United Nations Development Programme

Project title: Strengthening Marrakech's sustainable development through innovative planning and financing		
Country(ies): Morocco	**Implementing Partner (GEF Executing Entity):** Ministry of Energy, Mines and Environment - Department of Environment	**Execution Modality***:* *National implementation (NIM)*
Contributing Outcome (UNDAF/CPD, RPD, GPD)*:* Outcome 2 - Sustainable inclusive development		
UNDP Social and Environmental Screening Category: *High*	**UNDP Gender Marker:** According to the UNDP Gender Marker Rating, the project is classified as GEN2: gender equality as a significant objective. The project will contribute to gender equality by improving women's participation and decision-making for the transition to an inclusive green economy and sustainable and integrated urban planning.	
Atlas Award ID: 00128412	**Atlas Project/Output ID: 00122433**	
UNDP-GEF PIMS ID number: 6411	**GEF Project ID number: 10486**	
LPAC meeting date: *TBD*		
Last possible date to submit to GEF: *19.06.2021*		
Latest possible CEO endorsement date: *19.12.2021*		
Project duration in months: 60		
Planned start date: *01/04/2022*	**Planned end date:** *31/03/2027*	
Expected date of Mid-Term Review: *30/09/2024*	**Expected date of Terminal evaluation:** *31/12/2026*	
Brief project description: *Although the City of Marrakech has gone through substantial urban transformation during the last two decades, which improved drastically its touristic attractiveness on the national, regional and international levels, fostering its sustainable development and transformational change is warranted. In Morocco, the management of cities is*		

still dominantly considered as a "problem" that is solved through recovery programs with weak crosscutting effects of sectoral public policies and where local management focus mostly on everyday life without anticipation or true long-term vision. A strong local leadership is needed, warranted through coordinated and efficient policies, strong commitments, good governance and innovative investment frameworks to ensure a sustainable urban development where all stakeholders can put together their efforts towards the same objectives.

Accordingly, the project will build necessary institutional capacities at all levels to foster the integration of innovative approaches and instruments that can improve the design, planning and decision making of green urban projects. Highly sophisticated instruments are needed to enable better decision-making, mitigate risks, generate returns and optimize value for money across the lifecycle of urban assets. The City of Marrakech will be supported to develop its own capacities to better assess the interdependency of different sectors (e.g., water resiliency, energy, transport, biodiversity, waste management, etc.), where knock-on effects of vulnerabilities may lead to cascade failures elsewhere. Moreover, as current support from national government and the city's own financial sources are usually not sufficient, alternative financial sources will be sought to finance sustainable urban projects in large scale to ensure transformational change, spur inclusive socioeconomic development and deliver various GEBs (e.g., biodiversity conservation, GHG mitigation, climate resilience improvement, land restoration, air quality improvement, etc.).

FINANCING PLAN	
GEF Trust Fund grant	9,416,167 USD
UNDP (200,000 USD in cash,	200,000 USD
(1) Total Budget administered by UNDP	**9,616,167 USD**
CO-FINANCIERS THAT WILL DELIVER PROJECT RESULTS INCLUDED IN THE PROJECT RESULTS FRAMEWORK (FUNDS NOT ADMINISTERED THROUGH UNDP ACCOUNTS)	
Ministry of Energy, Mines and Environment - Department of Environment	8,933,888 USD
SDL Hadirat Al Anwar	30,720,000 USD
SDL City Bus Motajadida	164,282,500 USD
RADEEMA	92,120,000 USD
Professional Association of Sidi Ghanem IZ	1,000,000 USD
EMOB	1,000,000 USD
(2) UNDP (In-Kind)	**300,000**
(3) Total confirmed co-financing	**298,356,388 USD**
(4) Grand-Total Project Financing (1)+(3)	**307,972,555 USD**

SIGNATURES:

NOTE: IF THE PROJECT DOCUMENT IS IN FRENCH OR SPANISH, THE FINAL PROJECT DOCUMENT MUST BE CLEARED BY THE RTA BEFORE SIGNATURE.

Signature:	**Agreed by Government**	**Date/Month/Year:**

	Development Coordination Authority[1]	
Signature:	**Agreed by Implementing Partner[2]**	**Date/Month/Year:**
Signature:	**Agreed by UNDP[3]**	**Date/Month/Year:**
Key GEF Project Cycle Milestones:		

1 *Other evidence of government agreement may be accepted in lieu of a signature, unless the programme country government requires a signature.*

2 Not required when UNDP is the implementing partner (i.e. DIM implementation modality). If a UN Agency is the implementing partner, and has signed a SBEAA with UNDP, then the Government Development Coordination Authority, UNDP and UN Agency sign the project document. If an IGO is the implementing partner, and has signed a SBEAA with UNDP, then the Government Development Coordination Authority, UNDP and IGO sign the project document. If a CSO/NGO is the implementing partner, the Government Development Coordination Authority and UNDP sign the project document and attached it to the Project Cooperation Agreement to be signed by the CSO/NGO and UNDP.

[3] For NIM projects this is the Resident Representative. For DIM projects in a single country this is the Resident Representative. For global, regional DIM projects this is BPPS.

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List of Acronyms

ABHT	Tensift Hydraulic Basin Agency (*Agence du Bassin Hydraulique du Tensift*)
AMCC	Moroccan Capital Markets Authority (*Autorité Marocaine du Marché des Capitaux*)
AMEE	Moroccan Agency for Energy Efficiency (*Agence Marocaine pour l'Efficacité Energétique*)
AUM	Urban Agency of Marrakech (*Agence Urbaine de Marrakech*)
BPPS NCE-VF	Bureau for Policy and Programme Support, Nature, Climate and Energy, Vertical Fund team
BRT	Bus Rapid Transit
BUR	Biennal Update Report
CBD	Convention on Biological Diversity
CBI	City Biodiversity Index
CC	Climate Change
CDW	Construction and Demolition Waste
CGEM	General Confederation of Moroccan companies (*Confédération Générale des Entreprises du Maroc*)
CRI	Regional Investment Council
CUM	Urban Municipality of Marrakech (*Commune Urbaine de Marrakech*)
DE	Department of the Environment
DGCT	Directorate General of Territorial Collectivities (*Direction Générale des Collectivités Territoriales*)
DGM	General Directorate of Meteorology (*Direction Générale de la Météorologie*)
DRE	Regional Environment Directorate (*Direction Régionale de l'Environnement*)
ECI	Establishment of Intercommunity Cooperation (*Etablissement de coopération Intercommunale)*
EF	Emission Factor
EE	Energy Efficiency
EPC	Energy performance contract
ESC	Energy saving certificates
ESCO	Energy Service Company
ESS	Environmental and Social Standards
EV	Electric Vehicle
FEC	Municipal Equipment Fund (*Fonds d'Equipement Communal*)
GCF	Green Climate Funds
GEF	Global Environment Facility
GEFSEC	GEF Secretariat
GHG	Greenhouse Gas
GIS	Geographic Information Systems
GPBM	Professional Grouping of Banks in Morocco (Groupement Professionnel des Banques du Maroc)
GRM	Grievance Redress Mechanism
ID	Industrial district

