscal incentives for the adoption of e-mobility. Consistent and well-established policies will create a legal enabling background for e-mobility investments in the tourism and transport sectors. The project will establish a high-level committee to assist with policy coordination and respond to regulatory gaps in Jordan?s low carbon transport strategy as well as develop the public-private dialogue and roadmap for transport for the tourism sector.

The expected outputs that will contribute to the realization of the overall outcome of Component 1 are the following:

Output 1.1.1: The inter-ministerial High-level Forum on E-mobility (HFE) is established and functional.

The project will develop terms of reference (ToR) to create HFE to put it in operation through meetings. The HFE will be linked with the Inter-Ministerial Committee on e-mobility (ICE) and the donor committee on e-mobility (DCE) as well as with the networks of the Global Programme. .The HFE will be acting as a platform to coordinate actors? views, hosted by the Ministry of Energy and Mineral Resources (MEMR), Ministry of Transport and other interested relevant ministries. The HFE Will be indicatively led by Ministry of Transport and/or MEMR. The members of the HFE will consist of representatives from the Ministry of of transport, energy, and environment, Director of Land Transport Regulatory Commission (LTRC) and the Director of Energy & Minerals Regulatory Commission (EMRC). Establishment of such a formal inter-ministrial committe and ToR with clear mandate will enhance the ownership, aligned the agenda of different ministries, create shared responsibility and trigger a momentum of developing and implementing e-mobility policies supported by the high-level, thus ensure the sustainability and replication of project's interventions during and after the project lifetime.

Activities:

? 1.1.1.1 Develop ToR on the mandate, chairs, organization and operations of the committee as well as short-term and long-term goals focusing on tourism based on the existing coordination mechanisms including the role of the Gender Focal Point (FP), workplan, and agenda of the meetings

? 1.1.1.2 Support the development of a standing agenda focused on a set of learning objectives, institutional coordination matters and policy decisions to be discussed in the ICE.

? 1.1.1.3 Project team co-chairs the DCE with MEMR and facilitate knowledge exchange on a semi-annual basis (or more frequently depending on needs).

? 1.1.1.4 Organize and participate to annual HFE events held during the project (virtual and in-person if measures allow) including 1 training session on gender and e-mobility, including gender sensitive planning conducted for the HFE.

The project will provide technical guidance, facilitate knowledge exchange and strengthen the capacity of the members through workshops and trainings on best-practice policies, global trends and updates on the technology and business models makers, private sector engagement modalities, communication with the civil society and facilitate knowledge exchange with the Global Programme.

Output 1.1.2: Joint public-private partnership roadmap for transitioning towards a more sustainable tourism and transport sector is developed and submitted to the Government for endorsement

The project will work in close collaboration the national stakeholders (e.g, Ministry of Tourism and Antiquities) and private sector (e.g., Jordan Tourism Transport Association) in developing the roadmap. The project team will consult with civil society to ensure the gender and youth dimensions are incorporated. Developing a public-private roadmap will put forward a pathway for increased collaboration and encourage private sector to invest in e-mobility infrastructure as well as renewable energy technologies.

As a result, this output aims to increase private sector?s participation in charging infrastructure development which is crucial for the uptake of low-carbon e-mobility.

Activities:

? 1.1.2.1 Hold a series of public-private dialogue (PPD) events on the topic of contribution of e-mobility to sustainable tourism and transport sector.

? 1.1.2.2 Conduct a policy analysis to better understand the challenges, opportunities, and barriers to increased private sector investment in e-mobility in the tourism transport sector in Jordan.

? 1.1.2.3 Based on the two activities above, facilitate consultation between public and private sector representatives to develop the roadmap.

? 1.1.2.4 The roadmap is developed through consultation with (Ministry of Tourism and Antiquities) and Jordan Tourism Transport Association, civil society (e.g., women associations) and NGOs and submitted to the government for endorsement.

Output 1.1.3: Regulations and policies are supported to enable the integrated e-mobility and renewable energy investments and ensure the long-term environmental sustainability of EVs (e.g., guidelines on management of end-of-life batteries)

The project will strengthen national policy and regulations to improve the legal framework enabling and promoting e-mobility charging infrastructure coupled with renewable energy investments. This will further increase the GHG emissions mitigation potential of shifting to electric mobility.

Some national policies in Jordan such as the Master Strategy for Energy (2030), Green Growth National Action Plan (2021-2025), Long-term National Transport Strategy have put forward some policy priorities to support in e-mobility through, incentives to encourage shift to EVs, increasing EVs in public sector fleets, and investment in charging station. In addition, The Energy and Mineral Regulatory Commission (EMRC) provides licenses to public and private electric vehicle charging stations and has plans to make compulsory for all new gasoline stations to have EV charging points. Under this output the project will address the gaps, lacking specific frameworks, set concrete goals align them with the NDC and action plans to implement them through developing revision report and implementation guidelines to the above mentioned policies as well as formulate recommendation report for new policies. For instance, eventough NDC promotes 50% to be EVs, there are not yet a complete regulatory mechanism for greening the government fleets.The policies will include measures to increase institutional coordination mechanisms and ownership in line with the mandate of the inter-ministerial High-level Forum (see: Output 1.1.1). Furthermore, relevant policy documents will be drafted for the government to amend or extend current rules providing fiscal incentives other policy measures (e.g., non-monetary incentives) to encourage tourism and transportation firms to invest in EVs for the first time.

The revision reports and policy recommendations will be submitted to the relevant government stakeholders for adoption.

Furthermore, the policies and regulations will include recommendations on measures and guidelines on the environmentally-sound management scenarios of used batteries (e.g., second-life use, recycling, e-waste management). The project will benefit from the knowledge products of the Global Programme?s best-practice policies and thematic working group on battery life cycle aspects.

Activities:

? 1.1.3.1 Develop policy recommendations and its strategic implementation guidelines to promote the achievement of the agreed investment targets in consultation with the national stakeholders and submit to the relevant project partners.

The policy recommendations report will be built on the joint public-private investment roadmap and include the outcomes of the PPD (Activity 1.1.2.1) will be incorporated.

? 1.1.3.2 Develop revision report towards achieving the adoption of consistent policy and regulations on RE and e-mobility investments and submit to the relevant national policy making bodies for endorsement.

In line with the policy recommendations, the regulation revision report will include environmental management guidelines to mitigate the potential long-term impacts of the EVs with a focus on integration with renewable energy and end-of-life battery scenarios.

COMPONENT 2: Technical assistance to ?Petra E-bus Project? to demonstrate replicability and Scaling Up E-mobility interventions

Component 2 focuses on the successful implementation of a demonstration-scale pilot project for e-mobility. The outputs under this component designed based on the assumption that e-mobility tourism

transport solutions and scaling e-mobility are feasible, but lack of evidence-based information and technical support are the barriers. The pilot project that will be supported is an e-bus service pilot around the UNESCO World Heritage site of Petra in southern Jordan. As one of the world?s top tourism destinations, the project will have high visibility. With the technical assistance program, the PDTRA will be provided the support it needs to design and mobilize investment in the project by the end of 2023, around the time Jordan?s tourism sector is anticipated to regain pre-COVID momentum.

Another focus of this component is setting the enabling environment for the scale-up of e-mobility investments in Jordan beyond the time period of the technical assistance provided. Scale-up activities are planned for both the demonstration pilot in Petra, as well as, for commercial/private sector e-mobility investments nationally.

The technical assistance component to Petra e-bus pilot project is built on the pre-feasibilty study completed as part of the GCF readiness activities on assessing the viability and technical feasibility of operating e-buses in Petra executed by GGGI in collaboration with PDTRA in 2021. The details provided by the pre-feasibility allowed the government to move forward with this project and attract finance (e.g., from IFC).

The pre-feasibility study has investigated 3 routes options, there are activities in the proposal that GEF will cover but for the others they could be funded by PDTRA or others like GCF. Currently, GCF is not committed to this project.

The outcomes of the pre-feasibility study:

To start with the technical analysis, proposed bus operational plan for the 3 proposed service routes, including: commercial speed, travel tine, headway, operating hours, total bus travelled distance, fleet needs, and number of charging units needed. The emissions analysis was performed for Diesel Buses and Battery Electric Buses for the analysis cycle of 12 years was also performed. As for the ownership cost analysis, from operational days and distance traveled fuel consumption and energy efficiency were determined over the life span of the project. Lifetime fuel and lifetime maintenance costs were also calculated.

Finally, the main components of PV systems and infrastructure were determined, and their costs estimated. A sensitivity analysis was conducted for both the financial and economic feasibility. Six scenarios were examined for an increase in total costs or decrease in revenues at different percentages. The results of the sensitivity analysis for the six examined scenarios showed clearly that the project is not sensitive to increases in costs or decreases in revenues, even at a discount factor 9%.

Given the applied assumptions in this study, the results of the analysis suggest proceeding with the implementation of the e-bus project.

Outcome 2.1 Strategic investment drives proliferation of e-mobility and enables higher public and private investment in e-mobility.

The expected outputs that will contribute to the realization of the overall outcome of Component 2 are the following:

Output 2.1.1: Scalable E-mobility project (Petra E-bus project) in place to demonstrate replicability.

As the pre-feasibility suggests (see Baseline Project section), the government decided to move forward with this project and aim to mobilize financing from IFIs (e.g., IFC). The key objective of PDTRA is achieve fully electric fleet, acquire local ownership and sharing the benefit. PDTRA aims to procure 13 e-buses in addition to the existing 2 granted by Hyundai - Jordan (Unity Trading Est.) and required charging infrastructure to operate a total of 15 buses in 3 different routes in Petra. PDTRA - with the help of the project- will develop a business model and operational plan based on the two options of either setting up a company to own and operate the fleet, or bring in a private tourist transport

company (e.g., from Amman or Aqaba) to manage and operate the e-buses through a public-private partnership modality. PDTRA has sound financial management in place which is a precondition for attracting private financing. Further roles and responsibilities of the project will be fine-tuned and decided during the project implementation (please see Activity 2.1.1.1 and 2.1.1.2).

The project will investigate and compare different procurement modalities applicable to Petra e-bus project, such as leasing, joint procurement to tackle high upfront cost challenge. As the battery is a significant part of the overall cost, battery leasing can reduce the initial capital cost. Joint Procurement takes the advantage of economies of scale that enable upfront cost reduction by teaming with another operator, widening the contract with the bus supplier. These options will be analyzed in the feasibility study (see Activity 2.1.1.2) to reduce high upfront purchase costs.

In addition, the price of lithium-ion batteries dropped straggering 97% since their commercial introduction [33] which results in reduced vehicle costs. Ford expects its batteries to cost 40% less by 2025, GM expects a 60% drop in its battery prices, and Tesla expects its new battery design to lead to a 50% price drop due to improvements in battery chemistry [34].

Activities:

? 2.1.1.1 Analyse project design from environmental, technical, social and gender dimensions with focus on renewable energy-EV integration based on the best international experience and assess required technical assistance.

? 2.1.1.2 Provide technical assistance (e.g., support the full financial and technical feasibility studies) for Petra e-bus project in partnership with PDTRA and co-financiers to secure necessary finance from all co-investors, including Government, development partners

Feasibility study will take the assessments of the pre-fasibility further assess the;

- technical requirements (e.g., required number, location, type, power of the charging points, load to the grid and if a a transformer sub-station is needed, impact of HVAC use on battery lifetime) and technical design (e.g., both overnight charging and opportunity charging will be analyzed and compared)

- economic performance and financial model of the Petra e-bus investment (e.g., required CAPEX, OPEX, internal rate of return, revenue streams) inlcuding assesment and comparing of different procurement options such as a leasing and joint procurement
- environmental benefits (GHG emission reduction potential)
- environmental and social impacts and mitigation measures including battery lifecycle
- risks and mitigation measures

The project will conduct further consultations with JREEEF with aim to mobilize funds to the Petra e-bus project.

Output 2.1.2: Petra e-bus implementation program delivered.

The project will provide technical assistance to Petra e-bus Project based on best international practices to mobilize investment and create evidence-based information building on the pre-feasibility study completed under the GCF Jordan readiness program.

Activities:

? 2.1.2.1 Provide embedded technical advisory and guidelines to PDTRA on the topics of community and private sector engagement, sustainability, replicability, GHG emission calculations, regulations and international best practices, and similar.

? 2.1.2.2 Consultations with the local community related to the design and business model of the e-bus project.

? 2.1.2.3 Provide transaction advisory services for the Petra e-bus project (e.g., procurement plan, document preparation support, etc.)

Output 2.1.3: Strategies and pipeline are developed to scale-up e-mobility and renewable energy in Jordan.

To ensure the scaling of project's interventions on strengthening EV infrastructure towards accelerating the shift to e-mobility, the project will support PDTRA to attract private sector investment, develop scale-up strategy and pipeline of investment projects. The will create an incremental contribution to PDTRA that is actively pursuing replication in Petra and south of Jordan to expand its e-bus operations as stated in their cofinancing commitment letter.

As part of the exist strategy, the project will monitor and gather technical data (e.g., economics of the Petra e-bus project, number of buses charged, low-carbon electricity generation and supply, GHG emission reduction etc) as well as qualitive knowledge on the business model and extract lessons learned. Based on this real-world data, the project team will develop promotional reports and disseminate them with national network and regional network. This will improve access to nationally generated evidence based data to de-risk future investments, stregthen decision-making towards electrification of HOVs, promote scale-up and increase visibility of e-mobility technology and business model. In addition, the data from continuous monitoring will be exchanged with the Global Programme.

Lessons learned from the Petra e-bus technology project will feed into scale-up strategy (see Activity 2.1.3.5).

This output will consist of the activities listed below.

Activities:

? 2.1.3.1 Develop and disseminate of the promotional materials with national and regional networks and partnership platforms as well as with the Global Programme to promote replicability, scale up and visibility.
? 2.1.3.2 Credit rating developed for PDTRA to facilitate continued investment and accelerate scale-up.
? 2.1.3.3 Mainstream e-mobility projects into PDTRA?s infrastructure master plan and policy directions into PDTRA?s tourism master plan.
? 2.1.3.4 Identify potential scale up options for the Petra e-bus project.
? 2.1.3.5 Develop a scale-up strategy for integrated e-mobility & renewable energy technologies
? 2.1.3.6 Develop a pipeline of 3-5 investment projects to promote implementation of the joint roadmap for sustainable tourism transport (Output 1.2.1)

The project will provide technical assistance to help PDTR achieve creditworthiness which is a prerequisite for IFC or any other commercial-based financial institution (i.e., other FIs or a local commercial bank, etc.).

COMPONENT 3: Capacity building and knowledge management for facilitating the adoption of E-mobility

The interventions under this component tackle the capacity barrier and enable national stakeholders to scale-up investments in shift to electric mobility. In addition, the involvement of academia and other stakeholders will serve to inform the general public and educate a new generation on sustainable mobility issues including the outcomes of the pilot project. Long-term initiatives (e.g., extending tourist services to Wadi Rum and Aqaba) to further establish mass e-transit will be supported through capacity building of policy makers.

Outcome 3.1: Government and private sector are better prepared and enabled to replicate e-mobility successes in Jordan.

The project will leverage the impacts of the by actively engaging with the relevant institutions in order to avoid duplication of efforts and encourage synergies. The expected outputs that will contribute to the realization of the overall outcome of Component 3 are the following:

Output 3.1.1: Knowledge and best practice shared through regular exchange of global, regional and national experiences through the Global Programme.

Activities:

? 3.1.1.1 Facilitate regional and global exchanges through the Global Programme.

This output will engage with the Global Programme to exchange best practices and support replicability and disseminate best practices and encourage replicability. The project team will encourage and organize active participation of national stakeholders to e-mobility global programme workshops and events and in regional platform (i.e., Support and Investment Platform for Central and Eastern Europe, West Asia and the Middle East) meetings such as e-mobility trainings and market-place events.

Output 3.1.2: Capacity building program on integrating e-mobility and renewable energy technologies as well as environmentally sound management of EV batteries conducted for the relevant national stakeholders and the private sector through partnership with local academic/civil society institutions.

Under this output, training modules tailored to the national context of Jordan will be developed and capacity building workshops for national stakeholders and private sector will be conducted. The project will benefit from the Global Programme?s training materials that are prepared for use in the support and investment platforms.The training modules will include a range of environmental, social and technical topics such as; RE-EV integration, GHG emission reduction potential of e-mobility, how to tackle range anxiety, future technology scenarios and environmental impact with a focus on battery lifecycle. The PMU will reach out and promote the participation of women to the trainings. The time, date and location of the trainings and workshops will be suitable for women.