IoT	Internet of Things
IPCC	Intergovernmental Panel on Climate Change
IRESEN	Solar Energy and New Energies Research Institute (*Institut de Recherche en Energie Solaire et Energies Nouvelles)*
IZ	Industrial Zone
LEAP	Low Emissions Analysis Platform
LEZ	Low Emission Zone
LP	Light point
MASEN	Moroccan Agency for Sustainable Energy
MATNUHPV	Ministry of National Territory Planning, Land Planning, Housing and City Policy (*Ministère de l'Aménagement du Territoire National, de l'Urbanisme, de l'Habitat et de la Politique de la Ville*)
M&E	Monitoring and Evaluation
METLE	Ministry of Transport, Logistics, Equipment and Water *(Ministère de l'Equipement, du Transport, de la Logistique et de l'Eau*)
MICEVN	Ministry of Industry, Trade, Green and Digital Economy (*Ministère de l'Industrie, du Commerce, de l'Economie Verte et Numérique*)
MJ	Megajoule
NbS	Nature-based solutions
NDC	Nationally Determined Contribution
NGO	Non-governmental organization
PA	Land Planning (*Plan d'Aménagament*)
PAC	Communal Action Plan (*Plan d'Action Communal*)
PB	Public Building
PCV	City Climate Plans (*Plans Climat des Villes*)
PDAR	Rural Agglomeration Development Plan (*Plan de développement des agglomérations rurales*)
PDR	Regional Development Plan (Plan de Développement Régional)
PDU	Urban mobility plan (*Plan de Déplacement Urbain*)
PIF	Project Identification Form
PIR	GEF Project Implementation Report
PMUD	Sustainable Urban Mobility Plan (*Plan de Mobilité Urbaine Durable*)
PMU	Project Management Unit
PNAM	National Program of Mutualized Liquid Sanitation and Reuse of Treated Wastewater (*Programme National d'Assainissement Liquide Mutualisé et de Réutilisation des Eaux Usées Traitées*)
POPP	Programme and Operations Policies and Procedures
PPG	Project Preparation Grant
PPE	Personal Protective Equipment
PPP	Private Public Partnership
RADEEMA	Marrakech Autonomous Water and Electricity Distribution Authority (*Régie Autonome de Distribution d'Eau et d'Electricité de Marrakech*)
RE	Renewable Energy

SCIP GP	Sustainable Cities Impact Program Global Platform
SD	Sustainable Development
SDAU	Urban Development Master Plan (*Schéma Directeur d'Aménagement Urbain*)
SDGs	Sustainable Development Goals
SDL	Local Development Corporation (*Société de Développement Local*)
SEP	Stakeholders Engagement Plan
SESP	Social and Environmental Screening Procedure
SIE	Energy Engineering Company (*Société d'Ingénierie Energétique*)
SIREDD	Regional Information Systems for the Environment and Sustainable Development (*Systèmes d'Information Régionaux de l'Environnement et du Développement Durable)*
SMEs	Small and Medium-sized Enterprises
SNAT	National Spatial Planning Scheme (*Schéma National d'Aménagement du Territoire*)
SNDD	National Sustainable Development Strategy (*Stratégie Nationale de Développement Durable*)
SRAT	Regional Spatial Planning Scheme (*Schéma Régional d'Aménagement du Territoire*)
SSTrC	South-South and triangular cooperation
STAP	GEF Scientific Technical Advisory Panel
ToRs	Terms of Reference
UNDP	United Nations Development Program
UNFCCC	United Nations Framework Convention on Climate Change
UO	Used Oil

II. DEVELOPMENT CHALLENGE

Similar to the majority of cities in the Kingdom of Morocco, Marrakech is experiencing demographic change and significant urban expansion along with several socioeconomic changes. The city also faces several environmental pressures which, in addition to the effects generated by the socioeconomic activities at the city, are strongly impacted by climate change.

The territory is under many pressures related to climate change, especially in terms of rising temperatures and droughts. In overall, the climate in the Marrakech area has shifted from a semi-arid climate between 1961-1970 to an arid climate between 1998-2007. The aridity of the Marrakech region, increasingly exacerbated by the impact of climate change, makes the issue of the scarcity of water resources a major development issue. The analysis of the evolution of the balance of supply and demand for water resources shows that the city of Marrakech has been in deficit since 2015. Currently, watering green spaces leads to excessive consumption of groundwater, mainly due to water-intensive irrigation methods and plant selection. It is estimated that 12 million m^3 of water are used each year to irrigate 1,500 ha of public green spaces in the Marrakech region. On another hand, treated wastewater provides an important potential source of water, for closing the gap between water demands and supplies. In Marrakech, the present reuse capacity of 7 Mm^3/year[4], for irrigation, is far from covering the needs. While wastewater reuse is recognized in the new Water Law 36-15 as a viable resource and necessity to meet the country's water requirements, efforts towards the creation of supporting policies and regulations would be critical for its scaling-up.

The city of Marrakech faces also rising risks of flooding as more frequent and increased precipitation are leading to significant urban flood hazards. Flash floods, in addition to damaging critical infrastructure and directly impacting the lives of urban dwellers, also are harmful to urban water supplies and drainage systems and can have lasting negative impacts on ecosystems. This is due to several factors: the increasing waterproofing of soils linked to urbanization, the filling of the riverbeds with construction and demolition wastes (e.g., Issil wadi), and indirectly the poor connections, in places, of the networks which lead to overflows in case of heavy rains.

A recent study on the assessment of the UN SDG 11.3.1[5], an indicator of sustainability in urban areas, assigned the city of Marrakech a value of 1.13 for this indicator, just over the neutral value, indicating that Marrakech appears to be slightly drifting away from a sustainable development pathway. The agglomeration of Marrakech stretches far from the center in a concentric pattern where construction in the suburbs consumes urban land at a faster rate than population growth. Urbanization and climate change weaken the soil through the modification of the natural land surface by: i) reducing the fraction of vegetation which limits photosynthetic capacity and transpiration and promotes drought and erosion phenomena; ii) the increase in albedo and the modification of the energy balance and the modification of the permeability of the soil and consequently of the water balance. This impact of urbanization on the surface climate of Marrakech results in an urban microclimate mainly characterized by the phenomenon of the Urban Heat Island (UHI). The average maximum temperature difference during spring between urban and other types of ground cover varies between 1.6 ° C and 6 ° C.

During the last two decades, Marrakech has suffered a significant delay in the development and adoption of urban planning documents. In this context, the agglomeration operated for several years without reference documents, opting for exemptions and while continuing to rely on obsolete documents pending the preparation of new strategic documents, which recorded successive delays, notably the Marrakech Development Plan (PA) and the Urban Development Master Plan (SDAU).

To simplify procedures and stimulate investments, Marrakech represented a city-laboratory for the practice of derogation, with around 2440 requests for derogations over the period 1999-2011; the peak being recorded

[4] World Bank (2017) : Managing Urban Water Scarcity in Morocco

[5] Lahouari Bounoua et al. (2020): Assessment of Sustainability Development in Urban Areas of Morocco. Urban Science Journal, Vol. 4. Issue (2, pp.), 18. (https://www.mdpi.com/2413-8851/4/2/18/htm)

between 2005 and 2008[6]. In this context, the development of urbanization has often taken place outside the forecasts and limits provided for by the SDAU of 1995, also with the absence of approved city planning documents allowing coherent and integrated planning.

During this period of anarchic functioning, the territory faced strong urban planning inconsistency: industrial districts transformed into residential, industries set up in sites which are not dedicated to such activities, more and more expensive land with the consequence of a middle class excluded from any housing program, an increasingly absent social mix, a housing deficit, problems associated with traffic, etc. The impacts of these dysfunctions were felt on several levels, in particular on the spatial level, on the land, environmental level, on the urban and architectural landscape, as well as on urban mobility[7].

Faced with this situation, and with a perspective of shifting towards a sustainable urban development model, low in carbon and resilient to climate change, several initiatives have been launched to upgrade the city's flagship sectors: urban transport, collection and treatment of waste, public lighting, management of water resources, natural heritage (e.g., green spaces, palm groves, biodiversity). However, most of these initiatives are carried out in isolated approaches and are generally not subject to an overall planning and coordination, aimed at generating synergies and ensuring progress on more than one level. They are also characterized by low durability; successful projects not being scaled up or replicated and may also face obstacles that reduce the benefits sought in the longer term.

There is no need to recall that urban planning results from several components, which generates (or not) coherence and harmony at the level of the subject territory. In addition, the challenge of sustainable urban planning is even greater as all sectors move more towards the integration of aspects favorable to the preservation of the environment, social equity in addition to economic development. In this context, urban planning in Marrakech must not only catch up with the delay recorded in urban planning but also ensure the integration of sustainability in future strategic urban planning documents and in their implementation. It is therefore a matter of broadening the need for consistency to all the components concerned: building, mobility, housing, social policy, waste management, public lighting, green spaces, etc. It is also a matter of meeting several challenges, overwhelmed during years of anarchic operation, in order to succeed in overcoming the urban inconsistency as well as the various resulting impacts. The main challenges encountered are summarized below:

- **Demography:** The city of Marrakech has experienced sustained demographic growth in recent decades and has combined with the extension of its urbanization perimeter. Barely occupying an area of 21 km² in 1945, the urban area of the city of Marrakech grew by 10 folds, from 37 in 1989 to 230 km² in 2014, with the development of new peri-urban areas generating an increasing influx of populations from these areas to the city of Marrakech for employment, access to public services, education, health care, etc.;

- **Social cohesion:** The organization of Marrakech is centrifugal, with an urban sprawl that develops according to land opportunities. This is not without impact on the cost of urbanization, the right of access to services and facilities in the city, and on the surrounding rural environment. The lack of harmonization between the different zones widens the fragmentation of the city and the social gap. Such an organization needs to be rethought and adjusted, in particular to ensure harmonization within the city, reduce inequalities and ensure access to various equipment and basic infrastructure;

- **Economic competitiveness:** The socio-economic development of Marrakech is driven by the tourism sector. This factor, while it appears to be beneficial for the city, has its downside. Indeed, some sectors are experiencing a decline in their activity, as is the case of the industrial sector, faced both with the decline of its traditional agricultural base, on the outskirts of Marrakech, and the difficulty of maintaining industrial activity in a touristic environment marked by strong competition, particularly in terms of land. Nowadays,

[6] Source: Impact study of exemption projects in the territorial jurisdiction of the Marrakech urban agency, Summary of the study, August 2014

[7] Source: Impact study of exemption projects in the territorial jurisdiction of the Marrakech urban agency, Summary of the study, August 2014

and in particular with the COVID-19 crisis, the impacts are already being felt for a city which economy is based mainly on touristic activities. Therefore, it is essential to rethink the current model and to reconcile between the different economic sectors; a crucial element to be taken into consideration during urban planning;

- **Governance:** The latest and planned urban documents attempt to systematically adopt a participatory approach to ensure rational and transparent planning with respect to various stakeholders. However, such consultation remains focused on a limited number of stakeholders, and must be broadened to also include citizens, civil society, academia and the private sector;

- **Ecology and climate:** Almost all of the impacts of climate change and land use change have direct or indirect consequences for urban ecosystems, biodiversity, and the critical ecosystem services they provide for human health and well-being in the city. Climate change and urbanization are likely to increase the vulnerability of biodiversity hotspots, urban species, and critical ecosystem services which are key strategy for mitigating and adapting to the effects of climate change. Even if the strategic urban documents attempt to integrate sustainable development, the fact remains that effective consideration is weak, especially following this phase of continuous exemptions experienced by Marrakech. Climate change is even less considered. Urban sprawl comes at the expense of the city's biodiversity, ecosystems and resources, further increasing its vulnerability to climate change. An integrated approach involving scientists, territorial institutions, local communities and policy-makers will be necessary to develop successful response to climate change, make the city's infrastructure and population more resilient and its infrastructure development sustainable. Urban ecosystems and green infrastructure can provide cost-effective, nature-based solutions for adapting to climate change while also creating opportunities to increase social equity, green economies, and sustainable urban development.

Several constraints therefore persist at several levels, particularly at the level of urban planning. A lack of strategic vision is also to be noted, due to insufficient capacity and lack of knowledge regarding the integration of sustainable development into urban planning.

However, at the national level, urban planning is beginning to take on a new dimension by incorporating new principles of sustainability previously ignored. The updated Nationally Determined Contribution (NDC)[8] devotes a section to the definition of adaptation objectives and mitigation measures that will be targeted during the 2020-2030 decade. In this context, the updated NDC considers the generalization of City Climate Plans (PCV), the up-scaling of eco-neighborhoods already set up in order to converge towards sustainable cities and the mitigation of heat spots by improving green spaces and rationalizing water consumption. Accordingly, the NDC is moving towards a generalization of these sustainability practices at the national level to tackle the challenges that Moroccan cities will have to face.

In order to support the country in achieving its objectives in terms of mitigation and adaptation, but also to support the integration of sustainable development, in the context of advanced regionalization, Moroccan cities and towns have an interest in integrating multi-sectoral and crosscutting urban planning, to respond efficiently to the multiple challenges of a country in full socio-economic transition. The sustainable development way elected by the country at the highest level through its National Sustainable Development Strategy (SNDD) should be reflected at the local level.

This project is part of this framework and supports the city of Marrakech in improving the framework conditions relating to sustainable urban planning and strengthening sustainable development actions at the city level through

[8] The Moroccan updated NDC was submitted to the UNFCCC on the 22nd of June 2021: https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Morocco%20First/Moroccan%20updated%20NDC%202021%20_Fr.pdf

the implementation of targeted actions. The project aims to address the various difficulties and barriers facing the city, by creating a favorable environment for a transversal and multi-sectoral integration of sustainability.

III. STRATEGY

The project aims to promote an integrated urban planning and development of innovative financing instruments at the city of Marrakech through a multisectoral and inclusive approach guaranteeing effective management and spur of a paradigm shift towards an anchored sustainable development.

The project aims to be multidimensional by acting on several sectors and components of the city, as summarized in the following figure:

Figure 1 : The various objectives targeted by the project

The long-term impact of the project is to make the city of Marrakech a benchmark in Morocco in terms of sustainability through an improvement of governance, urban planning and financing schemes, as well as tap on best experiences and actions carried out in the city.

The implementation of project components will ensure significant change at several levels. The achievement of the objectives is based on the implementation of the proposed activities, which remain dependent on several assumptions conditioning the success of the project (see Theory of Change).

To ensure achievement of the sought changes and impacts, the project is structured according to the following components:

- **Component 1:** Evidence-based sustainable and integrated urban planning & policy reform;
- **Component 2:** Sustainable, low-carbon, resilient, integrated investments related to land conservation and restoration;
- **Component 3:** Innovative financing and scaling-up programs generalized through sustainable urban investments;
- **Component 4:** Advocacy, knowledge exchange, capacity building and partnerships.

The project strategy is based mainly on an inclusive process of stakeholder participation. This multi-stakeholder engagement which contributed to the development of the project should continue during its implementation, monitoring and evaluation (M&E). With a wide range of stakeholders, the project activities will take advantage of

sustainability initiatives already carried out at the city level, the engagement of stakeholders, their complementarity and synergies, ensured by the adoption of a coordination process favoring planning, exchange, communication, implementation, monitoring and evaluation.

Given its multiple interventions and objectives, the project tackles various GEF focal areas, including biodiversity, climate change and land degradation. In addition, the project is part of the overarching GEF-financed program, namely “Sustainable Cities Impact Program (SCIP)”, which aims to support cities to pursue integrated urban planning and implementation with global environmental benefits. In this sense, the project is designed to support the city of Marrakech in addressing several urban planning challenges in several sectors and various scales. The project covers several sectors, including urban planning, mobility, biodiversity, waste, water, energy, land degradation and aims to provide innovative solutions to urban planning and financing, and to support local investments to stimulate and strengthen the sustainable development of the city of Marrakech. This proposed project in Marrakech will be part of a cohort of cities across the globe facing similar urban planning and climate change challenges. Marrakech will be well positioned to share its learnings with the other cohort cities as well as learn from them.

Based on the current dysfunctions, barriers, assumptions and expected impacts, a figure summarizing the project's Theory of Change is presented below. The detailed Theory of Change is presented in Annex 17, presenting the products and activities planned under the project, as well as the various barriers and assumptions required for a successful implementation of the project.