Activities:

? 3.1.2.1 Established partnership with local academic/civil society institutions to develop training modules for public and private sector representatives on e-mobility and electric vehicle technology.
? 3.1.2.2 Deliver training sessions to relevant government representatives (e.g., members of the HFE on e-mobility as given under Output 1.1.1).
? 3.1.2.3 Deliver training sessions to relevant private sector representatives including the ones who will participate in the public private dialogue (Output 1.2.1).

Capacity building is crucial to achieve the outcomes of this project because there is lack of knowledge, know-how and practical experience in e-mobility in Jordan. The budget will be used to bring in international expertise which is not available in the country to provide trainings to policy-makers, PDTRA, trainers, and the private sector. Training modules will include international best-practice policy and regulation, e-mobility infrastructure and EV technologies, global trends in the field, integration with renewables, environmental and climate aspects of shift to e-mobility, transport planning and operations including route planning, charging point installation and operation, total cost

of ownership (ToT), data collection and dissemination, monitoring and evaluation of operations: fleet, drivers, and administration, e-waste management: reuse, recycling, disposal, of end-use batteries, risks and safety measures (e.g., fire prevention).

COMPONENT 4: Monitoring and Evaluation

This component will establish and implement an effective project monitoring and evaluation mechanisms alongside capturing progress and lessons learnt. Gender- disaggregated data will be captured wherever possible during monitoring and evaluation efforts. UNIDO will regularly monitor progress on each component to ensure the project is completed on time and to budget, as well as to be responsive and proactive about any potential adjustment or opportunities that arise that can further leverage the GEF grant for achieving additional GEBs. As per GEF and UNIDO guidelines, a mid-term review (MTR) and an independent terminal evaluation will be conducted at the conclusion of the project to collect best practices and lessons learned for future projects.

Outcome 4.1: Adequate monitoring of all project indicators in line with GEF, UNIDO and GoJ requirements

The expected outputs that will contribute to the realization of the overall outcome of Component 4 are the following:

Output 4.1.1: Monitoring and independent mid-term review

This output under monitoring and evaluation component includes activities below:

? 4.1.1.1 Regular monitoring of project activities against project targets
? 4.1.1.2 Independent mid-term review conducted

Output 4.1.2: Independent terminal evaluation conducted

? 4.1.2.1 Independent terminal evaluation on the project conducted at the end of the project

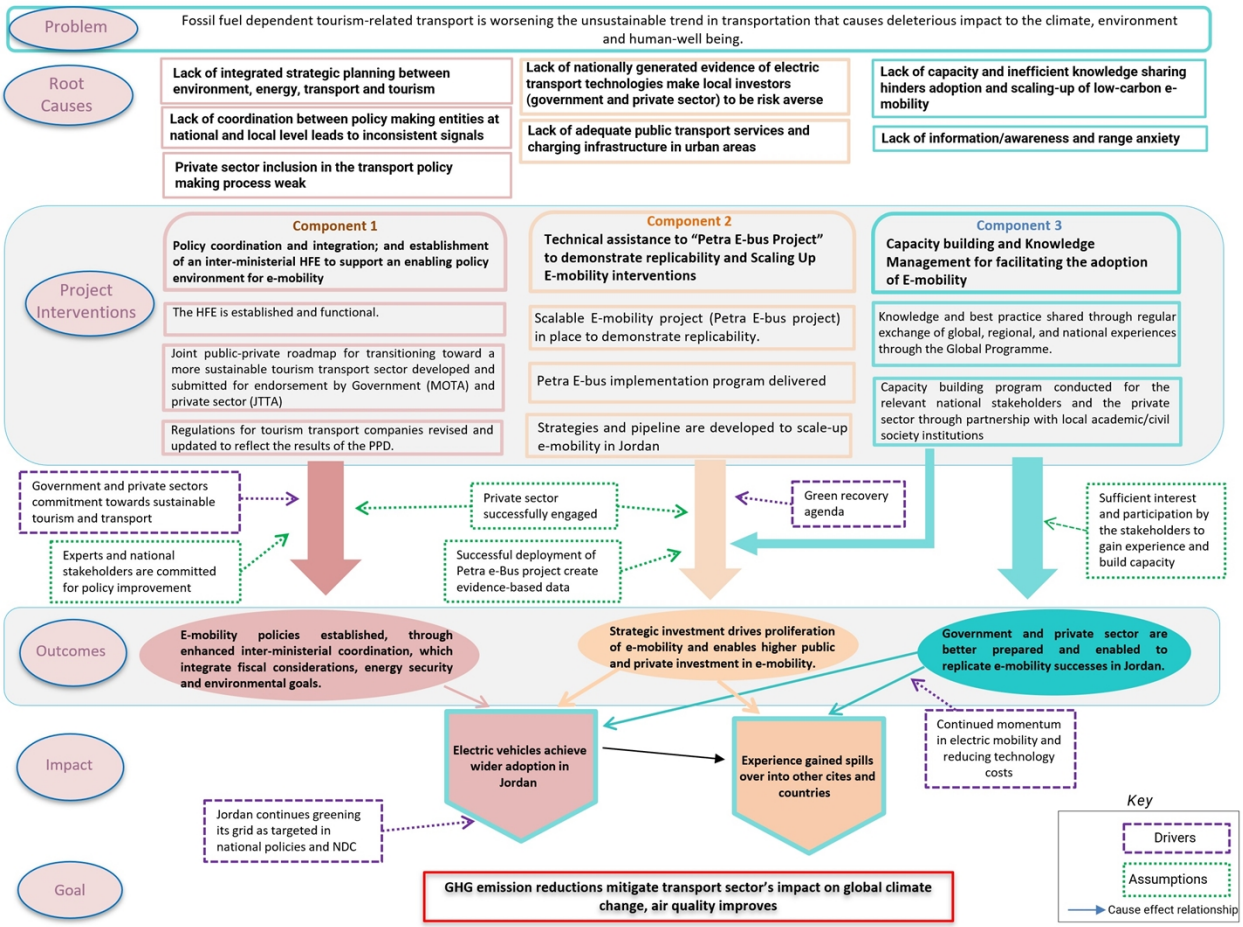
Terminal evaluation (TE) will evaluate the envisaged gender outcome at the end of the project. TE will be conducted by international and national independent evaluation experts as per UNIDO and GEF guidelines.

Theory of Change (ToC)

The project solutions in the ToC are based on the root causes lay under the unsustainable transport problem in Jordan.
The project outputs are structured to target one or more root causes. The logical pathways including driving forces and assumed scenarios between the outputs and outcomes are shown with arrows connecting the boxes. Different colors show the different Components of the project. Component 4 on monitoring and evaluation, gender mainstreaming and environmental and social impact assessment are considered cross-cutting and not shown in the ToC.

The project focuses on low-carbon e-bus technology demonstration to address the need for equitable access to public transportation (as described in the root causes and barriers) and unsustainable, fossil-fuel based transportation.

The ToC shows that IF the outputs (project interventions) are conducted successfully THEN the project will reduce GHG emissions resulting from tourism-related transportation BECAUSE creating evidence through pilot technology demonstration, building capacity on e-mobility and enabling policies and investment conditions for private sector will accelerate the adoption of EVs and promote sustainable tourism in Jordan.



The project duration is 5 years. The work plan for this duration is provided in the annexes.

4) Alignment with GEF focal area and/or Impact Program strategies

The project contributes the GEF focal area CCM-1-2 on promoting innovation and technology transfer for sustainable energy breakthroughs for electric drive technologies and electric mobility.

The project will reduce the GHG emissions resulting from transport, strengthen awareness and develop institutional and technical capacities into relevant policies, plans and associated processes at sub-national and national level and support cities in realizing Global Environmental Benefits outlined under GEF-7. From a climate change mitigation perspective, the project aligns with GEF-7 strategic objective to finance low-carbon technologies and mitigation options and promoting integrated low-emission urban transport, catalyzing technology innovations towards scale, whilst counteracting environmental impacts of air pollution results from exhaust emissions of vehicles in urban areas.

The realization of e-bus project in Petra will result in direct and secondary GHG emission reductions. Indirect GHG emissions are expected to reduced through replication and scale-up of the pilot project. The project will ensure this through dedicated output on scaling-up and enabling policies.

The GHG emissions and the number of direct beneficiaries were calculated based on the programme?s calculation methods and assumptions in the PFD.

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

The project will build on a number of baseline initiatives to ensure that they are coordinated coherently and move the transport and tourism sector as well as policy interventions to address the environmental problems resulting from unsustainable mobility and fossil fuel based energy. The cost of per ton of GHG reductions to the GEF is expected to be USD 2,50 for total direct emission mitigation (incl. secondary) for the years between 2022-2037.

The project?s incremental cost reasoning is given below separately for each component.

Component 1: According to the baseline scenario, conflicting policy priorities are discouraging public and private sector engagement in e-mobility. However, e-mobility policy needs to integrate fiscal, economic, social, environmental/climate and energy goals. The focus of this component is on developing the evidence base for reforms in the tourism transport and broader e-mobility sector in a participatory manner that will build the capacity of government stakeholders and local experts. The participatory approach will also increase ownership of the e-mobility agenda, improving the longer-term institutional capacity to manage further reforms. Jordanian stakeholders will be given ample opportunity to exchange lessons learned and feature national successes in the e-mobility sector. The GEF resources will go towards ensuring that management and planning are proactive and strategic.

Component 2: According to the baseline scenario, due to the listed barriers Jordanians are unable to fully engage with low-carbon transportation. Strategic investment drives proliferation of e-mobility and enables higher public and private investment in e-buses. The focus of this component is the successful implementation of a demonstration-scale pilot project for e-mobility in the tourism transport sector. The project of focus is an e-bus service pilot around the UNESCO World Heritage site of Petra. As one of the world?s top tourism destinations, the project will have high visibility and create national and regional attention. The project will provide much needed technical assistance to PDTRA to complete the design based on international best practices and mobilize investment in the project by the end of 2023, around the time Jordan?s tourism sector is anticipated to regain pre-COVID-19 momentum. The project?s technical assistance enabling the realization of Petra e-bus project is estimated to be equivalent of replacing 4 diesel buses with electric buses charged with renewable energy, corresponding direct GHG emission mitigation calculated as 98,976 tCO_{2eq} per year (please see GHG calculation annex for further information) between 2022-2027. Furthermore, the project will promote an enabling environment for the scale-up of e-mobility investments in Jordan beyond the time period of the technical assistance provided. Scale-up activities are planned for both the demonstration pilot in Petra as well as for commercial/private sector e-mobility investments nationally. This scale-up momentum will contribute to the global agenda on green and resilient recovery from the COVID-19 impact.

Components 3: According to the baseline scenario, the government and the private sector are not prepared to scale up and replicate e-mobility projects due to lack of knowledge and capacity. The project will benefit from Global Programme?s knowledge products and best practices to provide tailored trainings to government and private sector to prepare and enable them to replicate e-mobility investments in Jordan.

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

The project will generate multiple global environmental benefits building on a substantial baseline but also a strong incentivizing increment. The GHG emissions are calculated based on top-down UNEP methodology using the calculator tool.

The project will provide technical assistance and facilitate investment mobilization for Petra e-bus project. This impact of the project is assumed to be GHG emission reduction equivalent to replacing 4 diesel busses with e-buses charged with renewable energy (direct emission reductions).

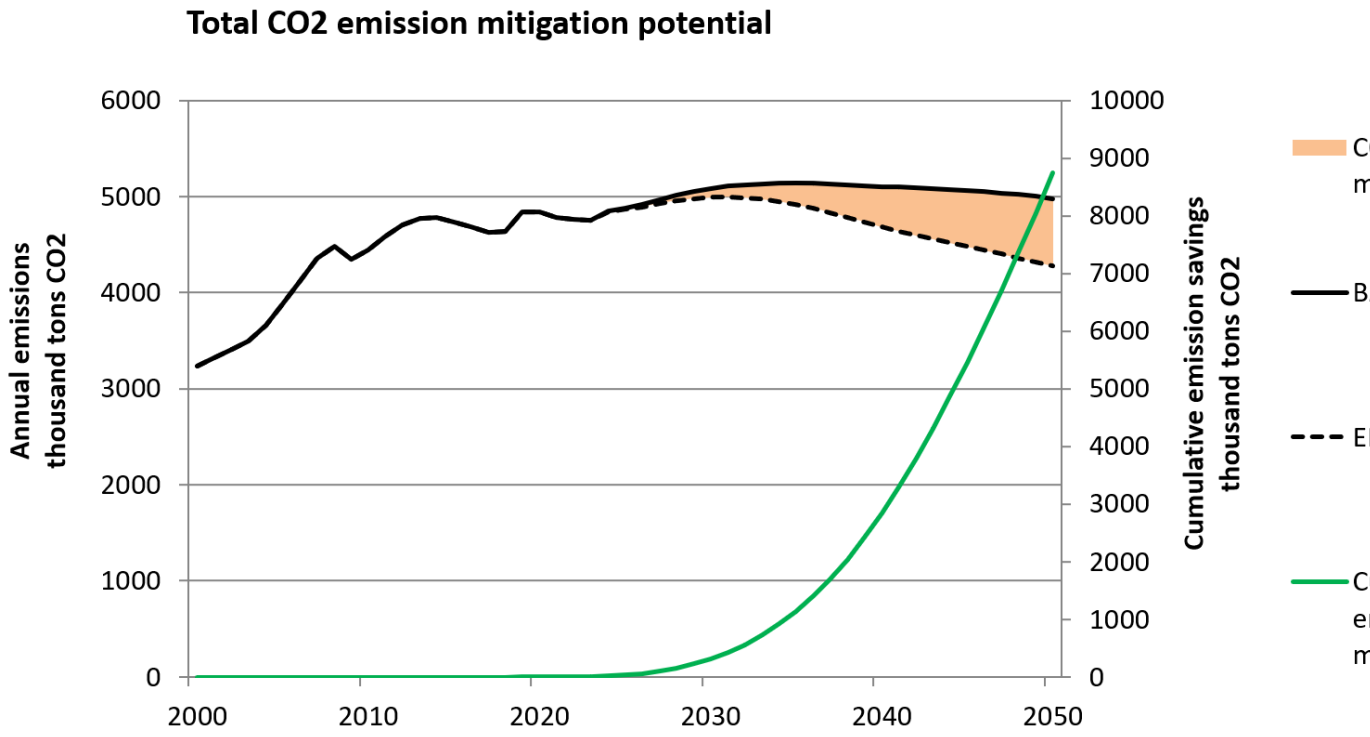
The breakdown of total (direct + indirect) GHG emission mitigation of 1,643,665 tCO_{2eq} is summarized here briefly. The total direct GHG emission mitigation of 494,880 tCO_{2eq} consists of direct emission reduction and secondary direct reduction. The direct emission reduction is expected to be achieved through replacing diesel buses with e-buses powered by renewables under Petra e-bus

project. The secondary direct emissions are resulting from reduced private car rides (e.g., taxis) in Petra e-bus route and increased electric vehicle ownership due to supportive policies calculated by applying 30% GEF causality factor. The indirect post-project mitigation of this total corresponds to 1,148,785 tCO_2eq assumed to be realized through scaling-up of e-bus and renewable energy technologies in similar touristic cities and further adoption of EVs in Jordan.

See below the summary table of the GHG mitigation potential.

Total top down emission mitigation potential, tCO2	
Thereof	
Total direct emissions mitigation 2022 - 2037, tCO2	**494,8**
Direct emission mitigation from demonstration 2022 - 2027, tCO2	3,
Secondary direct emission mitigation 2022 - 2037, tCO2	49
Indirect emission mitigation 2022 -2037, tCO2	**1,148**
Total project related emissions reductions, tCO2	**1,643,66**
Total GEF investment, USD	**1,239,56**
GEF efficiency USD/ Total direct emissions mitigation 2022 - 2037, tCO2	**2.50**
GEF efficiency USD/ Total project related emissions reductions, tCO2	**0.75**

See below the graph comparing low-carbon e-mobility scenario to business as usual scenario.



The assumptions and sources of the input data use for the calculations are summarized below.

The vehicle stock number in Jordan are taken from the statistics of ?the number of registered vehicles? from Jordanian Drivers and Vehicle Licensing Department (JTI). The public transport vehicles compose 3.5% of all the registered vehicles in Jordan (Shbeeb, L., 2018) [29]. For the secondary direct and indirect GHG calculations, it is estimated that 4% of the registered vehicles are bus, considering the private buses besides public transport vehicles.