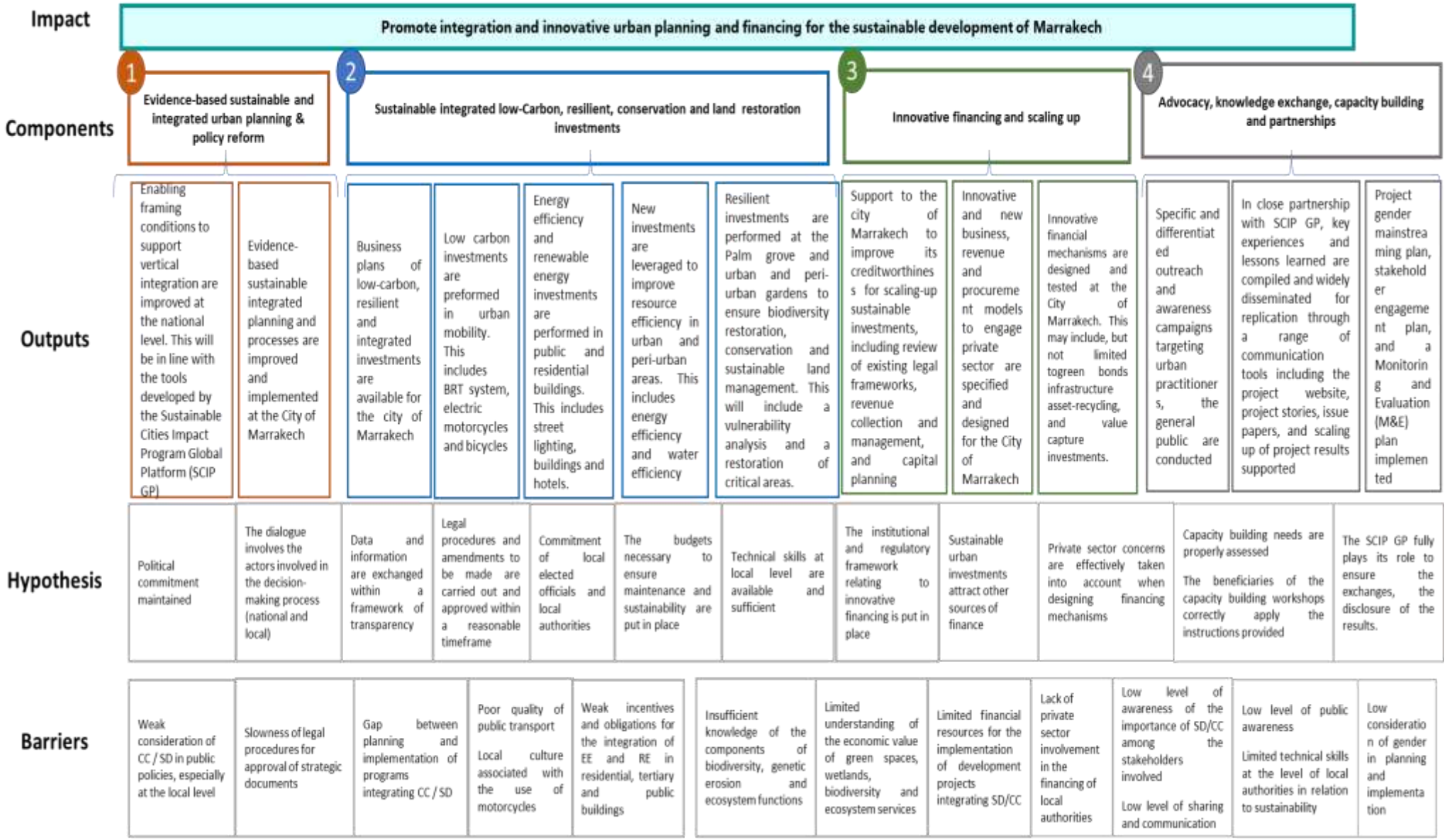


Figure 2 : Simplified theory of change

IV. RESULTS AND PARTNERSHIPS

Expected Results:

The purpose of the project is to promote an integrated urban planning and innovative financing for sustainable development. The project aims to strengthen the sustainable development of the city of Marrakech through the following components:

Component 1: Evidence-based sustainable and integrated urban planning & policy reform

The urban municipality of Marrakech operated for a long time with derogations and without long-term strategic documents. The lack of urban planning documents coupled with rapid and uncontrolled urbanization has fostered land speculation, devalued urban landscapes as well as natural environments, and deepened further social inequalities.

Faced with this situation, Marrakech Urban Agency committed itself in 2018 to cover most of the municipalities within its scope of intervention with urban planning documents. As a result, the territory has seen the development of various urban planning documents including PAs and PDARs. The year of 2016 also saw the launch of the SDAU, which is the main urban planning and development document.

This project will be part of this dynamic and aims to support the urban municipality of Marrakech to fully integrate sustainable development into its urban operating model. Through this component, the project aims to ensure a change in the procedures in place and to mobilize the various stakeholders to ensure vertical and transversal integration of sustainability. Indeed, sustainable urban planning covers multiple dimensions: technical, economic, ecological, social, and cultural. It is therefore a question of mobilizing key stakeholders capable to think and make the city differently, create another model of urban planning and development, but also, invent other ways of life, ways of living, of moving and consuming.

Far from being a procedure, sustainable urban planning is a process, a project and progressive approach that challenges professional practitioners, decision-makers, local elected officials and other key stakeholders, including citizens. The transformation towards sustainable urban planning remains a key issue which requires the mastery of several aspects and the availability of conditions conducive to this framework of planning and living, that is integrated and sustainable.

In order to support the upgrading of urban planning in Morocco, a review of the framework conditions at the national level is required. Indeed, urban planning procedures and their validation depend on the central level, while the elaboration, development and implementation remain dependent on local stakeholders, in particular through urban agencies which work in consultation with the key governmental sectors of the concerned territory. Therefore, this component aims first to examine the current framework conditions that accompany urban planning. This involves examining the institutional and legal framework, the procedures in place, the various documents and tools used to translate the vision of the territories in this area. Such work will not only benefit to the City of Marrakech, but to other cities of the country.

In this context, it is recommended to capitalize on the achievements of the Project “Integration of the global environment aspects into the local strategic planning process” which was carried out at the level of 3 pilot subnational regions with the support of GEF and UNDP, and developed and tested a set of tools for integrating sustainable development into local strategic planning, through a participatory process involving all the stakeholders. Among these tools that it is recommended to consult within the framework of this component: the Reference Framework and the guidelines for the integration of the environment and sustainable development into local

strategic planning, the Methodological Guide, and the Assessment tool of the National Sustainable Development Strategy specific to Territorial Communities.

Moreover, this component aims to analyze in depth the approach recommended by the Sustainable cities impact program Global Platform (SCIP GP) to identify the approaches to be developed, to be adopted but also those to be adapted to the urban municipality of Marrakech. Considering that each territory has its own specificities, any sustainable development approach must be flexible, coherent, and adapted to the local socio-economic context.

This component also aims to upgrade urban planning processes in Marrakech and update its urban planning. It advocates consultation between the various key stakeholders involved in urban planning, through dialogue, to define the long-term vision of the City of Marrakech and strategic planning orientations, while taking into consideration the priorities, objectives, and constraints of these stakeholders. This participatory approach will bring several benefits to the process, in particular the foundation of a common vision for all stakeholders and their adherence to the resulting urban planning documents. The dialogue will also be an opportunity to put an end to the issue relating to the management of territorial data, through the support of a unit under development and dedicated to the management, monitoring and evaluation of data in Marrakech.

This first component integrates one Outcome and two Outputs:

Outcome 1.1: Local and national governments have strengthened institutions, processes, and capacities to undertake evidence-based sustainable integrated planning and policy reform

- **Output 1.1.1**: Enabling framing conditions to support vertical integration are improved at the national level. This will be in line with the tools developed by the **Sustainable Cities Impact Program**

BOX 1: Role of the Urban Municipalities under Component 1.

The effective implementation of the advanced regionalization launched by Morocco in 2015, which reflects a strong desire to revamp and modernize state structures in order to consolidate the integrated development of all subnational regions and cities, rely on rallying all stakeholders around a common development project through policy dialogues to inform the reform process.

In line with the perspectives of the country's advanced regionalization, the two Urban Municipalities of Marrakech as well as the Marrakech-Safi Subregion Council will be strongly involved in the policy dialogue activities of Outcome 1.1 to provide them with the necessary means to showcase their experiences, share their constrains and visions in terms of urban sustainable development to sustain a bottom-up approach for urban policy reforms in the country.