The economy growth rate indicator is also used for secondary direct and indirect GHG emission calculations. The growth rate (%) of Jordanian economy is expected to bounce back to pre-COVID period, therefore, this value is estimated to be in average 2.5% from 2023 to 2030 and slow down to stay 2% from 2031 to 2050 based on the World Bank data [30].

The value for electricity well-to-tank emissions is calculated by applying LCA emission factors for Jordan [31] with the grid emission factor data from the Institute for Global Environmental Strategies (IGES) [32] .

The population data is gathered from the statistics of UN population division and GDP prospects from IFC. It is also considered that the grid emission factor of Jordan is assumed to be reduced steadily starting from 2025 in line with the national policies and NDC and trends such as climate agenda, green recovery, electrification and reducing capital investment cost of renewable energy technologies. Please find attached the calculator in the annexes for further information, more detailed graphs on baseline scenario and e-mobility scenario.

The total of number of beneficiaries estimated as 31,720. This calculation is based on:

? The number of trainees in all technical and institutional capacity building activities: 500 (40% women)

? Estimated half of Petra's local population (38,500) [27] to benefit from e-buses as passengers/drivers: 23,100 (50% women)

? 20 direct and 100 indirect jobs created and employment in new businesses: 120 (40% women)

? total number of tourist guides, long-stay visitors and similar (estimated 1% of number of international tourists arriving to Petra in the last year of the project (800,000)[28]) who will have health benefits resulting from reduced exhaust and PM emissions and noise pollution: 8,000 (50% women)

Therefore, the expected total number of beneficiaries is calculated as: 500 + 23,100 + 120 + 8,000 = 31,720 beneficiaries; 15,800 being women and 15,920 men.

7) Innovativeness, Sustainability and Potential for Scaling Up

Innovation:

The project ?Petra E-bus project? is bringing an innovative angle by mainstreaming green investments by using mature efficient technical solutions that were developed and streamed throughout different projects and proved successful with their best practices available for knowledge sharing such as electric

buses, energy efficiency usage, smart mobility and other relevant interventions. The market development for enhancing investment in sustainable tourism transport through knowledge exchange and scale-up of the pilot project by investigating the feasibility for introducing Battery Electric Buses (BEB) as a mobility option for tourists with different tourist shuttle service options and evaluate the number of e-charging facility and capacity needed for each option in Petra is considered innovative in Jordan.

Sustainability:

The project will address the root causes and barriers hindering the shift to sustainable tourism transport such as lack of policy coordination between energy, transport, climate and economy sectors and investment in electric transport technologies that in addition to the absence of replicable sustainable e-mobility investment examples and low capacity and awareness. The project?s interventions aim to ensure government commitment to sustainable tourism development as tourism continues to be a vital pillar of Jordan?s economy through fiscal incentives or other policies and regulations, as well as increase key stakeholders' capacity and knowledge. Policy environment enabling e-mobility investments, enhanced institutional capacity (e.g., HFE), pipeline of investment projects and improved credit rating of PDTRA (under Output 2.1.3) as well as established network with the Global Programme will ensure the continued replication of project interventions by the national stakeholders and private sector after the project life time.

Scaling up:

The project will demonstrate the benefit of adopting sustainable transport technologies in Jordan?s tourism sector by the reducing GHG, decreasing fuel consumption, improving energy efficiency, and generating work opportunities for both women and men and thus both the local and national businesses will be boosted. This will promote economic opportunities and transport access for surrounding communities.

Under a dedicated output for scaling up (see Output 2.1.3), the project will develop strategies and pipeline to scale-up e-mobility investments in Jordan. The credit rating that will be developed for PDTRA will attract private sector investment and accelerate the scale-up of similar investments based on the knowledge generated from Petra e-bus project. The evidence-based energetic, environmental and economic data and the outcomes from the Petra e-bus project will be disseminated (under Output 2.1.2) to tackle the lack of nationally generated data on e-mobility technology interventions. This will de-risk similar investments and demonstrated environmental benefits (e.g., as GHG emissions reduction potential) will promote scaling up in the country by the other organizations and climate funds (e.g., GCF) mandated to support developing countries . Furthermore the project will identify and develop pipeline of 3-5 e-mobility and renewable energy investment projects to promote replication.

Monitoring and evaluation plan will consider sustainability of the project?s interventions. Since Petra is a UNESCO World Heritage Site and Jordan's main tourist attraction, the demonstrating a good example of e-mobility pilot will create a significant visibility to promote replication.

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[1] The World Resource Institute?s Climate Data Explorer provides data from CAIT on the breakdown of emissions by sector. In 2016, global CO2 emissions (including land use) were 36.7 billion tonnes

CO2; emissions from transport were 7.9 billion tonnes CO2. Transport therefore accounted for 7.9 / 36.7 = 21% of global emissions.

[2] Global Programme to Support Countries with the Shift to Electric Mobility, GEF, 2018 (page 28)

[3] http://dosweb.dos.gov.jo/unemp_q42020/

[4] Ministry of Environment, Jordan's Second Biennial Update Report (SBUR) to the United Nations Framework Convention on Climate Change (UNFCCC)
2020: https://unfccc.int/sites/default/files/resource/Jordan%E2%80%99s%20Second%20Biennial%20Update%20Report%20for%20web%2010-5.pdf

[5] https://gggi.org/sustainable-transport-in-jordan-gggi-makes-the-case-for-electric-brt-buses-in-amman/, accessed 20/01/2020.

[6] Aditya Khandekar1, Deepak Rajagopal, Nikit Abhyankar, Shruti Deorah, and Amol Phadke, ?The case for all new city buses in India to be electric?, Lawrence Berkeley National Laboratory, March 2018. NB while the study is based in India the analysis of fossil-fuel based charging stations is relevant for Jordan.

[7] NEPCO, National Electric Power Company, Annual Report 2019, Page 23.

[8] https://www.enefit.jo/en/project/power-plant, accessed January 11, 2020

[9] Consultation with EBRD on 26 November 2019.

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[23] See JSF report: http://jsf.org/sites/default/files/Tourism%20Sector%20in%20Jordan%20%281%29.pdf

[24] Beyond Investments Group, 2016, ?The Investor Jordan,? p. 140

[25] https://www.shamsmaan.com/page/shams-ma%E2%80%99-company-starts-generating-electricity-photovoltaic-solar-cells-which-largest

[26] EBRD Transition Report for Jordan 2018, page 4

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[28] https://www.npr.org/2020/05/06/850157824/1st-time-to-see-it-like-this-petra-tourism-workers-long-for-visitors-to-return

[29] Shbeeb, Lina (2018) "A Review of Public Transport Service in Jordan: Challenges and Opportunities," AlBalqa Journal for Research and Studies: Vol. 21: Iss. 1, Article 4. Available at: https://digitalcommons.aaru.edu.jo/albalqa/vol21/iss1/4

[30] https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2020&locations=JO&start=2000

[31] https://jeodpp.jrc.ec.europa.eu/ftp/jrc-opendata/COM-EF/dataset/coms/JRC-CoM-EF-CoMS-EF-2017.pdf

[32] Institute for Global Environmental Strategies (2021). List of Grid Emission Factors version 10.10. Available at: https://pub.iges.or.jp/pub/iges-list-grid-emission-factors

IPCC emission factor (standard) = 0.584 t CO2/MWh
LCA/WTT ef = 0.584 * 1.153 = 0.673 t CO2/MWh

[33] Ziegler, Micah C., and Jessika E. Trancik. "Re-Examining Rates of Lithium-Ion Battery Technology Improvement and Cost Decline." Energy and Environmental Science, vol. 14, no. 4, 2021, pp. 1635-1651., doi:10.1039/D0EE02681F

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1b. Project Map and Coordinates

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

The maps of the project locations and transport routes in Petra historic city are given in the body text above. The location of Petra in Jordan is given in the map in the Annex.

Coordinates of Petra: 30?19'41.5"N 35?26'40.7"E

1c. Child Project?

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

This project is hosted under the ?Global Programme to Support Countries with the Shift to Electric Mobility?, led by UNEP.

The Global Programme is based on the following four components:
•Component 1: Global thematic working groups and knowledge materials
•Component 2: Support and Investment Platforms
•Component 3: Country project implementation
Component 4: Tracking progress, monitoring and dissemination

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

Global E-mobility Programme Monitoring Framework

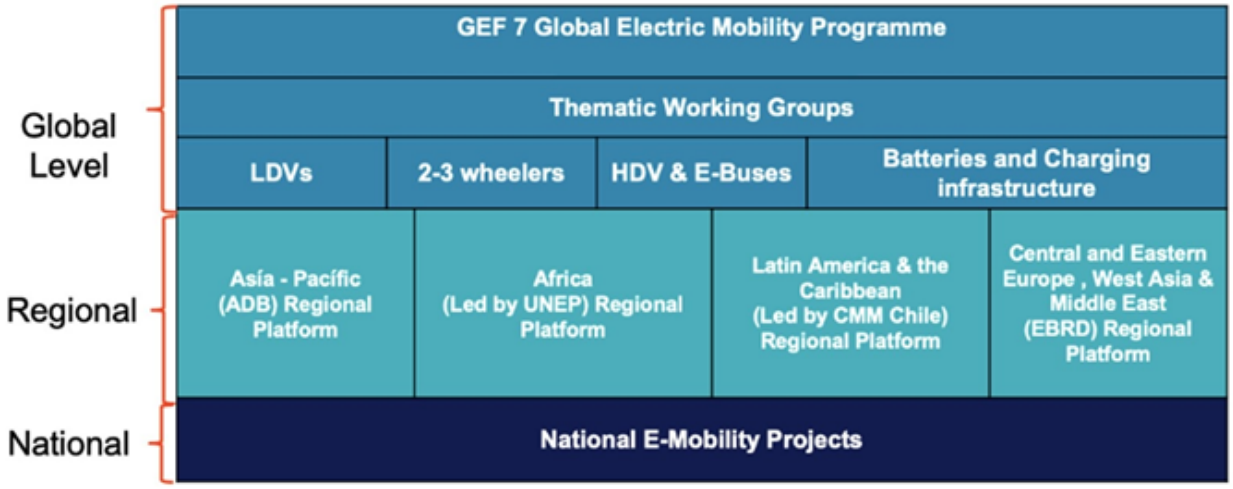
Global level monitoring | Country level monitoring

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

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

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

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



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

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

The 4 Support and Investment Platform will interact with and support participating countries in the region to link with each other through the following activities:

? The creation of a community of practice for the GEF 7 regional countries;
? Facilitation of knowledge transfer between countries, and regions, especially those with common characteristics like SIDS;

? The creation of thematic groups in light-duty vehicles (LDVs), 2-3 wheelers, and buses at regional level;
? A marketplace between countries, technology providers and financial institutions;
? Help desk for technical assistance to GEF 7 countries;
? Personalized assistance from international experts in electric mobility;
? Generation of training sessions and workshops.

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

Without the project, it can be expected that transport initiatives (e-mobility specifically) would continue to be sporadic and do not coherently push the sector towards innovation. The program?s theory of change is to address the root causes of fossil-fuel dependency in the transport sector in Jordan. One of the environmental issue is air quality, Jordan's air quality is classified as moderately unsafe (World Health Organization). The latest data indicate that the average annual Jordan concentration of PM2.5 (particulate matter particles with a diameter of less than 2.5 ?m) is 33 ug/m3, which exceeds the World Health Organization's allowable 10 ug/m3. Climate change is expected to have an impact on sustainable development, economic growth, and society; Jordan released 27 million tons of carbon dioxide equivalent (MtCO2eq) in 2011 and this represents 0.06 of the world total (46,906 MtCO2eq).[1] 73% of the emissions were generated by the energy industry, whereas transportation GHG emissions account for 26% of energy emissions and grew by 95% from 1990 and 2011.[2] Jordan's transportation sector is dominated by road transport and there is lack of railway networks. The uncontrolled movement of vehicles associated with lacks in transportation infrastructure guarantees has resulted in serious damage to wildlife in many biodiversity hotspots such as northern forests, as well as disruptions such as reduced successful reproduction and migratory bird visits to Jordan.[3]

Jordan's TTCI (Travel & Tourism Competitiveness Index) ranking reflected a dramatic drop, as it was ranked 84th out of a total of 140 economies in 2019.[4] One of Jordan's economic challenges is a deterioration of public finances since 2011, with increased energy expenditure and meeting the needs of registered Syria refugees leading to a reduction in revenue growth and a deficit increase. The deficit excluding grants was high in 2011 at 12.7% of GDP before declining to 9.7% in 2012 (World Bank, 2013). In 2017, as a result of efforts to control fiscal conditions, it declined to 2.6%. Jordan's economic growth slowed to 1.3% in the first quarter of 2020, reflecting partially the COVID-19 pandemic effect (World Bank). The private sector is the main driver for growth and employment in Jordan consisting of 70%; thus government always seeks to partner with this sector to achieve the goals of developing the economy. In 2015, there have been 1,135 million employees (75% for males and 24% for females) in the public and private sectors.[5] The Jordanian government enacted the Public-Private Partnership (PPP) Law in 2014, which serves as the exclusive legal framework for PPP projects. As a result of the COVID-19 pandemic, there was disruption in the labor market in the second quarter of 2020, leading to the high unemployment rate of 23% in 2020, up from 19.3% in the first quarter of the same year, and the labor force participation rate falling by 0.4% during the same period.[6] A successful PPP tourism transport project would have the desired environmental benefits whilst creating jobs and improving the economic conditions of the Petra local community through job creation and other commercial activities.

Weak policy coordination between the relevant ministries (energy, transport, environment, and tourism) has lead each party to take individual paths, which is one of the most significant root causes of the previously described problems in Jordan. The lack of an e-mobility pipeline of projects or programs is also due to the inconsistent planning and application of incentives; the energy crisis has had a significant impact on the country's public debt. The debt increased from 60% of the GDP in 2009 to more than 80% of the GDP in 2018.[7] Lack of public transport services in rural and urban

communities makes the time coverage of service low and usually does not exceed two trips per day (morning and evening trips).[8] This situation is caused by a lack of interest in private or public sector investment in the sector, which is seen as a low-return investment because the government does not provide the required incentives, exemptions, or support.

The project will highlight the technical and economic viability of e-mobility infrastructure. The implementation of such e-mobility technologies in Jordan's tourism sector, as well as their replication in other tourist destinations, would boost visitor accessibility while also alleviating urbanization pressures and generating major benefits such as employment opportunities and expanded access to services. PDTRA has welcomed introducing e-buses to carry visitors from the archaeological park to the cultural village in the Little Petra area, and then to hotels or the tourist bus station.[9]

Engagement with the Global / Regional Framework

The project will contribute to several indicators of the Global Programme namely; Indicator A (GHG emission mitigation), Indicator C (direct beneficiaries), Indicator 2.1, 3.1, 3.2, 3.3 and 4.1 (see the Monitoring Framework under the section 1c. Child Project).

The urban transportation project draws directly from the suite of activities presented under the global programme and the Regional Support and Investment Platforms, and is synchronized with its theory of change. As a such, it will promote broad use of e-buses in Petra/Southern Jordan, where our pilot project's target market is tourism because of the importance of this sector to Jordan, the high feasibility, and financial power and revenue streaming of that sector as Jordan's tourism sector was accounted for about 12.5% of GDP. The project aims to support the PDTRA with the design and pre-feasibility analysis of an electric bus investment and operations plan for a new transport route for tourists visiting the Petra UNESCO World Heritage Site. This project will reinforce current initiatives in and around Petra and enhance awareness of the possibility of planning and implementing e-mobility projects supported by both the public and private sectors. The project will complement existing policy initiatives and e-mobility baseline projects supported by both the public and private sectors (e.g., the installation of e-chargers by Hyundai Company).

The project will facilitate replication to support the shift to e-mobility in coordination with the public and private sectors. The scale-up plan for Petra project was arranged into two main stages, namely, inception phase and the assessment and reporting phase and during the inception process, preliminary project scoping and conceptualization will be performed to ensure a knowledgeable evaluation process and control the number of alternatives and solutions pursued further in the feasibility assessment. The public-private dialogue developed is intended to entice the private sector to invest in the sustainable transport and tourism sector and finance the e-charging facilities required for the three planned tourism routes.

The project will give particular attention to regional and global collaboration and inter-ministerial integration, as well as an environmental assessment and feasibility study of sustainable tourism transportation in Jordan then expanding Petra/Southern Jordan's e-mobility plans and investing in this aspect (component 2).

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[1] World Resources Institute Climate Analysis Indicators Tool (WRI CAIT) 2.0, 2016. WRI CAIT data are available for Jordan for 2012, however the 2012 data exclude emissions from the IP sector. This fact sheet uses 2011 data to present a more complete overview of economy-wide emissions.

[2] WRI CAIT 2.0, 2016.

[3] Ministry of Environment, The National Biodiversity Strategy and Action Plan 2015 ? 2020.

[4] World Economic Forum, Travel and Tourism Competitiveness Report, 2019

[5] http://www.jordantimes.com/news/local/number-public-private-employees-reaches-1135m%E2%80%99

[6] https://www.worldbank.org/en/country/jordan/overview

[7] https://www.jordantimes.com/news/local/impact-energy-crisis-most-evident-rising-public-debt-%E2%80%94-report

[8] Lina Shbeeb, A Review of Public Transport Service in Jordan: Challenges and Opportunities, Al-Balqa Journal of Research and Studies, Volume 21(1), 2018.

[9] MoE ?Tourism Sector Green Growth National Action Plan 2021-2025? 2020. Jordan.

2. Stakeholders

Please provide the Stakeholder Engagement Plan or equivalent assessment.

Stakeholder Engagement Plan is provided in the annexes.

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 main governance institutions overseeing the sector are the Ministry of Environment, the Ministry of Transport, the Ministry of Energy and Resource Conservation. Municipal agencies such as the Greater Amman Municipality will also need to be critically engaged. Jordan has some national capacity and technical expertise on transport within its universities, civil society organizations and think-tanks. International agencies and development banks are also working on transport issues. The following table provides an indication of the range of stakeholders that will participate in the project.

Stakeholders and their roles and responsibilities in the project

Stakeholder		Roles and Responsibilities
Lead Executing Entity	Global Green Growth Institute (GGGI)	GGGI is the Lead Executing Entity, selected based on its demonstrated collaboration with the Ministry of Environment and the Ministry of Transport to support the implementation of transport projects in Jordan, and in the provision of policy recommendations (e.g., on tax and subsidies). The Lead Executing Entity will be responsible for executing all the activities under Component 1, 2 and 3 as well as day-to-day management and monitoring of project?s interventions. It will also provide data and support to Monitoring and Evaluation (Component 4).
Government Partner Agency	Ministry of Transport (MoT)	MoT is the primary policy-making organ on transport-related issues. Its role in the project will be programming and promoting tourism-transport dialogues (Component 1.2). The MOT will assist in the identification applicability of EVs technologies, challenges, opportunities, benefits and costs for associated with e-buses and cars in Jordan.

Government Partner Agency	Ministry of Tourism and Antiquities (MOTA)	MOTA will be consulted with MOT and MOF on the project design to estimate one market assessment for tourism-related transport, define laws and legislation that restrict investment in infrastructure that is environmentally friendly and socially inclusive, prepare a study detailing short-medium term policy investment and goals, as well as lessons learned from tourism-related transportation firms that can be used to extend local mass transit between cities, Partnership with the MOF and the MOT to present and analyze one set of investment proposals that can be submitted by the private sector (Component 2.1.3).
Government Partner Agency	Ministry of Energy and Mineral Resources (MEMR)	It is responsible for communication, and donor coordination with national inter-ministerial committee on e-mobility. (Component 1); will closely coordinate with MOT, MoENV, MOTA, and other key stakeholders.
Government Partner Agency	Ministry of Finance (MOF)	The Ministry of Finance is one of the decision makers in establishing any fiscal and financial long-term incentives for investments. Components 1.2 and 3.2 will align closely with their priorities
Government Partner Agency	Ministry of Environment, Climate Change Department and Green Economy Unit (MoENV)	The Green Economy Unit hosts the HFE and serves as the Co-Chair to the HFE. It is directly involved in the activities described under Component 1.1
Partner Agency	Petra Development & Tourism Region Authority (PDTRA)	PDTRA is responsible for stimulating investments, developing tourism, managing and protecting the Petra Archeological Park, and sustainable development across the region. PDTRA is a key partner in particular on implementation of Petra e-Bus pilot pipeline project. The project will provide technical capacity building, mentoring and consulting and support project design and detailed feasibility studies for the Petra E-bus (Component 2.2).
Financing Agency	IFC (International Finance Corporation)	The IFC can provide sub-sovereign debt financing, equity investment in a public-private partnership, and/or related advisory services
Partner in PPP Project	Private sector Tourism Transport Companies represented by the Jordan Tourism Transport Association (JTTA)	JTTA will represent tourism and transport private sector companies in project meetings and will contribute to consultations on Joint public-private roadmap (Output 1.1.2), EV technology pipeline investments and relevant policies.

Associations and national agencies promoting gender equality and women?s empowerment, Gender Focal Points and Gender Experts	e.g.: SADAQA: women?s economic rights organization in Jordan JNCW: The Jordanian National Commission for Women IMC: Inter-Ministerial Committee on Women?s Empowerment and Parliamentary Committee on Women & Family Affairs	Relevant women entrepreneurs, gender experts, associations that promote gender equality and empowerment of women (GEEW) and gender focal points will be involved in all activities of the project. The project will deliberately mobilize interest from women by targeting the involvement of their associations in the project process. This will be done by taking into consideration the cultural context that exists in Jordan. That way, the project would adequately address the gender imbalances and provide a solid basis for gender mainstreaming in e-mobility technology innovations
Potential financing partner	Jordan Renewable Energy & Energy Efficiency Fund (JREEEF)	JREEEF provides financial resources and technical assistance to energy users and renewable energy and energy efficiency project developers to facilitate the deployment of RE and EE technologies, reduce associated risks, expand market potential, and leverage existing resources. The project will conduct further consultations with JREEEF with aim to mobilize additional funds to the Petra e-bus project.

Select what role civil society will play in the project:

Consulted only; Yes

Member of Advisory Body; Contractor;

Co-financier;

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

Executor or co-executor;

Other (Please explain)

The project will engage with NGOs working on women and youth empowerment and local civil society through consultation meetings to assess and mitigate any emerging social and environmental risks related to the Petra e-bus project. Furthermore, the project will consult with the civil society representatives in relation to policy-related activities under the Component 1.

3. Gender Equality and Women's Empowerment

Provide the gender analysis or equivalent socio-economic assesment.

Gender mainstreaming will be based on GEF's Policy on Gender Mainstreaming, UNIDO Policy on Gender Equality and the Empowerment of Women (2019) and the UNIDO Strategy for Gender Equality and the Empowerment of Women, 2020-2023 as well as the Guide on Gender Mainstreaming Environmental Management Projects.

UNIDO recognizes that gender equality and the empowerment of women have a significant positive impact on sustained economic growth and inclusive development of sustainable transport, key drivers of poverty alleviation and social progress.

As a guiding principle, the project is designed to ensure both women and men are provided equal opportunities to lead, participate and benefit from the project. In practical terms, this will be demonstrated in a multitude of ways:

? Based on the General-Neutral ToRs, gender sensitive recruitment will be practiced at all levels where possible, especially in the selection of project staff and experts, as well as technical staff. Gender sensitive recruitment will be encouraged in instances where the project does not have direct influence.
? Research, data collection and technical assessments (e.g., to Petra e-bus project) will consider gender and age differentiated needs of women and men from different social groups in public transport Existing staff will be trained and their awareness raised on gender issues when possible.
? Gender dimensions will be considered in all decision-making processes. With respect to project management, the HFE will have a gender focal point and the meetings will aim to be gender balanced and extend invitations to observers that represent gender dimensions, such as organizations / associations promoting gender equality and advocating women?s empowerment. During project activity implementation, effort will be given during stakeholder consultations towards focusing on gender equality and women?s empowerment issues, in particular during policy review and formulation.
? Gender dimensions will be considered when data collections or assessments are conducted as part of project implementation. Examples include sex-disaggregated data collection and performing gender analysis as part of Environmental and Social Management Plan.
? The project will ensure that location and time are suitable for women to participate all the trainings.

The planned project outcomes will be enhanced by considering gender equality and women?s empowerment by adopting a gender lens at high-level decision-making bodies and forums, and within planning and developments relating to sustainable transport. A component-by-component description is provided:

Component 1: The focus of this component is on developing the evidence base for reforms in the tourism transport and broader e-mobility sector in a participatory manner that will build the capacity of government stakeholders and local experts. The gender and youth participatory approach will also increase ownership of the e-mobility agenda, improving the longer-term institutional capacity to manage further reforms. The policy activities under this component will include gender mainstreaming consideration. The project will assess a gender focal point person among the members of the HFE.

Component 2: The focus of this component is the successful implementation of a demonstration-scale pilot project for e-mobility. The project will consult with the women associations and local community during the design of the Petra e-Bus pilot pipeline project to integrate the needs of women and youth into project design.

Component 3: The training activities under this component have women participation targets.

A gender analysis has been conducted during the PPG phase that can be seen in the Annex G. Research has demonstrated that women public transport passengers are more susceptible to negative impacts of inadequate mobility choices as well as low public transport service levels and safety.[1] The gender

context and relevance of the project integrated into the final project design and it covers the different implications for women and men. It involves the identification of the differentiated needs (e.g., safety) and roles of women and men particularly related to the Petra e-bus project and policy interventions. The project log frame is gender mainstreamed.

To establish a baseline and develop targets, basic relevant data and qualitative information collected during PPG phase and gender indicators at the output level have been incorporated in the project design. The project will track gender indicators throughout the project implementation. During project implementation the project will continue identifying and addressing gender issues, including collecting additional baseline data and monitoring progress towards the targets.

Please find attached the Annex "Gender Analysis and Action Plan".

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[1] Ibid.

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

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

Yes

4. Private sector engagement

Elaborate on private sector engagement in the project, if any

The private sector will directly benefit from all project components, and will be directly engaged as part of the activities under Components 2 and 3. The project will engage with private sector representatives to collect their input on how best to implement the strategies and policies involving private investment (e.g., Output 1.1.2 and Output 1.1.3). The private sector will also be represented through participation of interested relevant companies and/or associations (e.g., JTTA) in stakeholder meetings.

One of the key objectives of UNIDO?s strategy in cities is to address the urgent need for subnational entities such as PDTRA to crowd in private investments. A precondition to enable PDTRA to access domestic/international capital markets is the obtainment of investment grade creditworthiness. Currently, only 4% of the largest cities in developing countries are creditworthy, which means that access to financing is the fundamental problem hindering sustainable development. Strengthening PDTRA?s creditworthiness and building its capacity to pursue commercial-based financing can have far reaching effects on its ability to attract investments and partner with the private sector.

As part of its project preparation, UNIDO assisted PDTRA with a creditworthiness workshop and a preliminary financial assessment. Building on this, the project will provide technical assistance to strengthen PDTRA?s preparedness to attract private investments. In particular, UNIDO will offer extensive assistance to build PDTRA officials? capacity to develop, manage, and supervise public-private partnerships. This includes a pipeline assessment to scope out financing options on related projects, identify revenue streams, pool projects together, etc. Finally, to provide investors with an objective measure of PDTRA?s financial credibility, UNIDO will also produce a credit rating on the national scale.

With the approach above, UNIDO is determined to crowd in private investments for PDTRA. The co-financing availability from the International Finance Corporation (IFC) validates UNIDO?s preliminary assessment and private sector development strategy. Beyond the immediate benefits for PDTRA?s e-mobility project, the technical assistance components will also enable opportunities for private participation across the full spectrum of PDTRA?s infrastructure projects. If successful, innovative financing mechanisms to be identified for PDTRA will validate commercial-based solutions (from land-value capture to pooled/hybrid financing) that could serve other municipalities in Jordan as well.

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: Risks and Mitigation Measures

Risks	Risk Level	Risk description	Mitigation Measures
Political and institutional risk	Low	This risk entails lack of sufficient support and engagement from the relevant ministries and institutions.	Component 1 of the project includes extensive engagement with the relevant institutions at national, city and local levels. The risk of leadership changes during the course of the project is a possibility against which the project cannot hold influence. For this reason; Components 2-3 are designed to be unaffected by leadership change given their focus on private-sector engagement. For this reason, overall project risk is low, although political/institutional risk for Component 1 could be higher. The capacities of government and local authorities will be increased through trainings and workshops to implement sustainable policies and programs on clean energy and low-carbon mobility. The content of these workshops will include social and environmental aspects.

Operational risk	Medium	Delays in the proposed improvements to institutional and regulatory framework by public institutions.	This risk is considered medium since the scale-up of infrastructure and e-HOV investments, (e.g., Components 2 and 3) depend on a clear regulatory framework that can take significant time to develop and implement due to national approval processes. The project team will work in close collaboration with the PDTRA and other national stakeholder and put forward implementation plan including milestones for Petra e-bus project and monitor the progress closely to assess the possible delays in advance and provide recommendations on action points to speed up the processes (e.g., on procurement modalities). The risk will be mitigated by identifying and engaging external consultants through the project to develop draft policies which can be quickly adopted by the government. Multiple experts have been identified in the pre-project design phase who have demonstrated expertise in transportation strategy and technical issues. It is expected that these experts will be engaged under Component 4 in order to help advance discussions on an overall e-mobility policy for the HFE.

Climate change risks - Infrastructure developed is vulnerable to climate risks.	Medium	The high-risk climate hazards in Jordan include; river flood, landslide, water scarcity, extreme heat, and wildfire. These hazards are increasing in frequency and intensity year by year due to climate change. Flooding has caused serious implications in the last years where lives have been lost, and several square kilometers of agricultural lands were destroyed in addition to the sever damages to infrastructure. Landslides and erosion problems have occurred as well, and they were concentrated on the steep slopes of mountains and wadis. The impact of climate change will certainly affects many sectors including agricultural, coastal, biodiversity, urban, society, water, and health sectors.([1] NAP, 2021) All models predict a warmer climate with strong confidence e to increase in temperature. In 2070-2100, average temperature increase could reach +2.1?C [+1.7 to +3.1?C] under the RCP 4.5 scenario, and +4?C [3.8-5.1?C] under RCP 8.5. Figures below present the results for the mean, minimum and maximum annual temperature, for the three time horizons considered and under RCP 4.5 and 8.5 scenarios. In addition, the dynamic projections predict a drier climate with medium confidence. In 2070-2100, the cumulated precipitation could decrease by 15% [-6% to -25%] using RCP 4.5 scenario and by ? 21% [-9% to -35%] under RCP 8.5. The decrease would be more marked in the western part of the country where the project activities will take place (NAP, 2021). The semi-arid/arid climate of	The risks will be mitigated related to charging infrastructure by ensuring that this infrastructure meets current international standards (see Component 2) and ? where applicable ? contracting will also include a clause on resilience to climate impacts. Project planning decisions, project design, and construction methods will take into account of the on-site implications of these climate hazards. The risks associated with climate change include extreme weather conditions will be addressed by ensuring that any infrastructure investment supported by the project is climate-proofed.

Financial risk	Low	The successful long-term operation of the e-HOV financing facility will rely on reflows. Given the nature of energy efficiency initiatives, it is expected that the eHOVs will ?pay for themselves,? which de-risks the financial investment to some extent.	In order to mitigate the risk of default, the project will select an international financial institution with an AAA risk rating that has demonstrated capacity to perform due diligence on the loans.
Environmental and social risk	Low	The use of any type of HOV (conventional or electric) may include environmental and social risks.	Component 4 seeks to address these risks directly through the provision of recommendations on clarifying HOV licensing and requirements, in addition to addressing the need for predictable bus routes. Consultation from vulnerable groups (women, refugees, the disabled, poor and elderly) will be sought when preparing policy recommendations under Component 4. Similar consultations will be held on the placement of e-chargers, and findings from the consultations will be integrated into the RFP (for example, the need for adequate lighting at the e-charging station).
Technology risk	Low	The introduction of new technologies carries a risk that they may not be suitable for the location and use intended.	The project will draw upon UNIDO?s experience and the knowledge from Global programme on the suitability of e-mobility for specific cities within Jordan, and has designed the project for short-haul, intra-urban usage of e-mobility in recognition of the steep hills and extreme temperatures characteristic of the region.