Whereas for activities of Outcome 1.2 geared to improve and implement sustainable integrated planning and processes at the City of Marrakech, the two Urban Municipalities of Marrakech and the Marrakech-Safi Subregion Council will have to lead these activities at the onset of their design to ensure that necessary synergies with on-going initiatives are reached and to maximize results and impacts.

  - **Activity 1.1.1.1.:** Diagnosis of framework conditions relating to territorial urban planning (institutional framework, legal framework, procedures, documents, tools, etc.)

Territorial urban planning is a process of crucial importance when it comes to creating a sustainable balance for territories, providing a framework for the coordination of public (and private) action and for economic and social development.

In Marrakech, urban planning has gone through a phase of anarchic functioning generating impacts on several scales. This activity proposes to analyze the process of upstream territorial urban planning, in particular the framework conditions, in order to identify the weaknesses and shortcomings of the process in place. The diagnosis will be carried out on the basis of a critical analysis which will lead to the recommendation of concrete measures to strengthen the provisions in place.

- **Activity 1.1.1.2.:** Organization of a multisectoral policy dialogue on the integration of sustainability in urban planning and in sectoral strategic planning documents

As their development involves crossing and reconciling many thematic issues, territorial planning documents involve several sectoral and crosscutting stakeholders. In addition, sustainability considers different aspects, to seek harmony between the challenges of economic development and social and environmental needs. Therefore, coordination and a high-level dialogue are necessary by involving key stakeholders concerned by the integration of sustainability. This dialogue will be an opportunity to expose the strengths and advantages of the integration of sustainability, to discuss the national and territorial framework conditions relating to urban planning, to discuss the needs of stakeholders and to structure coordination between all levels (national, subnational and local) around a sustainable system.

Taking into account the current sanitary circumstances of Covid 19, organization of this dialogue will necessarily take into account the health requirements advocated by the Government of Morocco. It is important to mention that the country has been able to adapt adequately to the pandemic by adapting barrier gestures and by establishing teleworking, which is practiced on a large scale and by all the country's institutions. As a result, the dialogue can be organized virtually, if the conditions are not favorable for the organization of face-to-face events.

Global Platform will support this activity by bringing successful experiences of governance structures and models on urban development. Also, Support from the SCIP's national dialogue is expected, that can bring together national and city-level stakeholders for closed door engagement.

- **Activity 1.1.1.3.:** Development of a national roadmap for the establishment of the framework conditions related to the integration of sustainability into urban planning, to be operationalized through a policy instrument.

The two activities carried out previously will enable to identify proposals for the integration of sustainability in urban and sectoral planning. The results of these activities will be used at this level to develop a national roadmap that will lead to the implementation of the recommended measures. Given the multitude of stakeholders, having a national roadmap will enable to bring together the various foreseen measures, and to have a common vision translated into a policy instrument to ensure implementation and monitoring. This roadmap will summarize the concrete measures, the means of implementation, the guiding principles, the key activities and timetable.

To support the implementation of this roadmap, it will be operationalized through a policy instrument to engage all key stakeholders involved in the implementation.

- **Output 1.1.2**: Evidence-based sustainable integrated planning and processes are improved and implemented at the City of Marrakech
  - **Activity 1.1.2.1.:** Development of an action plan to reflect the commitment of the Marrakech-Safi sub-region within the framework of the implementation of the SNDD.

The National Sustainable Development Strategy represents the strategic reference document in Morocco aimed at consolidating all public policies in terms of sustainable development and guides the implementation of a green and inclusive economy by 2030. Emphasizing on the consistency of all sectoral interventions, the implementation of the SNDD also requires the involvement of territories to promote the shift towards sustainable development at all scales and encourage local action. Therefore, this activity proposes to develop an action plan reflecting the implementation of the SNDD at the level of Marrakech-Safi subregion, as the first subregion in the Kingdom to have signed an

agreement with the Department of Environment for the SNDD implementation. This will in fact involve an in-depth analysis of the SNDD and examining the modalities of its operationalization at the subregional level.

- **Activity 1.1.2.2.:** Territorial dialogue to ensure alignment of objectives and priorities of strategic documents and identification of integrated and sustainable orientations for the city.

Local authorities in Morocco are experiencing the launch of several strategic documents and initiatives which meet the growing needs of the population and the territories, which are also aligned with the country's efforts in sustainable development. As there are many stakes, the stakeholders define their interventions and their strategic documents according to sectoral and local priorities. For Marrakech, the efforts carried out so far require the establishment of a multisectoral framework, which involves the various stakeholders of the city and allows them to structure a common vision for the territory. Thus, a territorial dialogue will be conducted to facilitate consultation between elected officials, citizens, and professionals for a richer, better shared, and more sustainable public action. The dialogue will in fact involve representatives of the various stakeholders as part of a participatory process and will be organized under appropriate conditions in line with the current Covid-19 sanitary circumstances. Thus, the precautionary measures will be applied taking into account the health requirements. Two options can be considered: 1) organizing the dialogue through virtual platforms and 2) organizing face to face events in compliance with the country's health requirements (distancing, wearing masks and disinfection of venues).

- **Activity 1.1.2.3.:** Upgrade of the Communal Action Plan (PAC) and other strategic documents of the City of Marrakech to ensure integration of sustainability

The institutionalization of territorial planning is part of the decentralization process in which Morocco is engaged. This is an approach intended to open the municipalities to new opportunities in terms of development and local management.

At the level of a municipality, the Communal Action Plan (PAC) constitutes the reference document outlining the economic and social development strategy of the municipality over a period of six years. This activity will aim to analyze the Marrakech PAC with the perspective of its upgrading, in particular the consideration of sustainability and its multi-sector integration. Besides the PAC, this activity will also identify other strategic documents of Marrakech, which will be subject to diagnosis and upgrading as well. The overall objective is to provide the city with a panoply of planning instruments, coherent and complementary, integrating sustainability and in line with national strategic orientations, in particular the SNDD.

- **Activity 1.1.2.4.:** Support to the establishment of a multisectoral data management unit (waste, energy, transport, green spaces, etc.) at the City of Marrakech, to scientifically inform the process of integrating sustainability into urban planning.

Monitoring sustainability integration into urban planning is very broad and can integrate several components related to the three dimensions of sustainable development. This is indeed a balance sought by urban planning documents, which aims not only to meet equipment needs[9], but also to regulate the urban sphere to reduce socio-spatial inequalities. However, monitoring the integration of sustainability into urban planning is not an easy task without a strong and coherent approach.

In this context, this activity meets this need by strengthening a multisectoral data management unit that the City of Marrakech has set up. Indeed, the latter has set up a control center for public lighting, waste management and public transport by BRT. Through this activity, this center will be further strengthened to cover other sustainability thematics such as the management of green spaces, other modes of transport, the rationalization of various forms of energy, management of different waste streams, among others. This center will need to have a structured framework and strong partnerships allowing it to have multisectoral data to scientifically inform the process of

[9] These relate to IT equipment and software such as GIS tools (see budget Note n°5 in Chapter IX. TOTAL BUDGET AND WORK PLAN)

integrating sustainability into urban planning. This strengthening will encompass also data digitalization to streamline traditional processes through digital technologies to ensure more efficiency.

Component 2: Sustainable integrated low-Carbon, resilient, conservation and land restoration investments

This component will have a major leverage effect for the achievement of sustainable investments in the City of Marrakech, which experienced in the past few years the implementation of several sustainable development and climate change initiatives through different sectors, including urban transport, public lighting and waste management.

However, these initiatives have been carried out on a unique sectoral basis, and less on an integrated and comprehensive approach that can coordinate and harmonize all sectoral interventions. In this context, the results of the first component of the project will be of great value to ensure set-up of a common, sustainable, integrated and crosscutting vision.

This second component builds on the initiatives already carried out, ensures the scaling up and propose new interventions, with the aim of promoting the integration of sustainability in the different sectors of the city. The component also proposes an in-depth analysis of low-carbon initiatives, mainly by building on international experiences that can be adapted to the characteristics and specificities of the city. The main sectors considered under this component are those that are the most energy-intensive, most GHG emitting, or most vulnerable to climate change.