Operational risk	Low	Low interest to participate and engage project activities (from private sector, stakeholders from the government and municipalities) including political factors at the macro level	Project success depends on active participation and investment from the private sector. The project will have early engagement strategy, regular outreach with networks to keep the momentum. The project team will disseminate the knowledge to ensure scalability of project beyond Petra. During the project preparation phase, consultations with eCharge company and other e-charging installation service providers will be conducted to gather lessons learned and to identify cities beyond Amman with the greatest unmet demand for e-mobility services. The project preparation grant will also be utilized to follow up on initial interest from car-share companies, mini-bus services and school shuttles in order to identify an investment pipeline under Component 2. Based on the demonstrated willingness of the Jordanian private sector to adopt and utilize e-vehicles, the risk of low participation from the private sector is considered low.

Social/Operational risk	Low	Low representation from women in positions of power and influence on the transport policy; inadequate engagement from women or missing qualified female technicians from the engineering sector.	This risk will be mitigated through specifically targeting women involved in the sector for participation in consultations on policy improvements under Component 4, and for safety and other considerations under Component 2. It may also be noted that the current leads for multiple institutions slated for HFE engagement under Component 1 are currently women. Female transportation engineering experts have been identified at the University of Jordan and other research institutions, and they will be actively requested to recommend additional colleagues as needed ? thereby lessening the chances of invisibility amongst qualified female technicians. Disaggregated data on gender participation will be collected at all HFE meetings and other events related to the project, and targeted invitations will be made for enhanced female participation as needed. To ensure gender inclusiveness of all project activities, UNIDO methodology for gender assessment and gender responsive communication showing the benefits of gender equality for both women and men will be applied. To mainstream gender dimensions and empower women, adequate and gender responsive communication strategy will be implemented, and sensitization workshops will be organized. A full gender analysis was carried out and its recommendations were incorporated into the project design.
COVID-19 Risk and Opportunities	Medium	Risks The number of visitors to Petra in 2020 decreased to	The tourism sector will stay as one of most vulnerable sectors to COVID-19 due to the risk of travel restrictions.

			252,728 due to the restrictions imposed to contain the Covid-19 crisis. The city was closed in March 2020. The pandemic hit the Jordanian tourism sector, which was contributing between 12% to 14% of the GDP, and tourism income decreased from 5.8 billion dollars in 2019 to one billion in 2020, according to official figures.[2] Due to the pandemic lockdowns, all public transport services were stopped for about than 3 months. The Land Transport Regulatory Authority later resumed operations in July 2020 but dropped capacity to 50%; however, in April 2021 the capacity was increased to 75%. Starting July 1st 2021, full capacity of operation will return as the second phase of the government's plan to reopen all sectors enters into force. Opportunities: The project will potentially benefit from the government?s COVID-19 financial recovery package for the tourism sector, as well as the public and private investment in e-mobility. The total government package to support the tourism sector post COVID-19 in direct and indirect cash flow amounts to 268 million USD (JD). The package includes facilitating low-interest loans worth 150 million JD from the Central Bank Advance Program with guarantees from the Jordanian Loan Guarantee Company. The loan periods could be up to 42 months, including a grace period of 12 months, where the government bears 2% of the interest on these loans throughout the loan period. As for the remaining 40 million JD, they constitute the ?Tourism Risk Fund?	During the project will monitor and fully implement safety measures and preventive and precautionary procedures following national and WHO recommendations (e.g., mask use, vaccination, working from home). COVID-19's possible impacts on the project?s implementation and interventions can arise additional challenges that will be pinned in the project schedule to accommodate to the prolongation of activities implementation and mobilization challenges during the pandemic period.

Please see ESMP for further details on the baseline and mitigation plan of environmental and social risks.

[1] The National Climate Change Adaptation Plan of Jordan, Final Draft, 2021

[2] https://arabic.euronews.com/2021/06/10/jordan-s-donkeys-suffer-as-coronavirus-cripples-tourism

[3] https://petra.gov.jo/Include/InnerPage.jsp?ID=35478&lang=en&name=en_news

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.

Institutional Arrangement

As the GEF implementing partner agency, UNIDO is responsible for the implementation of the project, providing overall administrative management and ensuring that the project is being carried out in accordance with GEF standards and requirements. The Project Executing Entity (PEE) is the Global Green Growth Institute (GGGI) that has an office representation in Jordan. GGGI was considered as the most strategic partner for this project?s execution given that it is a global entity with strong country-level presence.
During the PPG-phase, UNIDO has conducted capacity assessment for GGGI based on the HACT (Harmonized Approach to Cash Transfers) methodology and found that the institute has sufficient capacity to execute the project activities. HACT establish common principles and process for managing cash transfers among UN agencies that have adopted the approach across all countries and operational contexts.

The GGGI will have a contractual agreement with UNIDO to execute all the project activities and related services under the Component 1, 2 and 3 and day-to-day monitoring activities under the Component 4. As to the activities related to Mid-term Review and Terminal Evaluation under the Component 4, UNIDO will be the responsible entity. Terms of Reference (ToR) for the Project Execution Agreement between GGGI and UNIDO is drafted during the PPG phase. The contractual arrangement will specify the exact deliverables expected from the PEE.

The project management unit (PMU) will consist of project coordinator, project assistance and technical experts, where required, will be formed by the PEE.

The Project Steering Committee (PSC) will consist of the Ministries involve in decision making in the field of transport, energy, environment, tourism, finance and planning as well as UNIDO as the GEF partner agency. The PSC will be chaired by the Ministry of Environment (indicatively). The PEE will report directly to the PSC. The PSC will provide advisory instructions and guidance to the PEE and make decisions on the execution of the project activities whenever required to ensure the execution goes in line with the project's priorities and national context. The PSC will be the decision making body if and when major amendments to the project required throughout the project. Institutional arrangements are showned in the scheme below.

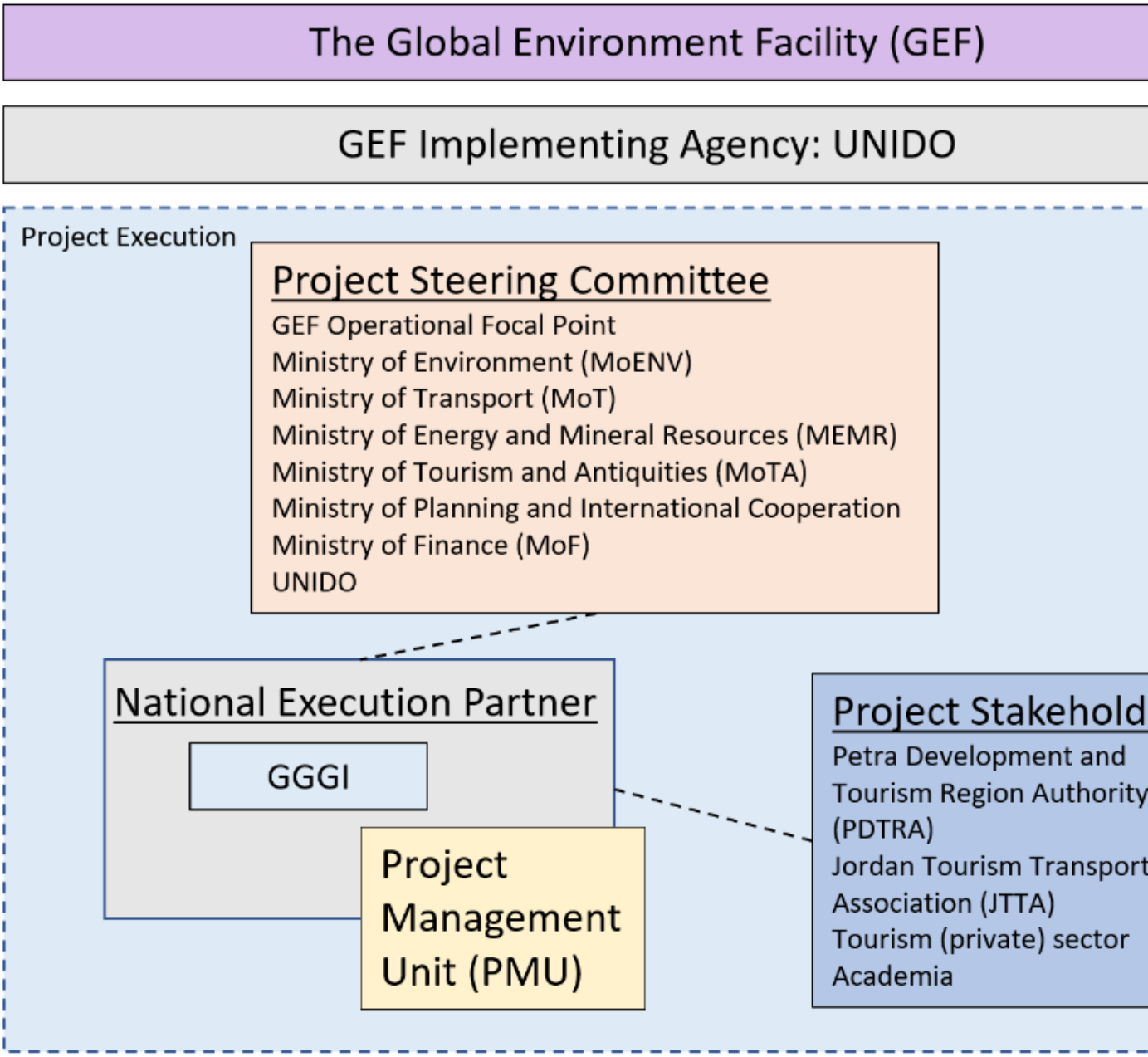

Figure 13: Institutional arrangements and flow of funds

Coordination

The project will collaborate with ongoing GEF and other international projects in Jordan in particular in development projects in Petra.

No.	Project/Programme title	Budget	Source of funding	Year	Agency(ies)

No.	Project/Programme title	Budget	Source of funding	Year	Agency(ies)
1	GCF Readiness Program for Jordan	N/A	The project benefit from the prefeasibility study of the Petra e-bus project developed under the GCF readiness activities in Jordan. The Petra e-bus pilot project will be built on the outcomes of the pre-feasibility on the viability and technical feasibility of operating e-buses in Petra.	2021	GCF
2	Bus Rapid Transit (BRT)[1]	USD 166 million	AFD	2020[2]	General Amman Municipality (GAM)
3	Electric Vehicles (EVs) charging facilities to be installed in new gas stations[3]	N/A	N/A	2018	The Energy and Minerals Regulatory Commission (EMRC)
4	44 active portfolio projects/investments including transport, municipal infrastructure, EE, RE[4] BRT bus electrification project is being considered for phase 2 of the BRT infrastructure project Incorporate e-buses in the new planned fleet of 100 buses are for Irbid (59) and Zarqa (41) Pilot project of 15 battery electric buses ("BEB") planned for the Amman Bus project by GAM[5]	Cumulative EUR 1,080 million	EBRD	2019	European Bank for Reconstruction and Development (EBRD)

No.	Project/Programme title	Budget	Source of funding	Year	Agency(ies)
5	Green Cities Facility[6]	USD 590 million	EBRD / GCF / SIDA	2019	Green Climate Fund (GCF) ? Implementing agency: EBRD
6	Scaling Up Renewable Energy Financing Facility[7]	EUR 380 million	EBRD/NAMA Facility	2019	NAMA Facility (Implementing agency: EBRD)
7	Solar Energy Bus Fleet Pilot in Southern Governorates[8]	N/A	EBRD	N/A	Land Transport Regulatory Commission
8	QUDRA Programme[9]	EUR 82.4 million	EU and BMZ	Since 2016	GIZ, Expertise France, Spanish Agency for International Development (AECID) and Hungarian Interchurch Aid (HIA)
9	Jordan Competitiveness Programme[10]	USD 50 million	USAID	2013 - 2019	USAID (Implementing agency: DAI Global LLC)
10	Installation of 10,000 smart electric vehicles charging stations[11]	Undisclosed	Undisclosed	2019	eCharge (German-based private company)
11	Climate Finance Accreditation Support[12]	EUR 0.9 million	N/A	2019	Cities and Villages Development Bank (Accreditation support provided by GGGI)
12	Upgrade of the Desert Highway (220km from the QAIA to Mreigha-Ras Al Naqab)	USD 170 million	International Cooperation and the Saudi Fund for Development (SFD)	2017	Ministry of Planning and International Cooperatio
13	Job creation for youth and women through improvement of business environment and SMEs competitiveness	EUR 2.5 million	Italy	2017	UNIDO in collaboration with Ministry of Industry, Trade and Supply of Jordan
14	IFC-GEF Hotel Green Revitalization Program (HGRP)	EUR 9.1 million (grant)	GEF	2021	IFC with financial institutions

Transfer of Assets

Full or partial ownership of equipment/assets purchased under the project may be transferred to national counterparts and/or project beneficiaries during the project implementation as deemed appropriate by the government counterpart in consultation with the UNIDO Project Manager.

Legal Context

The Hashemite Kingdom of Jordan agrees to apply to the present project, mutatis mutandis, the provisions of the Standard Basic Assistance Agreement between the United Nations Development Programme and the Government, signed and entered into force on 12 January 1976.

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[1] Project Information page. Accessed 14/01/2020 at: https://www.afd.fr/en/actualites/amman-new-bus-network-reduce-street-congestion

[2] Feasibility study on e-buses for the BRT by the GGGI (unpublished).

[3] Jordan Times (2018) ?Electric vehicle charging service mandatory for all new gas stations? published 19/06/2019. Accessed 14/01/2020 at: http://www.jordantimes.com/news/local/electric-vehicle-charging-service-mandatory-all-new-gas-stations

[4] EBRD in Jordan. Accessed 15/01/2020 at https://www.ebrd.com/jordan-data.html

[5] https://www.ebrd.com/work-with-us/projects/psd/52505.html

[6] Project FP086 Information page. Accessed 15/01/2020 at: https://www.greenclimate.fund/projects/FP086

[7] Project Information Page. Accessed 15/01/2020 at https://www.nama-facility.org/projects/jordan-scaling-up-renewable-energy-financing-facility/

[8] Notes from Marshall Brown, Senior Officer, Jordan Program at Global Green Growth Institute, 19/11/2019.

[9] QUDRA General Factsheet. Accessed 14/01/2020 at: https://www.qudra-programme.org/fileadmin/Editorial/en/PDF/Qudra_General_Factsheet_EN.pdf

[10] USAID Jordan Competitiveness Program Factsheet. Accessed 14/01/2020 at: https://www.usaid.gov/sites/default/files/documents/1883/2019_2_JCP_Fact_Sheet_Feb_2019.pdf

[11] Jordan Times (2018) ?10,000 electric car charging stations to be built in Jordan?, published 14/03/2018. Accessed 14/01/2020 at: https://www.jordantimes.com/news/local/10000-electric-car-charging-stations-be-built-jordan%E2%80%99

[12] News article (2019) ?Ministry of Environment and Global Green Growth Institute Select Cities and Villages Development Bank to be Green Climate Fund Direct Access Entity Candidate for Jordan?, published 18/07/2019. Accessed 14/01/2020 at: https://gggi.org/ministry-of-environment-and-global-green-growth-institute-select-cities-and-villages-development-bank-to-be-green-climate-fund-direct-access-entity-candidate-for-jordan/

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.