Box 2: Project's Approach to GEF INV Support

Under this outcome 2, many outputs involve sustainable investment for which the project will provide direct financial support ('GEF INV support'). For each output, the project's final approach to supporting the specific sustainable investment, and the related level of GEF INV support, will be determined in a preparatory step during implementation. This final approach will take into account the following principles:

(i) Ensure that the IP (GEF executing entities') selected modality to make the GEF INV is in line with UNDP's policies and financial rules and regulations. If there is a departure between the IP's policies and UNDP's polices, UNDP's policies must prevail.

(ii) Ensure that the level of GEF INV support for private sector beneficiaries is determined on the principle of minimal concessionality. Or in other words, that the GEF INV is used as efficiently as possible. In practice, during implementation, this will nearly always involve a step in the GEF INV financial mechanism where a financial analysis of the investment opportunity will be performed.

(iii) Ensure that the design of the mechanism to provide GEF INV support in the particular sector safeguards financial resources against potential wrongdoing, for example involving checks-and-balances, committees, and/or multiple individuals, on key decisions. Quoted cost of investments should be checked against market prices.

(iv) Ensure that any GEF INV to the private sector recipients is done on a competitive process to identify the recipients.

The outcome and outputs expected under Component 2 are as follows:

Outcome 2.1: Local and national governments have undertaken sustainable integrated low carbon, resilient, conservation and land restoration investments

- **Output 2.1.1:** Business plans of low-carbon, resilient and integrated investments are available for the city of Marrakech
    - **Activity 2.1.1.1:** Development of the Sustainable Urban Mobility Plan

In 2008, Marrakech adopted an Urban Travel Plan (PDU), a tool that made a diagnosis of the mobility in the city and provided guidance for upgrading the sector by the year of 2030. Currently, the results and orientations of this PDU are considered outdated, given the strong socio-economic evolution that the city has experienced during the last decade. It is therefore necessary to update this document.

From 2017, a new generation of the PDU was born, namely the Sustainable Urban Mobility Plan (PMUD). This plan represents a 15-year road map defining the main guidelines of transports, traffic, and parking organization within the perimeter of the city of Marrakech and the neighboring municipalities.

The PMUD is a powerful tool that will ensure the coherence and the alignment of the different means of transport of people and goods and improve the complementarity between the different ways that seek to rationalize the global system of transport, without neglecting the strengthening of the links between urban planning, transport and road safety.

Therefore, the activity 2.1.1.1 aims to support the city of Marrakech in the development of its own PMUD, based on the achievements and failures identified during the implementation of the city's PDU. The project contribution will cover 50% of the PMUD cost. Without such project contribution, the PMUD can be delayed, and its scope of work will be limited to the generic ToRs set by the Ministry of Interior with support by MobiliseYourCity initiative[10] (see also Table 5). GEF investments will be key in extending the scope of the PMUD to include other issues such as carbon neutrality targets.

Accordingly, the project will explore supporting and developing climate and sustainability long term plan at the beginning of the project. This plan is expected to bring the evidence/data of what needs to be done (e.g. reducing Marrakech pollution and GHGs emission and resilience building) and the activities to achieve that in the medium term (5 years) and in the long term. For example, the project will examine if it would be useful if Marrakech considers making a carbon neutrality target. For instance, the UNFCCC and multiple global partners are promoting the Race to Zero framework for cities which proposes a carbon neutrality target for cities by 2050 in alignment with the Paris Agreement.

A common inter-institutional plan will also help to harmonize priorities across the city, coordinate work between relevant local and national agencies which will need to be represented in the development, executing and monitoring aspects of the plan.

- **Activity 2.1.1.2:** Environmental and social impact studies of the scaling-up of the BRT system

The urban public transport sector has experienced ambitious sustainability and low-carbon initiatives, in the last recent years, in order to adapt it to the growing needs of the population and the increasing demands of the tourism sector as well as to contribute to the fight against climate change by reducing the sector's GHG emissions. Among these initiatives is the introduction of the Bus Rapid Transit (BRT) in 2017 by the commissioning of 10 electric buses at the Massira line[11]. Many sites, equipped with intelligent light-signaling, have been created for electric BRT traffic regardless of road traffic constraints. Compared to diesel buses, the 10 electric buses save 374,427 liters of diesel per year and therefore reduces annual GHG emissions by 1,003 teCO2.

The activity 2.1.1.2 is dedicated to the development of environmental and social impact studies of the scaling-up into diesel BRT Euro 6 (371 buses in 2022 and 395 buses in 2024) and electric BRT system, which will be carried out

[10] https://www.mobiliseyourcity.net/node/214
[11] The electric BRT was operated on a pilot scale during COP22 in December 2016

in two phases: (i) the addition of two new slow-charging electric lines serving the Medina and the airport with 11 additional electric buses in 2022 and (ii) addition of two high-capacity and opportunity charging basic lines, serving respectively: the new bus station -the Medina-Sidi Youssef Ben Ali line and the Massira-Guéliz line with 29 additional electric buses. The BRT system eases the access to certain vital social services located in the city center, such as educational institutions (universities, technical training centers and private schools) and health care centers. These new buses also offer greater comfort to meet the needs of certain vulnerable categories of beneficiaries such as the elderly, pregnant women, and people with disabilities. Furthermore, the scaling up of the BRT system can reduce GHG emissions of the transport sector, create employment opportunities, improve the quality of public transport service, and promote the image of the city of Marrakech.

The studies will mainly concern the analysis of environmental and social impacts of the BRT system and thus identify its positive and negative effects, whether direct or indirect, on the natural and human environment of the target area while identifying possible corrective or improvement actions to ensure its successful scaling-up.

- **Activity 2.1.1.3:** Development of new business plans to promote sustainable solutions related to waste management (dangerous and non-dangerous waste), biodiversity and water resources

To ensure a sustainable urban planning that is based on integrated, low-carbon and resilient investments, it is essential to develop a well-structured and detailed business plans to guide the implementation of planned projects and initiatives. These business plans will also represent a guideline for the development of innovative financing instruments under Component 3.

By analyzing low-carbon initiatives already carried out and new actions inspired by international experiences, a package of investment opportunities can be identified and adapted to the context and specificities of the City of Marrakech. Each new investment proposal or scale-up of existing initiatives must be supported by a concrete and coherent business plan outlining all necessary actions, means of implementation, planning and financial planning and budgeting.

The three sectors concerned are waste management, biodiversity and water resources given their importance in terms of sustainability, environmental conservation and climate change. The developed business plans will serve as a guide and a reference when implementing the identified solutions for each of these key sectors. Both private and public investments will be considered.

- **Output 2.1.2:** Low carbon investments are pre-formed in urban mobility. This includes BRT system, electric motorcycles and bicycles

Box 3: GEF INV under Output 2.1.2

During implementation, all project activities providing direct financial support to investments (GEF INV) under this Output will begin with an initial step where with PMU, in consultation with key stakeholders, will prepare individual 'Project Investment Plans' for each activity. These plans will finalize - via detailed financial, technical, legal and procurement/operational assessments - the project's approach to providing GEF INV support for each activity. The plans will address the key principles included in Box 1. For each activity, this plan will be submitted for clearance to UNDP (CO and BPPS NCE), and then shared with Project Board.

- **Activity 2.1.2.1:** Contribution to the investment related to the deployment of the first phase of EMOB's sharing system of electric scooters

The city of Marrakesh is characterized by a strong use of motorcycles with internal combustion engine (ICE), as one of the leading means of urban transport, given its almost flat topography, with nearly 180,000[12] units in circulation generating 91,218 teCO2/year. As such, a project that aims to promote electric motorcycles in the city is planned thanks to a partnership between the city of Marrakech, the Regional Council of the Marrakech-Safi subregion and the sustainable transport company EMOB[13]. EMOB was selected after a competitive process conducted by the Regional Council of the Marrakech-Safi subregion.