The project is consistent with the national strategies, plans and assessments given in the table below:

National Strategy or Plan	Project?s contribution and relevance to priorities and objectives
Updated Master Strategy of Energy Sector in Jordan for the period (2007-2020); 2016, MEMR [1]	o Reduce dependence on oil imports o Improve energy use efficiency in the transport sector by rationalizing fuel use and reducing customs duties and sales tax and other fees on vehicles with small engines or hybrid vehicles. o Promotion of replacement of old vehicles by modern ones in light of the Cabinet?s resolution regarding exemptions granted to public buses so that these apply to private vehicles o Creation of mechanisms to encourage people to use public transport modes
The National Climate Change Policy of the Hashemite Kingdom of Jordan 2013 ? 2020 ? Sector Strategic Guidance Framework (2013), MoE [2]	o Contributes to increase the insight and knowledge on the impact on GHG emissions of the introduction of low-carbon energy efficiency technologies, as well as on the feasibility and cost-effectiveness of these measures from a mitigation perspective through research o Contributes to the integration the climate change perspective in transport strategies and action plans by assessing and reporting the impact on GHG emissions of the proposed and adopted energy strategies and actions, and includes these data into the strategy and action plan documents o Facilitates the revision of the Transport strategy o Develop and strengthen local capacities in specific areas such as improvement of transport efficiency, assessment of different transport modes and application of transport mitigation technologies o Improve the enabling environment for energy efficient transport technologies including hybrid cars o Improve statistics including trends analysis and projects on transport activity data, emission factors and emissions
Jordan 2025: A National Vision and Strategy[3], 2014	o Fostering PPPs o Capacity building to government institutions o Contribution to sustainable economic growth and increased private sector involvement o Provision of an effective and sustainable transport system that will position Jordan as a competitive regional hub o Improving the citizens? standards of living by facilitating transportation modes and reducing air pollution
Jordan Economic Growth Plan 2018-2022[4]	

National Green Growth Plan for Jordan[5], 2017	o Addresses electricity/transport infrastructure deficiencies o Addresses inadequate legislation and enforcement that enables green growth o Improves ministry?s accountability, coordination and technical capacity o Improves knowledge transfer and communication between the public and private sector o Contributes to the increase in public transport infrastructure to achieve 1.25 buses per 1,000 people in 2025 o Policy review and integration of EE and Climate Change concerns
Intended Nationally Determined Contribution (INDC) of Jordan, 2015[6]	o Contributes to GHG reduction outcome target of 1.5% by 2030 compared to BAU o Contributes to conditional outcome target to reduce Jordan?s GHG emissions by at least 12.5% by 2030 o Contributes to rationalization of energy consumption o Contributes to the introduction of Zero Emission Electric Vehicles (ZEV) and deployment of 3,000 charging stations and support of 10,000 ZEVs by the private sector o Contributes to increasing the total number of commuters using public transport to 25% of total number of commuters o Reduces fuel consumption in ton/day o Increasing transport sector rideability through adopting and implementing policies related to fleet characteristics to enhance efficiency and reduce emissions thus yielding positive effect on energy consumptions and reducing CO2 and other greenhouse gases emissions
National Energy Efficiency Action Plan (NEEAP), 2013[7]	o Reduce end use electricity consumption o Supports Green investment through policy advocacy and favorable incentives o Raising awareness of energy efficiency

The Transport Sector National Green Growth Action Plan (2021-2025) highlights the need to develop a public-private dialogue and roadmap for improving road transport services linked to the tourism sector (Action number 6).

In addition, the project comply with the international conventions listed below:

- ? National Action Plan for Adaptation (NAPA) under LDCF/UNFCCC
- ? National Action Program (NAP) under UNCCD
- ? ASGM NAP (Artisanal and Small-scale Gold Mining) under Mercury
- ? Minamata Initial Assessment (MIA) under Minamata Convention
- ? National Biodiversity Strategies and Action Plan (NBSAP) under UNCBD
- ? National Communications (NC) under UNFCCC
- ? Technology Needs Assessment (TNA) under UNFCCC
- ? National Capacity Self-Assessment (NCSA) under UNCBD, UNFCCC, UNCCD
- ? National Implementation Plan (NIP) under POPs

? Poverty Reduction Strategy Paper (PRSP)

? National Portfolio Formulation Exercise (NPFE) under GEFSEC

? Biennial Update Report (BUR) under UNFCCC

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[1] http://eis.memr.gov.jo/index.php/ar/librarys-ar/policy-ar/283-energy-strategy

[2] https://globalnaps.org/wp-content/uploads/2018/08/climate-change-policy-of-jordan.pdf

[3] http://www.nationalplanningcycles.org/sites/default/files/planning_cycle_repository/jordan/jo2025part1.pdf

[4] http://extwprlegs1.fao.org/docs/pdf/jor170691.pdf

[5] Ministry of Environment (2017), A National Green Growth Plan for Jordan, Amman, Hashemite Kingdom of Jordan: https://www.greengrowthknowledge.org/sites/default/files/A%20National%20Green%20Growth%20Plan%20for%20Jordan.pdf

[6] https://www4.unfccc.int/sites/submissions/INDC/Published%20Documents/Jordan/1/Jordan%20INDCs%20Final.pdf

[7] https://www.rcreee.org/sites/default/files/plans_neeap_jordan_2013_en.pdf

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.

The knowledge management of the project will be conducted in close collaboration with the Global Programme to Support Countries with the Shift to Electric Mobility. The Global Programme will generate knowledge products to support policy making and investment decision-making through global thematic working groups. The project team will benefit from these knowledge products in executing its activities such as policy drafts under Component 1 and technical assistance under Component 2.

The knowledge generated by the project will be disseminated with the Support and Investment Platforms Central and Eastern Europe, West Asia and the Middle East.

A knowledge management strategy and plan will be developed to coordinate the gathering and distribution of all data, information and lessons learnt during project implementation. Knowledge management will be a key approach of the project and the knowledge management strategy will aim to disseminate the results and lessons of the technology demonstration activities to be carried out under Component 2 to the largest possible audience on a regional and global level.

The establishment of a feedback and dissemination mechanism for capturing knowledge and results generated by the project will enable the systematic gathering of information to be disseminated to relevant

stakeholders, such as development partners, national ministries and entities, academic institutions, the private sector etc. Identified stakeholders will be presented with case studies and brochures showcasing lessons learnt and best practices in paper and online format, which will be developed to be visually-appealing and engaging while placing special emphasis on stories about women, youths and refugees.

As a GEF Implementing Agency, UNIDO has a growing global experience (e.g., China, Philippines, Thailand, Nepal, Tunisia, Albania, South Africa, Malaysia) in the implementation of e-mobility projects and the knowledge and network to be leveraged by the project will consolidate knowledge of the sector within and across UNIDO projects and for global level initiatives. This approach will enable and facilitate knowledge sharing between stakeholders involved in e-mobility to provide an ongoing coordination mechanism that will remain in place beyond the project period.

All knowledge management material will be gender mainstreamed. For instance, gender responsive training and advocacy material will not perpetuate gender stereotypes through presenting women only in their traditional roles.

Key Deliverables	**Timeline**
KM team is formed up	**First 3 months of the project**
KM Implementation plan is developed	**1st half of the project**
Project website is developed and launched	**1st half of the project**
Strategic communication plan for information exchange with the key organizations is developed	**1st half of the project**
The main outcomes of key meetings and conferences are reported as news piece in the project website	**After key meetings and conferences**
Main results and lessons-learned from the project are reported and disseminated	**Continuous throughout the project**

9. Monitoring and Evaluation

Describe the budgeted M and E plan

Project monitoring and evaluation (M&E) will be conducted in accordance with established UNIDO and GEF procedures. The overall objective of the monitoring and evaluation process is to ensure successful and quality implementation of the project by:

i) tracking and reviewing project activities execution and actual accomplishments;

ii) providing visibility into progress as the project proceeds so that the implementation team can take early corrective action if performance deviates significantly from original plans;

iii) adjusting and updating project strategy and implementation plan to reflect possible changes on the ground, results achieved and corrective actions taken.

iv) Ensure linkages and harmonization of project activities with that of other related projects at national, regional and global levels.

According to the Monitoring and Evaluation policy of the GEF and UNIDO, follow-up studies like Country Portfolio Evaluations and Thematic Evaluations can be initiated and conducted. All project partners and contractors are obliged to (i) make available studies, reports and other documentation related to the project and (ii) facilitate interviews with staff involved in the project activities.

At the same time, M&E will comply with the rules and regulations governing the M&E of UNIDO technical cooperation projects, in particular the UNIDO Evaluation Policy and the Guidelines for Technical Cooperation, both in their respective current versions.

A detailed monitoring plan for tracking and reporting on project time-bound milestones and accomplishments will be prepared by the PEE and UNIDO at the beginning of project implementation and then periodically updated. By making reference to the impact and performance indicators defined in the Project Results Framework, the monitoring plan will track, report on and review project activities and accomplishments.

The PEE will be responsible for day-to-day execution and management of project activities and monitoring the execution, performance and the tracking of progress towards the achievement of milestones.

The PEE will be responsible for narrative reporting to the GEF, and the preparation of draft Annual Project Implementation Reviews (PIR) that will be submitted to the GEF by UNIDO. UNIDO will be responsible for oversight and tracking overall project milestones and progress towards the attainment of the set project outputs.

Mid-term evaluations and terminal evaluation (TE) will be prepared by an independent evaluator as established in the M&E Plan.

One mid-term review will be carried out and a final independent terminal evaluation at least one month before the completion of the project. UNIDO execute independent mid-term review and terminal evaluation of the project. The UNIDO project manager will inform UNIDO Evaluation Group at least 6 months before project completion about the expected timing for the Terminal Evaluation (TE). The UNIDO Evaluation Group will then manage the terminal evaluation in close consultation with the project manager.

All monitoring and evaluation documents, such as progress reports, terminal evaluation report, and thematic evaluations (e.g., capacity needs assessment), as well as publications reporting on the project, will include gender dimensions wherever adequate. Table 8 provides the tentative budget for monitoring and the two evaluations, which has been included in Output 4.1 of Project Component 4. UNIDO as the Implementing Agency will involve the GEF Operational Focal Point and project stakeholders in order to ensure the use of the evaluation results for further planning and implementation.

The M&E plan will encompass monitoring of the Gender Analysis Report and Gender Mainstreaming action plan.

Table 8: Project?s Indicative Monitoring and Evaluation Work Plan

Type of M&E Activity	Responsibility	Budget (USD)	Co-financing (USD) (to be distributed accordingly during execution)	Remarks	Timeframe

Type of M&E Activity	Responsibility	Budget (USD)	Co-financing (USD) (to be distributed accordingly during execution)	Remarks	Timeframe
Inception Workshop (IW) and inception report	PMU	Incl. in the contract arrangement with national execution partner (GGGI)			Within first two months of project start up
M&E design and tools to collect and record data (performance indicators) including a survey to confirm baseline values for industry, manufacturers, policy makers, gender, etc.	PMU				Within first two months of project start up and mid project
Regular monitoring and analysis of performance indicators (technical, social, policy, environmental, gender)	PMU				Regularly to feed into project management and Annual Project Review
Project Implementation Reviews (PIRs) including ?lessons learned?	PMU (for data collection and drafting) and UNIDO (to final report and submission to GEF)				Annually
Annual Project Review to assess project progress and performance	PMU				Annually prior to the finalization of APR/PIR and to the definition of annual work plans
Steering Committee (SC) Meetings	PMU, UNIDO Project Steering Committee			It will be part of PMU activity	Annually to coincide with the Annual Project Review and ad hoc when urgent and important decisions need approval of SC

Type of M&E Activity	Responsibility	Budget (USD)	Co-financing (USD) (to be distributed accordingly during execution)	Remarks	Timeframe
Mid-term evaluation including survey to measure progress against baseline for investments, trainings and policy makers	PMU, external consultants, UNIDO PM, UNIDO Quality Monitoring Division in advising on TOR and selection of evaluators, Steering Committee and M&E specialists as required	35,000		Indicative cost	Mid of project
Final survey to measure progress against baseline for projects	UNIDO PM; PMU and M&E specialists as required	45,000		It will be part of PMU activity	At least two months prior to end of the project
Project Terminal Evaluation	UNIDO Independent Evaluation Division, PMU, PM UNIDO HQ and Project Steering Committee, independent external evaluators			Indicative cost	Evaluation at least one month before the end of the project; report at the end of project implementation
Visits to field sites	PMU, UNIDO PM			It will be part of PMU activity	As required, throughout the project

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)?

Economic benefits:

The project will have multiple socio-economic benefits at the national and local levels. These benefits will help to boost the interest of integration the EVs in Jordan and this will contribute to global reduction in GHG emissions. Jordan imports about 94% of its energy needs, the highest level of the energy imports present economic risks, as well as making the nation's economy internationally vulnerable to volatility, so, the benefits at economic growth will be in improved energy efficiency, employment prosperity and competitive productivity. The national and local quality of air is a critical benefit to be gained by the promotion of EVs.

In gender point of view aspect, the project will offer a regular work for women in labor market in Jordan. The development in the access for both women and men to safer, cleaner, and more efficient transport, thereby will increase the economic growth by minimizing travel time and ensuring reliable modes of transport.

Health and Social benefits:

This project will support creation of additional work opportunities, develop technological skills, and thus improve the quality of life of local community. The adoption of EVs can create a new business environment for both men and women. Compared to the base year 2010, the substantial rise in car mileage will increase fuel consumption by nearly 30% until 2030 and CO2 will increase by 26% according to MoT. In particular, the integration of electric vehicles will decrease Jordan's dependency on gasoline will play an important role in decreasing fuel consumption and mitigating CO2, CO, PM2.5, NO2, SO2, Volatile Organic Compounds (VOC), Particular Matter (PM). The project will integrate gender dimensions into Petra e-bus project to ensure that local women will benefit from the public transportation. Safe access to public transport services are expected to improve women's access to employment opportunities. Please see ESMP for more details of the project interventions.

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
	Medium/Moderate		

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.

	E&S risks	Mitigating measures	Location	Timeline, including frequency, start and end date	Responsibility

Risks identified during the project screening and verified during the project preparation or inception	Health risks related to Covid-19 pandemic and its impact on: - Working arrangements - Restrictions on face-to-face meetings - National and international travel restrictions - Government priorities shift	The tourism sector will stay as one of most vulnerable sectors to COVID-19 travel restrictions and social distancing rules due its human dependence. The number of visitors to Petra in 2020 decreased to 252,728 from more than 1 million visitors in 2019 due to the restrictions imposed to contain the COVID-19 virus. The city was closed in March 2020. The pandemic hit the Jordanian tourism sector, which was contributing between 12% to 14% of the GDP, and tourism income decreased from 5.8 billion dollars in 2019 to one billion in 2020, according to official figures. Due to the pandemic lockdowns, all public transport services were stopped for about than 3 months. The Land Transport Regulatory Authority later resumed operations in July 2020 but dropped capacity to 50%; however, in April 2021 the capacity was increased to 75%. Starting from July 1st	Global	During project implementation	PEE/PMU

	Climate change risks - Infrastructure developed is vulnerable to climate risks.	The climate induced risks will be mitigated related to charging infrastructure by ensuring that this infrastructure meets current international standards (see Component 2) and ? where applicable ? contracting will also include a clause on resilience to climate impacts. Project planning decisions, project design, and construction methods will take into account of the on-site implications of these climate hazards. The risks associated with climate change include extreme weather conditions will be addressed by ensuring that any infrastructure investment supported by the project is climate-proofed. For instance, the location of technologies (e.g., charging stations) will take into consideration of flood risks.	Jordan	During project implementation	

		Electrical risks and work safety	Although EVs are generally safe if precautions and safety guidelines are followed, they do represent risks of electroshock, leakage of electrolyte chemicals from batteries, fire in certain situations such as accidents. Even though, the project will not directly procure equipment, technical assistance to be provided to demonstration project (e.g., procurement plan, feasibility studies) will consider equipment with safety and quality certificates guided by UNIDO procurement policies and the best international experience on construction and operation as well as national regulations. The trainings on operating and maintenance of EVs will include health and safety measures (e.g., electrical safety). The project will be in full compliance with the following UNIDO operational safeguard standards; OS 8: Labor and Working Conditions, OS	Jordan	During project implementation	

	Lack of partnership engagement (from stakeholders, government, municipalities etc.) including political factors at the macro level	Early engagement strategy, regular outreach with networks to keep the momentum. Dissemination of information and knowledge to ensure scalability of project beyond Petra.	Jordan	During project implementation	PEE/PMU
	Limited human resources and technical capacities of local and central government;	The capacities of government and local authorities will be increased through trainings and workshops to implement sustainable policies and programs on clean energy and low-carbon mobility. The content of these workshops will include social and environmental aspects.	Jordan	During project implementation	PEE/PMU

	Limited knowledge and information on the benefits of EVs in particular; range anxiety and adapt to new technologies;	Public awareness and advocacy activities under Components 1 and 2 aim to mitigate this risk. In addition, the pilot demonstrations will showcase smart technologies in a visible manner to present the opportunities and benefits. Moreover, the involvement of academia and other stakeholders will serve to inform the general public and educate a new generation on sustainable mobility issues. Mitigation activities are included through trainings. Electric mobility and sustainable energy interventions will reduce air pollutants and particular matter thus improve public health.	Jordan	During project implementation	PEE/PMU

	Environmental impact from disposal of EV?s batteries	Environmental laws and regulations can mitigate the environmental effects from EV?s batteries. The project components address the problem of sustainability considering local ecosystems, so the realization of the project should effectively decrease the risk of environmental change.	Jordan	During and after the project implementation	PEE/PMU

	Social Impact of High Occupancy Vehicles (HOVs) to vulnerable groups	The use of any type of HOV (conventional or electric) may include environmental and social risks. Component 4 seeks to address these risks directly through the provision of recommendations on clarifying HOV licensing and requirements, in addition to addressing the need for predictable bus routes. Consultation from vulnerable groups (women, refugees, the disabled, poor and elderly) will be sought when preparing policy recommendations under Component 4. Similar consultations will be held on the placement of e-chargers, and findings from the consultations will be integrated into the RFP (for example, the need for adequate lighting at the e-charging station).	Jordan	During project implementation	

		Low representation/participation from women in positions of power and influence on the transport policy; inadequate engagement from women or missing qualified female technicians from the STEM sector. See Project?s Gender Plan for Electric Mobility.	This risk will be mitigated through specifically targeting women involved in the sector for participation in consultations on policy improvements under Component 4, and for safety and other considerations under Component 2. It may also be noted that the current leads for multiple institutions slated for HFE engagement under Component 1 are currently women. Female transportation engineering experts have been identified at the University of Jordan and other research institutions, and they will be actively requested to recommend additional colleagues as needed ? thereby lessening the chances of invisibility amongst qualified female technicians. Disaggregated data on gender participation will be collected at all HFE meetings and other events related to the project, and targeted invitations will be made for enhanced female participation as needed. The project will follow thorough gender	Jordan	During project implementation	PEE/PMU

	Increasing urban congestion by adding new personal electric cars on the roads. The project promotes shift to e-mobility however adding new cars on the roads can have the risk of contributing to traffic congestion in cities.	Under the Component 1, the project will support policies prioritizing HOV and tourism transport (e.g., shuttles) as well as replacing polluting fossil fuel cars with EVs, in line with the ??Petra e-bus?? investment	Jordan	During project implementation	

Supporting Documents

Upload available ESS supporting documents.