The main purpose of the project is to make of Marrakech the most important African platform dedicated to the sustainable mobility industry and to set up in the Marrakech-Safi subregion an industrial ecosystem devoted to the construction and marketing of sustainable vehicles. The city will thereby become a showcase and an international model for ecological mobility. By 2040, the Marrakech-Safi subregion aims to have a 100% sustainable two-wheeled vehicles fleet. Thus, this project is articulated around three axes: i) the promotion of electric motorcycles via a sharing system, ii) the establishment of a showroom for the marketing of electric motorcycles, (iii) ultimately establish a local electric motorcycle manufacturing unit.

The activity 2.1.2.1 will support the sharing system of electric motorcycles through a financial contribution to the investment related to the first phase of its deployment (i.e., procurement of 320 electric motorcycles[14]). The basic concept is to make a fleet of self-service electric scooters available to citizens in several points of the city. This fleet will be accompanied by a mobile application (app) that can be downloaded on specialized download platforms. The app will enable users locate, book and use the scooter, then pay for the ride. Based on EMOB's business plan, the first phase of this sharing system is planned to be launched in 2021/2022 in several locations of the city according to the following functioning:

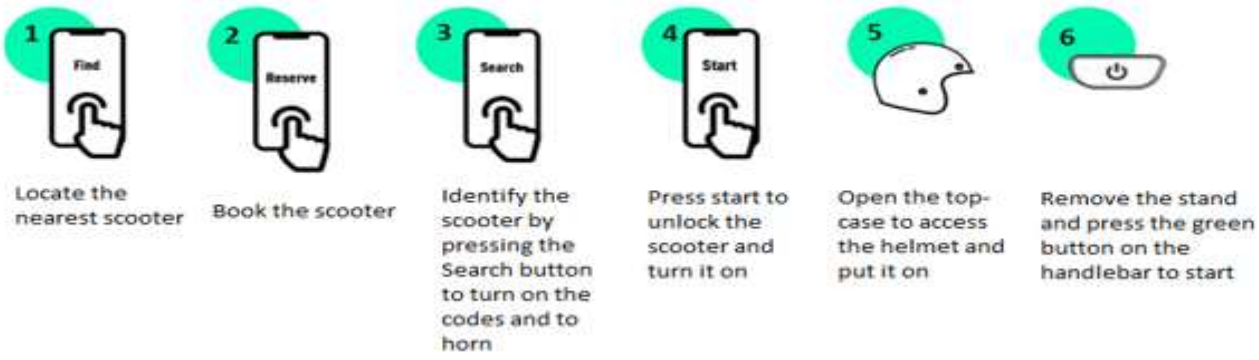


Figure 3: E-mob sharing system

- **Activity 2.1.2.2:** Implementation of a Low Emission Pilot Zone (LEZ) near the tourist area Jamaa Lafna Square

Already adopted by 231 cities or metropolitan areas in Europe, the implementation of Low Emission Zone (LEZ) is known as a very effective measure to reduce the emissions generated by road traffic, one of the main sources of air pollution in cities.

[12] Data from Marrakech's thermal motorcycle fleet were identified following a major field survey conducted as part of the "Feasibility Study for the Introduction of Electric Mobility in the City of Marrakech" carried out between 2018-2019 by the Mohamed VI Foundation for Environmental Protection

[13] EMOB, a joint venture carried out by a local industrial operator (IMPRERIUM HOLDING) and the insurance company Allianz SE: www.emob.ma

[14] This is based on a business plan shared by EMOB

The purpose behind the implementation of these kind of zones is to promote the circulation of clean vehicles, limit the circulation of polluting vehicles and allow only clean vehicles to drive in certain strategic areas, such as city centers.

Concretely, a sticker can be created and placed on the windshield to distinguish vehicles according to their level of emissions of air pollutants and to recognize those who can drive in the LEZ. The most polluting ones will not be able to drive in the zone on certain time slots, which improves air quality in areas with high population density (city centers) and encourages the population to adopt clean vehicles. Moreover, specific traffic signs and road markings will be placed by the city of Marrakech at every entry point along the boundary and along key arterial approaches of the LEZ.

- **Activity 2.1.2.3:** Financing of two-wheeled vehicles lanes in some key roads of the city

The implementation of lanes dedicated to two wheeled vehicles is a road system intended to organize the circulation of bicycles and motorcycles that are widely used in Marrakech. These facilities are barely deployed and respected by the users in Moroccan cities and may take the form of dedicated pavements or strips on the side of the road by using a simple tracing of paint and pictograms. These roads are usually equipped with signs indicating their specific features. The UN Habitat guide "Streets for walking & cycling. Designing for safety, accessibility, and comfort in African cities, 2018" can be used as a reference for the implementation of this activity[15].

This type of settings will remove several safety barriers to the use of bicycles or electric motorcycles, and provide a suitable infrastructure for the two wheeled vehicles and thus encourage and promote their use. The awareness of urban road users in the city of Marrakesh will be increased through the awareness raising activities in component 4.

- **Activity 2.1.2.4:** Development of a smartphone application dedicated to the different public transport means available in the City of Marrakech

Already adopted in several cities around the world, the mobile application will help users access itineraries and schedules as well as correspondence settings of different public transport means available in the city. Such an app will be completely a new tool for Morocco, but it is at the same time quite appropriate given the widespread use of mobile devices and availability of mobile location.

Such app will allow users identify the fastest path to take as well as the best transport combinations to use to move from point A to point B. By integrating the sharing system of bikes, electric motorcycles sharing system, buses,

[15] Streets for walking & cycling Designing for safety, accessibility, and comfort in African cities

electric BRT or taxis, this application should remove several accessibility barriers and should encourage other drivers to adopt less polluting means of transport, including electric BRT, electric motorcycles and self-service bicycles.

The development of the mobile application will be based on a call for projects through startup networks, since the project proponent who will be selected will benefit from financial assistance but also from the support of the city, particularly in terms of data access and cooperation with the various operators of public transport modes in Marrakech. This cooperation is crucial to ensure the subsequent launching of the sustainability of this service. A partnership can be planned between the project proponent and the public transport operators in Marrakech to ensure the sustainability of the application. Regarding economic viability, a business model based on advertising revenue is profitable and sufficient when the application reaches a critical volume of users.

- **Activity 2.1.2.5:** Development of a network of solar charging stations for electric motorcycles and vehicles

To promote the transition to electric mobility for individuals, several measures must be put in place such as incentives measures, however, an infrastructure that can ensure the charging of this kind of vehicles must also be developed.

The goal is to develop a network of public low carbon solar charging stations dedicated to electric vehicles dispatched in car parks, service stations, etc., since the city of Marrakech has a very low density of electric charging stations. In fact, the stations available are usually located in the entrances and exits of the city or in private hotels.

The project therefore plans to implement 15 solar charging stations, to encourage the conversion of conventional car users to electric vehicles. This should allow the democratization of these technologies and therefore the generalization of private charging stations among individuals, companies, or public institutions.

Figure 4: Map of charging stations available in Marrakech

- **Output 2.1.3:** Energy efficiency and renewable energy investments are performed in public and residential buildings. This includes street lighting, buildings and hotels.

BOX 4: Beneficiaries of this activity will be identified through a transparent selection process and based on a set of criteria. Project financial contribution will be reassessed at the onset of implementation through a financial, legal and technical assessment to define the level of concessionality. The outcome of this assessment will be discussed and concerted among key stakeholders and endorsed by the PMU and the Steering Committee. Implementation of this activity will be formalized through a legal contract between selected hotels and the Implementing Partner (Department of Environment). The selection of hotels will be through a competitive process.

- **Activity 2.1.3.1 :** Financing energy audits of public buildings with an annual electricity / water bill greater than 0.25 million MAD and EE and RE investments in 10 of the audited buildings

Within the framework of the 2009 National Energy Strategy, Morocco has placed EE among the national priorities. Recently, in 2018, Morocco undertook a feasibility study for the establishment of a National Energy Efficiency Program in Public Buildings. Today, Morocco is proclaimed as an example in EE. In this context, it is recommended to implement an action to reduce the energy consumption in public buildings and its environmental impact in Marrakech.