Title	Module	Submitted
ANNEX H-10605-ESMP-Jordan	**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 Strategy	Objectively verifiable indicators (quantified)	Baseline	Target/deliverables	Sources of verification	Global Programme Indicator
PROJECT OBJECTIVE	To catalyze and accelerate the breakthrough of electric mobility in urban areas in Jordan through innovation and technology transfer	Tourism related transportation based contributes GHG emissions. The shift to e-mobility has a significant potential to mitigate this.	GHG emissions reductions: total of 1,643,665 CO2 (direct and indirect) Beneficiaries: 31,720. 15,800 (women), 15,920 (men).	GEF project tracking tool Project Implementation Reports Mid-term review report Terminal Evaluation report	
Project Component 1- Policy coordination and integration, and establishment of an inter-ministerial high-level forum on e-mobility (HFE) to support an enabling policy environment for e-mobility					
OUTCOME 1.1	E-mobility policies established, through enhanced inter-ministerial coordination, which integrate fiscal considerations, energy security and environmental goals.	Insufficient coordination among government stakeholders and insufficient policy framework.	Coordination between main government stakeholders increase, enabling policies are in place	HFE is operational and enabling policies are established	

Output 1.1.1	The HFE is established and functional.	Poor coordination between national and local levels; Inconsistent policy signals. Weak inter-ministerial coordination / short leadership tenure undermines long-term transportation strategy.	? Terms of Reference (ToR) on the mandate, chairs, organization and operations of the committee including the role of the Gender Focal Point (FP) is developed ? Annual HFE meetings conducted (4 in total throughout the project) ? 1 training session on gender and e-mobility nexus, including gender sensitive planning conducted for the HFE ? 2-3 Donor meetings/year ? At least 1 HFE member is assessed as the Gender FP ? At least 33% of HFE members are women	ToR document Minutes of HFE meetings and donor group Outcome reports and stakeholders list List of participants in HFE meetings (gender aggregated)	HFE to support and promote the uptake of low-carbon e-mobility is established and operational

Output 1.1.2	Joint public-private partnership roadmap for transitioning towards a more sustainable tourism and transport sector is developed and submitted to the Government for endorsement	There is no public-private investment strategy on greening tourism related transport in Jordan. Current policy measures insufficiently implemented and overly dependent on consumer taxation. The tourism transport legislation has been changed, making it easier for new companies to enter the market as tax exemptions for both new and existing companies for three years have been introduced.	? 2-4 PPD events organized and conducted per year ? 1 policy analysis report ? 1-3 meetings/year (between public and private sector) to develop roadmap. ? At least 3 consultation meetings with the national stakeholders and NGOs; including with at least 2 relevant women associations/ organizations that promote gender equality and empowerment of women ? 1 Joint public-private investment roadmap is developed. The policy analysis and roadmap will be gender-responsive and addresses gender gaps and priorities in public transport and HOVs. ? The roadmap is submitted to the Government for endorsement.	PPD event minutes Policy analysis report Roadmap is prepared and submitted to the Government for endorsement Minutes of meeting with stakeholders and NGOs	MOTA and JTTA endorse a national strategy to promote low-carbon electric mobility

Output 1.1.3	Regulations and policies are supported to enable the integrated e-mobility and renewable energy investments and ensure the long-term environmental sustainability of EVs (e.g., guidelines on management of end-of-life batteries)	Ministry leadership in transport, energy, planning has changed multiple times over the past five years. Current policy measures insufficiently implemented and overly dependent on consumer taxation. Technical specification of e-mobility in Jordan is unregulated. Jordan imports 94% of its energy.	? 2 policy / regulatory recommendation workshop conducted ? 1 set of policy recommendations and implementation guidelines report on e-mobility including gender dimensions in transport prepared and submitted to the government for endorsement ? 1 regulatory revision report prepared and submitted to the government for endorsement	Minutes of policy workshop Policy recommendations report and implementation guidelines Regulatory revision report Communications with the governmental stakeholders proving the policy recommendations and regulatory revision report submitted	
Project Component 2-Technical assistance to ?Petra E-bus Project? to demonstrate replicability and Scaling Up E-mobility interventions					
Outcome 2.1	Strategic investment drives proliferation of e-mobility and enables higher public and private investment in e-mobility	The country has no successful implementation of a demonstration-scale pilot project for e-mobility yet.	Technical assistance to generate evidence on low-carbon e-mobility and scale-up strategy is delivered	Feasibility Studies Scale-up strategies Pipeline of investments Credit rating Promotional material Meeting minutes	Global Programme Indicator 3.2 Jordan is one of the countries with nationally generated evidence of the technical, financial and/or environmental benefits of low-carbon electric mobility

Output 2.1.1	Scalable E-mobility project (Petra E-bus project) in place to demonstrate replicability	Petra E-bus project requires technical assistance to trigger investment 15 transport tourism companies operate three types of vehicles: large diesel buses (with an avg. 31-person capacity), medium diesel buses (with an avg. (10-30)-person capacity), and gasoline vans (with an avg. ?9-person capacity). The public transport (PT) system in Petra-Wadi Mousa consists mainly of buses and taxis and there are seven PT bus routes in Petra. Two e-buses have operated in Petra as a pilot for the	? 1 technical analysis report on the project design ? 1 full financial feasibility completed ? 1 full technical feasibility study completed including social impacts and safety measures given in the gender action plan (e.g., the measures factoring the fairness and inclusiveness dimensions for diverse women users for a comfortable, safe and useful service.) ? 1 workshop using participatory concepts and methodologies to ensure that the planning, implementation, supervision and monitoring of the project will involve and benefit women and men equally stakeholder and beneficiary assessments. ? Letters of intent to invest: central government?s endorsement of the final project design	Design and technical assessment documents of the Petra E-bus project (feasibility studies, technical reports, procurement plan, letters of intent)	PDTRA takes a position on the technical, economic and environmental viability of low-carbon electric mobility based on the evidence generated through the in-country demonstration project

Output 2.1.2	Petra E-bus implementation program delivered	electric bus fleet in Petra with two fast e-charging stations donated by Hyundai company	? 2-4 training sessions conducted to provide technical advisory to PDTRA on community (incl. gender impact) and private sector engagement, sustainability, regulations and best practices. ? Procurement plan is developed ? Minutes of the 2-3 community consultations on project design and implementation as well as social and environmental aspects including at least 1 women associations/ organizations (e.g., JNCW) involved in the stakeholder consultations.	Training Materials List of attendants (gender-disaggregated) Minutes of Meetings	The project develops and submits procurement guidelines to PTDRA for low-carbon electric vehicles for adoption

Output 2.1.3	Strategies and pipeline are developed to scale-up e-mobility and renewable energy in Jordan	There is no baseline of upscaling without demonstrated business cases on e-mobility	? 1 Scale-up Strategy including 5 projects shortlisted for further support (gender dimensions will be considered in the selection process) ? 3-5 projects made investment ready ? 1 credit rating report for PDTRA ? Recommendations report on integrating shortlisted concepts into PDTRA?s infrastructure master plan including inputs from at least 2 associations/ organizations that promote GEEW incorporated into pipeline ? Develop and disseminate knowledge sharing documents (1 short/ 1 long case study brochure, short videos or similar format providing key facts and short guidelines) to promote replicability, scale up and visibility. Gender-responsiveness of the project will be incorporated in the dissemination material.	Scale up strategy. 3-5 projects ready for investment Credit Rating report. Recommendations report on integrating concepts into PDTRA master plan Develop promotional material (1 short, 1 long) Meeting minutes	3-5 up-scaling pipeline investment projects developed that incorporate lessons learned from the demonstration project
Component 3 - Capacity building and Knowledge Management for facilitating the adoption of E-mobility					

Outcome 3.1	Government and private sector are better prepared and enabled to replicate E-mobility successes in Jordan	There is lack of capacity and knowledge on e-mobility hinders scaling up of e-mobility.	The capacity on e-mobility in enhanced Knowledge exchange with the Global Programme	List of attendants to the trainings Training curriculums	
Output 3.1.1	Knowledge and best practice shared through regular exchange of global, regional and national experiences through the Global Programme.		? 3-5 events / exchanges with the Global Programme (at least 35% women). ? Participation to Global Programme events	List of participants (gender disaggregated) Minutes of Meeting Event Reports	The Ministries of Environment, Transport and Energy have used services and knowledge products offered by the Support and Investment platform to promote/undertake low-carbon electric mobility investments

Output 3.1.2	Capacity building program on integrating e-mobility and renewable energy technologies as well as environmentally sound management of EV batteries conducted for the relevant national stakeholders and the private sector through partnership with local academic/civil society institutions.		? Training curricula is developed (including gender dimensions in the context of public transport services) ? At least 5 training sessions delivered to HFE, PDTRA and relevant national stakeholders (at least 40% women) ? 1 training focused on the gender-mobility nexus conducted for HFE members ? At least 5 training sessions delivered to private sector (at least 40% women). ? The training on project?s action plan on gender mainstreaming and on ESMP delivered to the PMU ? At least 2 meetings with local women organizations to mobilize women?s participation to the trainings and integrate the transport- related needs and priorities with a focus towards gender equality into training curricula	Training material List of attendants (gender disaggregated) Meeting minutes	Jordan has improved preparedness to accelerate market transformation towards low-carbon e-mobility
Project Component 4- Monitoring and evaluation					

Outcome 4.1	Adequate monitoring of all project indicators in line with GEF, UNIDO and Government of Jordan (GoJ) requirements	N/A	The project activities continuously monitored against the project targets and timeline The data below is collected during the project for all activities: - # and proportion (%) of women participated in capacity-building, workshops and events - # and proportion (%) of women employed by project office at a professional level and jobs created (gender-aggregated) All the progress reports include the progress on the implementation of the gender mainstreaming action plan	Progress reports (PIRs) MTR Terminal Evaluations	
Output 4.1.1	Monitoring and independent mid-term review	**N/A**	Annual project implementation reports (PIR) developed and submitted to the GEF Mid-term review evaluation report conducted	Annual PIRs Mid-term review (MTR) document	Jordan creates and shares best practices and other lessons on low-carbon e-mobility with the global programme
Output 4.1.2	Independent terminal evaluation conducted	**N/A**	Terminal evaluation conducted by third-party independent experts	Terminal evaluation report	

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).

As the document is too large to be introduces here (does not seem to be supported by the Portal), please find it attached as Annex B.

ANNEX C: Status of Utilization of Project Preparation Grant (PPG). (Provide detailed funding amount of the PPG activities financing status in the table below:

Project Preparation Activities Implemented	*GETF/LDCF/SCCF Amount ($)*		
	Budgeted Amount	*Amount Spent to Date*	*Amount Committed*
-	50,000	33,000	17,000
Total	50,000	33,000	17,000

PPG Completion Report

The following activities are conducted during the PPG work plan:

- Stakeholder engagement activities during PPG (consultations, workshops, steering committee)
- Disclosure of relevant studies and information to stakeholders
- Analysis of baseline and ongoing/planned initiatives
- Collection of baseline data on relevant sectors/technologies
- Preparation of relevant technical feasibility studies
- Preparation of environment and social impact assessments (ESIAs) and environmental and social management plan (ESMP) (for Category A projects)
- Preparation of environmental and social management plan (ESMP) (for Category B projects)
- Gender Assessments
- Description of the project implementation/execution modalities and agencies (incl. draft TOR for contractual arrangements, assessments of proposed executing agency capacity)
- Obtaining of co-financing letters from donors, NGOs, Agencies and government
- Finalization of project documents

Activities	**Budgeted Amount**	**Amount spent/committed to date**	**Timeline[1]**	**Verification at CEO endorsement submission**
HACT assessment of proposed EAs	13,500[2]	13,500	Sep 2020 ? Apr 2021	Done. Internal Self HACT assessment is conducted. The capacity of the project executing entity has been found adequate.

Development of the Environmental and Social Management Plan (ESMP) outlining the relevant risks as well as the mitigation measures ESMP for the project	36,500	36,500	Sep 2020 ? Apr 2021	Done. ESMP is developed and shared along with the submission package.
Development of detailed ToRs including ESMP role for the national executing entity.				Done. ToR for national execution is developed, the comments from Procurement integrated.
Development of detailed ToRs and approach for private sector participation in the purchase of e-mobility infrastructure (in consultation with financing partners such as EBRD, IFC and others)				Done (equivalent activity). The project will provide TA assistance to e-bus project in Petra based on the results of the pre-feasibility study developed by the project execution entity and stakeholder consultations.
Initial feasibility study to compare location-optimisation and appropriate business models for the charging stations				Done. The project will provide TA assistance to e-bus project in Petra based on the results of the pre-feasibility study developed by the project execution entity and stakeholder consultations.
Development of the gender mainstreaming strategy				Done. Gender Analysis and action plan is developed and shared along with the submission package.
Consolidation of all inputs into the CEO Approval Document as per GEF template				Done.

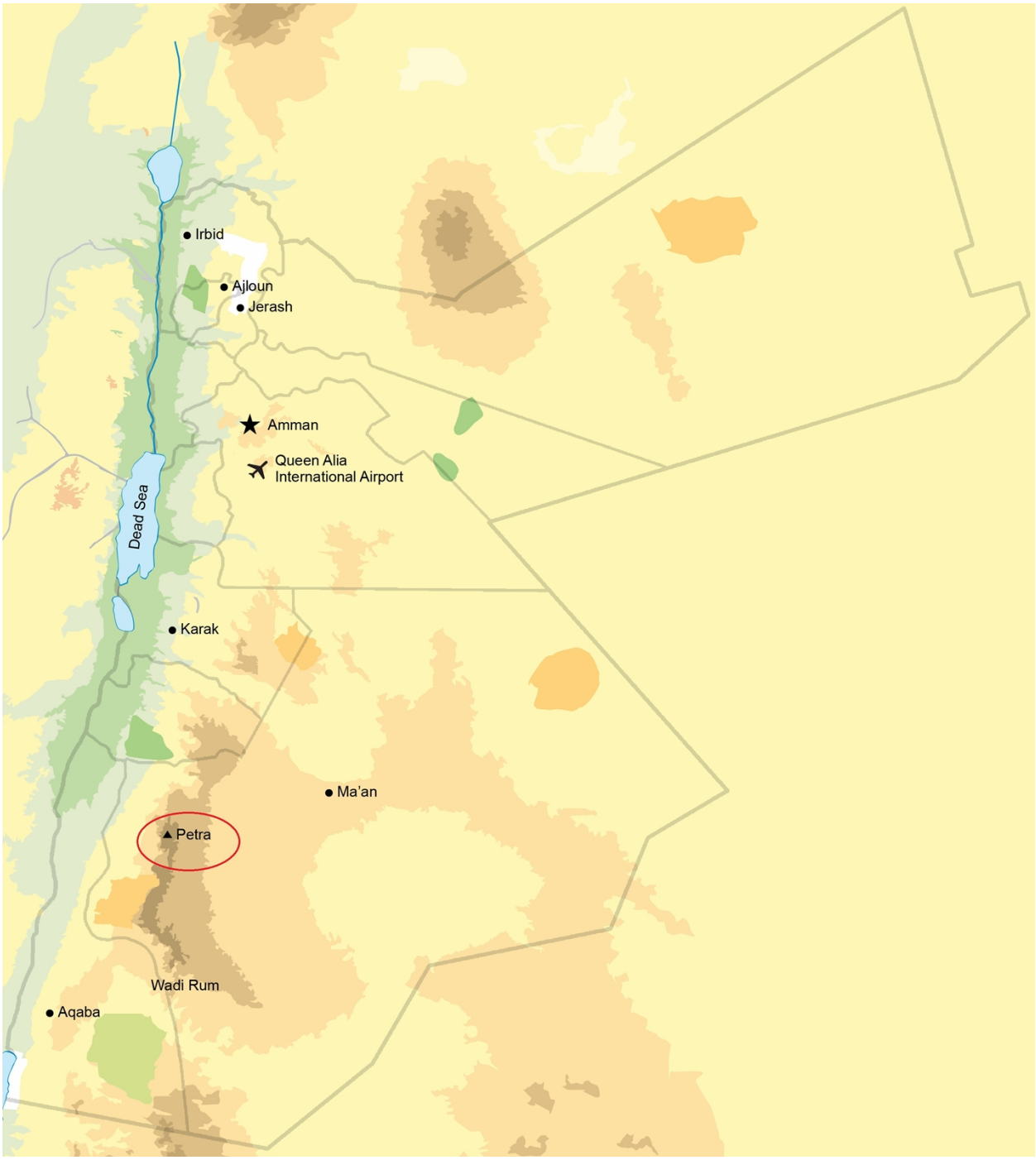
Integrate pending GoJ comments from PIF stage (MEMR / MoE / GAM)				Done. Government feedback is integrated into project design.
Stakeholder consultations to verify the CEO approval document				Done. The project team conducted inception and validation workshop along with bilateral meetings with national stakeholders (e.g., Min. Transport, PDTRA) as well as IFC
Formal validation of the CEO approval document, UNIDO Internal review and submission to GEF Sec; preparation for project-start			May ? Dec 2021	Ongoing
Total	50,000	50,000		

[1] Assuming approval by June 2020; PPG funds availability by August 2020

[2] As per Procurement?s price list

ANNEX D: Project Map(s) and Coordinates

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



Source: adapted from Jordan Tourism Board North America | Copyright ? 2020.

Petra Geographical Coordinates: 30.3285? N, 35.4444? E

*The boundaries and names shown and the designations used on this map above and on the maps given in the body text of the project document do not imply official endorsement or acceptance by the United Nations.

ANNEX E: Project Budget Table

Please attach a project budget table.

Please find attached the detailed Project Budget (Annex E) for further details.

i) Budget Summary Table per activity for year 1-5:

ii) Budget Tables per activity for each year

Project Budget Table (indicative)

YEAR 1			Component (USD)												
			Component 1			Component 2			Component 3		Component 4				
Expenditure Category	Activity	Detailed Description	Outcome 1.1			Outcome 2.1			Outcome 3.1		Outcome 4.1		Sub-Total	PMC	Total (USD)	Responsible Entity
			Output 1.1.1	Output 1.1.2	Output 1.1.3	Output 2.1.1	Output 2.1.2	Output 2.1.3	Output 3.1.1	Output 3.1.2	Output 4.1.1	Output 4.1.2				
Contractual services	Activity 1.1.1.1	Develop ToR on the mandate, chairs, organization and operations of the committee	15.000,00										15.000,00		15.000,00	GGGI
	Activity 1.1.1.2	Support the development of a standing agenda focused on a set of learning objectives,	10.000,00										10.000,00		10.000,00	GGGI
	Activity 1.1.1.3	Project co-chairs the donor committee on e-mobility (DCE) with MEMR and facilitate	5.000,00										5.000,00		5.000,00	GGGI
	Activity 1.1.1.4	Organize annual high-level forum on e-mobility (HFE) events held during project (virtual and in-	5.000,00										5.000,00		5.000,00	GGGI
	Activity 1.1.2.1	Hold a series of public-private dialogue (PPD) events on the topic of sustainable tourism		5.000,00									5.000,00		5.000,00	GGGI
	Activity 1.1.2.2	Conduct a policy analysis to better understand the challenges, opportunities, and barriers to		35.000,00									35.000,00		35.000,00	GGGI
	Activity 1.1.2.3	Based on the two activities above, facilitate discussion between public and private sector		5.000,00									5.000,00		5.000,00	GGGI
	Activity 2.1.1.1	Analyse project design from environmental, technical, social and gender dimensions with				10.000,00							10.000,00		10.000,00	GGGI
	Activity 2.1.1.2	Provide technical assistance (e.g., support the full financial and technical feasibility studies)				65.000,00							65.000,00		65.000,00	GGGI
	Activity 2.1.2.1	Provide embedded technical advisory and guidelines to PDTRA on the topics of					20.000,00						20.000,00		20.000,00	GGGI
	Activity 2.1.2.2	Consultations with local community related to the design and business model of the e-bus					10.000,00						10.000,00		10.000,00	GGGI
	Activity 3.1.1.1	Facilitate regional and global exchanges through the Global Programme*							15.000,00				15.000,00		15.000,00	GGGI
	PMC	Project Coordinator											0,00	16.000,00	16.000,00	GGGI
	PMC	Project Assistance											0,00	10.000,00	10.000,00	GGGI
sub-total			35.000,00	45.000,00	0,00	75.000,00	30.000,00	0,00	15.000,00	0,00	0,00	0,00	200.000,00	26.000,00	226.000,00	
grand total			35.000,00	45.000,00	0,00	75.000,00	30.000,00	0,00	15.000,00	0,00	0,00	0,00	200.000,00	26.000,00	226.000,00	

*includes the costs related to travel to global programme workshops and events

YEAR 2			Component (USD)												
			Component 1			Component 2			Component 3		Component 4				
Expenditure Category	Activity	Detailed Description	Outcome 1.1			Outcome 2.1			Outcome 3.1		Outcome 4.1		Sub-Total	PMC	Total (USD)	Responsible Entity
			Output 1.1.1	Output 1.1.2	Output 1.1.3	Output 2.1.1	Output 2.1.2	Output 2.1.3	Output 3.1.1	Output 3.1.2	Output 4.1.1	Output 4.1.2				
Contractual services	Activity 1.1.1.3	Project co-chairs the donor committee on e-mobility (DCE) with MEMR and facilitate	2.500,00										2.500,00		2.500,00	GGGI
	Activity 1.1.1.4	Organize annual high-level forum on e-mobility (HFE) events held during project (virtual and in-	5.000,00										5.000,00		5.000,00	GGGI
	Activity 1.1.2.1	Hold a series of public-private dialogue (PPD) events on the topic of sustainable tourism		5.000,00									5.000,00		5.000,00	GGGI
	Activity 1.1.2.2	Conduct a policy analysis to better understand the challenges, opportunities, and barriers to		22.000,00									22.000,00		22.000,00	GGGI
	Activity 1.1.2.3	Based on the two activities above, facilitate discussion between public and private sector		5.000,00									5.000,00		5.000,00	GGGI
	Activity 1.1.2.4	Draft roadmap through consultation with civil society (e.g., women associations) and NGOs		23.500,00									23.500,00		23.500,00	GGGI
	Activity 1.1.3.1	Building on the Joint public-private investment roadmap, develop policy recommendations			45.000,00								45.000,00		45.000,00	GGGI
	Activity 1.1.3.2	Develop revision report towards achieving consistency in regulatory framework on			55.000,00								55.000,00		55.000,00	GGGI
	Activity 2.1.1.1	Analyse project design from environmental, technical, social and gender dimensions with				20.000,00							20.000,00		20.000,00	GGGI
	Activity 2.1.1.2	Study the full financial and technical feasibility studies for Petra e-bus project in partnership				60.000,00							60.000,00		60.000,00	GGGI
	Activity 2.1.2.1	Provide embedded technical advisory and relevant training to PDTRA on the topics of					40.000,00						40.000,00		40.000,00	GGGI
	Activity 2.1.2.2	Consultations with local community related to the design and business model of the e-bus					5.000,00						5.000,00		5.000,00	GGGI
	Activity 3.1.1.1	Facilitate regional and global exchanges through the Global Programme							15.000,00				15.000,00		15.000,00	GGGI
	Activity 3.1.2.1	Established partnership with local academic/civil society institutions to develop								60.000,00			60.000,00		60.000,00	GGGI
	Activity 3.1.2.2	Deliver training sessions to government representatives who are members of the HFE								25.000,00			25.000,00		25.000,00	GGGI
	Activity 3.1.2.3	Deliver training sessions to private sector representatives who will participate in the								25.000,00			25.000,00		25.000,00	GGGI
	Activity 4.1.1.1	Independent mid-term review conducted									35.000,00		35.000,00		35.000,00	UNIDO
	PMC	Project Coordinator											0,00	16.000,00	16.000,00	GGGI
	PMC	Project Assistance											0,00	10.000,00	10.000,00	GGGI
sub-total			7.500,00	55.500,00	100.000,00	80.000,00	45.000,00	0,00	15.000,00	110.000,00	35.000,00	0,00	448.000,00	26.000,00	474.000,00	
grand total			7.500,00	55.500,00	100.000,00	80.000,00	45.000,00	0,00	15.000,00	110.000,00	35.000,00	0,00	448.000,00	26.000,00	474.000,00	

YEAR 3			Component (USD)												
			Component 1			Component 2			Component 3		Component 4				
Expenditure Category	Activity	Detailed Description	Outcome 1.1			Outcome 2.1			Outcome 3.1		Outcome 4.1		Sub-Total	PMC	Total (USD)	Responsible Entity
			Output 1.1.1	Output 1.1.2	Output 1.1.3	Output 2.1.1	Output 2.1.2	Output 2.1.3	Output 3.1.1	Output 3.1.2	Output 4.1.1	Output 4.1.2				
Contractual services	Activity 1.1.1.3	Project co-chairs the donor committee on e-mobility (DCE) with MEMR and facilitate	2.500,00										2.500,00		2.500,00	GGGI
	Activity 1.1.1.4	Organize annual high-level forum on e-mobility (HFE) events held during project (virtual and in-	2.500,00										2.500,00		2.500,00	GGGI
	Activity 2.1.2.3	Provide transaction advisory services for the e-bus project (procurement document				20.000,00							20.000,00		20.000,00	GGGI
	Activity 2.1.3.1	Develop and disseminate of the promotional						2.500,00					2.500,00		2.500,00	GGGI
	Activity 2.1.3.2	Credit rating developed for PDTRA to facilitate						5.000,00					5.000,00		5.000,00	GGGI
	Activity 2.1.3.3	Mainstream e-mobility projects into PDTRA's						5.000,00					5.000,00		5.000,00	GGGI
	Activity 2.1.3.4	Identify potential scale up options for the						10.000,00					10.000,00		10.000,00	GGGI
	Activity 2.1.3.5	Develop a scale-up strategy.						10.000,00					10.000,00		10.000,00	GGGI
	Activity 2.1.3.6	Develop 3-5 pipeline of investment projects to						20.000,00					20.000,00		20.000,00	GGGI
	Activity 3.1.1.1	Facilitate regional and global exchanges through the Global Programme							7.500,00				7.500,00		7.500,00	GGGI
	Activity 3.1.2.2	Deliver training sessions to relevant government representatives (e.g., members of								15.000,00			15.000,00		15.000,00	GGGI
	Activity 3.1.2.3	Deliver training sessions to relevant private sector representatives including the ones who								15.000,00			15.000,00		15.000,00	GGGI
	PMC	Project Coordinator											0,00	16.000,00	16.000,00	GGGI
	PMC	Project Assistance											0,00	10.000,00	10.000,00	GGGI
sub-total			5.000,00	0,00	0,00	20.000,00	0,00	52.500,00	7.500,00	30.000,00	0,00	0,00	115.000,00	26.000,00	141.000,00	
grand total			5.000,00	0,00	0,00	20.000,00	0,00	52.500,00	7.500,00	30.000,00	0,00	0,00	115.000,00	26.000,00	141.000,00	

Activity No	Activity	Budget
1.1.1.1	Develop ToR on the mandate, chairs, organization and operations of the committee as well as short-term and long-term goals focusing on tourism based on the existing coordination committee	15,000
1.1.1.2	Support the development of a standing agenda focused on a set of learning objectives, institutional coordination matters and policy decisions to be discussed in the inter-ministerial committee on e-mobility (ICE).	10,000
1.1.1.3	Project co-chairs the donor committee on e-mobility (DCE) with MEMR and facilitate knowledge exchange on a semi-annual basis (or more frequently depending on needs).	12,500
1.1.1.4	Organize and participate to annual high-level forum on e-mobility (HFE) events held during the project (virtual and in-person if measures allow) including 1 training session on gender and e-mobility, including gender sensitive planning conducted for the HFE	15,000
1.1.2.1	Hold a series of public-private dialogue (PPD) events on the topic of sustainable tourism transport investment	10,000
1.1.2.2	Conduct a policy analysis to better understand the challenges, opportunities, and barriers to increased private sector investment in e-mobility in the tourism transport sector in Jordan	57,000
1.1.2.3	Based on the two activities above, facilitate discussion between public and private sector representatives to develop the roadmap	10,000
1.1.2.4	Draft roadmap through consultation with civil society (e.g., women associations) and NGOs and submit final version to government (Ministry of Tourism and Antiquities) and Jordan Tourism Transport Association	23,500
1.1.3.1	Building on the Joint public-private investment roadmap, develop policy recommendations and its strategic implementation guidelines to promote the achievement of the agreed investment targets in consultation with the national stakeholders and submit to the relevant project partners	45,000
1.1.3.2	Develop revision report towards achieving consistency in regulatory framework on sustainable transport and tourism and submit to the national policy making bodies.	55,000
2.1.1.1	Analyse project design from environmental, technical, social and gender dimensions with focus on renewable energy-EV integration based on the best international experience and assess required technical assistance.	30,000
2.1.1.2	Provide technical assistance (e.g., support the full financial and technical feasibility studies) for Petra e-bus project in partnership with PDTRA and co-financiers to secure necessary finance from all co-investors, including Government, development partners	125,000
2.1.2.1	Provide embedded technical advisory and guidelines to PDTRA on the topics of community and private sector engagement, sustainability, replicability, GHG emission calculations, regulations and international best practices, and similar.	60,000
2.1.2.2	Consultations with local community related to the design and business model of the e-bus project	15,000

2.1.2.3	Provide transaction advisory services for the Petra e-bus project (e.g., procurement plan, document preparation support, etc.)	40,000
2.1.3.1	Develop and disseminate of the promotional materials with national and regional networks and partnership platforms as well as with the Global Programme to promote replicability, scale up and visibility.	10,000
2.1.3.2	Credit rating developed for PDTRA to facilitate continued investment and accelerate scale-up.	30,000
2.1.3.3	Mainstream e-mobility projects into PDTRA?s infrastructure master plan and policy directions into PDTRA?s tourism master plan.	10,000
2.1.3.4	Identify potential scale up options for the Petra e-bus project.	15,000
2.1.3.5	Develop a scale-up strategy for integrated e-mobility renewable energy technologies.	50,000
2.1.3.6	Develop 3-5 pipeline of investment projects to promote implementation of the joint roadmap for sustainable tourism transport (Output 1.2.1	55,000
3.1.1.1 *	Facilitate regional and global exchanges through the Global Programme *	60,000
3.1.2.1	Established partnership with local academic/civil society institutions to develop training modules for public and private sector representatives on e-mobility in Jordan.	60,000
3.1.2.2	Deliver training sessions to relevant government representatives (e.g., members of the HFE on e-mobility as given under Output 1.1.1).	70,000
3.1.2.3	Deliver training sessions to relevant private sector representatives including the ones who will participate in the public private dialogue (Output 1.2.1).	70,832
4.1.1.1	Independent mid-term review conducted	35,000
4.1.2.1	Independent terminal evaluation on the project conducted at the end of the project	45,000
	Sub-total	1,033,832
PMU	Project Coordinator	63,383
PMU	Project Assistant	40,000
	Total	1,137,215
* includes the costs related to travel to global programme workshops and events		

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 relevant

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 relevant

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 relevant