This activity is subdivided into two financing sub-activities: First, a high degree of financing, up to 100%, of the performance of complete energy audits (including water resources) in about twenty public buildings in Marrakech selected according to their annual bill (greater than 250,000 MAD / year). This high degree of subsidized funding of energy audits of buildings is mainly justified by the exemplarity that the state must set in terms of saving all resources and it is in this sense that the project can provide support; Second, a share of the financing of investments, with initial estimates of up to 25% of the costs, in EE-RE and water resulting from the recommendations of the audits, for 10 of the 20 buildings audited. The remaining 75% in investment needs will be financed by the State and showcased results will allow other State entities to follow the successfully completed projects.

The assistance of the city and its Autonomous Water and Electricity Distribution Authority (RADEEMA[16]) will be essential to identify the buildings to select. The audits will ideally be carried out by national consulting firm duly authorized under the Law 47-09 and its decree 2-17-746, to promote national capacity building in EE and RE.

The control of subsidy budgets will be done in such a way as to limit the total amount to the maximum of the budget estimated, knowing that after the audits and the recommended energy reduction measures the amounts may be different but without exceeding the funding budgets initially planned.

- **Activity 2.1.3.2 :** Financing of 20% of energy audits in tourist establishments with a capacity of less than 30 rooms, grant assistance that covers 10% of EE and RE investments in 50 tourist establishments and conducting a study to select 50 future recipients of the sustainable tourism label “Green Key”

The City of Marrakech is known worldwide as an important tourist destination. It has more than 1,500 tourist establishments of different types and sizes, from small lodges with 2-3 rooms to luxury hotels with more than 300 rooms. Over the years, the Green Key sustainable tourism label[17], recognized worldwide and promoted in Morocco by the Mohamed VI Foundation for the Environment, witness 57 labeled establishments in the country including 27 in the City of Marrakech only[18].

[16] https://www.radeema.ma/
[17] https://www.greenkey.global/
[18] https://www.clefverte.ma/fr

A. As a first step, it is necessary to carry out a study to select 50 small and medium-sized tourist establishments (with a capacity of 20 to 50 rooms on average), not belonging to major international hotel chains and having the will and commitment to make the necessary efforts to obtain the « Green Key » label.

B. Based on initial assessments, the project's contribution would consist of financing 20% of the cost of the audits allowing the rigorous specifications of the "Green Key" Label to be achieved. It is estimated that these audit recipients will also be able to benefit from grants at the national level to cover a large part of the remaining costs. This value of 20% was established due to the fact that there are in Morocco various support programs to carry out this kind of studies covering up to 70-80% of the budget of such service.

C. In addition, based on initial assessments and to be finalized during implementation, the project will provide a financial contribution covering 10% of the investments required for the implementation of the EE/ER measures recommended to achieve the criteria of the labelling system corresponding to the category "Small structures" or "Hotels and similar" for the tourist establishments selected. This 10% rate is recognized at national level as the minimum value to be given to the private sector for investments of this nature, thus not making any particular discrimination, compared to other programs.

- **Activity 2.1.3.3 :** Transformation of the Sidi Ghanem industrial zone into an industrial ECO-PARK including : 1/ New intelligent public lighting network with 1 100 light points ; 2/ Installation of rooftop solar PV panels of a capacity of 2,650 kWp and ; 3/ Smart Grid for the industrial zone power network

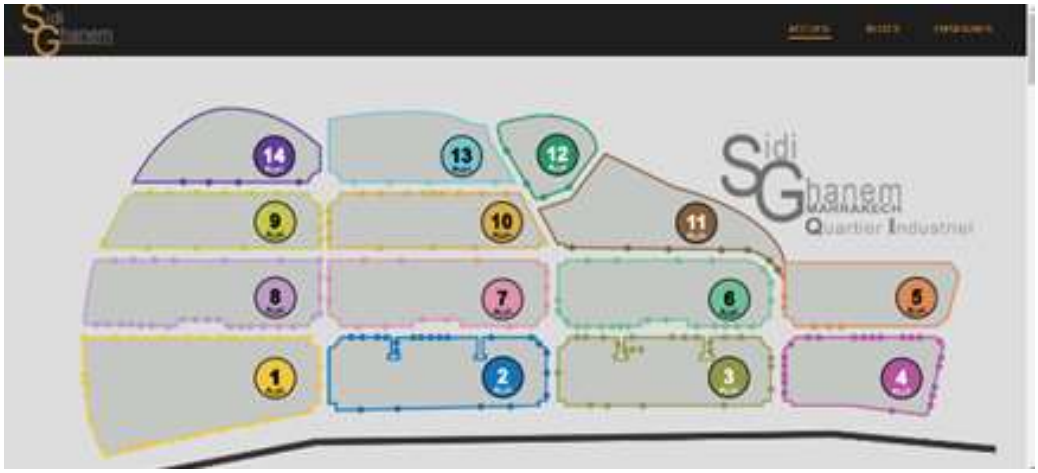


Figure 5: Industrial District Sidi Ghanem

Over the years, Sidi Ghanem district has become the most important industrial zone in Marrakech. This district is the only formal and organized industrial district in Marrakech. That's why it has been decided to select it after consultations with all stakeholders. Located in the north of the city in the Menara district, along the Safi road, the zone aims to become a leading industrial ECO-PARK.

A. The industrial zone's public lighting network will be completely renovated to accommodate LED lighting technologies and its intelligent network management. The new network will have 1,100 light points (LP) and an intelligent network management system. Based on initial discussions, to be finalized during project implementation, the operator of the Marrakech Public Lighting Network (the local development corporation: Hadirat Al Anwar[19]) will not only manage the new network of the zone but will also make a

[19] http://www.hadiratealanwar.ma/

financial contribution of 70%. Hence, on this initial basis, the GEF project, for its part, would finance 30% of the cost of these investments.

B. The industrial operators of the Sidi Ghanem district will invest in the installation of photovoltaic system for electricity production on the roofs of their buildings (~10.000 m²) with a capacity of around 2,650 kWp, since these types of projects have now become financially very attractive to them. Based on initial discussions, to be finalized during project implementation, the project's contribution to this investment is about 5%. It is also planned that a SMART GRID system will be provided for the management of the industrial zone electricity network, capable of managing all the electricity supply sources of the zone either through the national electricity grid or through renewable sources that the zone can provide for all its members. Based on initial discussions, to be finalized during project implementation, the project's contribution to this system is 50% and will also include a transfer of expertise from the Autonomous Water and Electricity Distribution Authority (RADEEMA).

- **Output 2.1.4:** New investments are leveraged to improve resource efficiency in urban and peri-urban areas. This includes energy efficiency and water efficiency
    - **Activity 2.1.4.1:** Support for the development of at least one non-domestic waste stream (dangerous and non-dangerous waste) with a treatment and recovery unit at the Sidi Ghanem Industrial District, such as used oils or electrical and electronic equipment waste

Marrakesh is considered as the first tourist destination in the country given the richness and diversity of its heritage as well as its biological diversity, its geographical position and its climate. Therefore, the city has a large number of tourist establishments, restaurants and catering companies that have a negative impact on the environment due to the large amount of waste or discharges generated. The unmanaged waste, especially edible oils, are so far destroyed, discharged into the soil, or directly thrown into the sewers which can cause the clogging of the pipes and reducing the performance of the city's wastewater treatment plant. However, these used edible oils are an important source for biodiesel production.

This activity aims to develop this source through a circular economy approach to implement a management system for used edible oils by collecting them from tourist establishments, restaurants and catering companies and others, ensuring their efficient treatment in order to remove all the impurities and water and finally transforming them into biodiesel that can be used as a substitute for the diesel consumed by buses or industries in the city. In synergy with activity 2.1.1.3, the business plan of the used oil waste stream will be developed upstream, and with activity 2.1.3.3 to develop such waste stream in line with the ECO-PARK concept of the industrial district of Sidi Ghanem.

This purpose of this activity is to develop a circular system locally at the City of Marrakech in partnership with one of the country's leading companies in used oil collection and treatment (e.g., Ekogeste[2021]). Such companies are actively looking for local partners to expand their used oil collection networks by offering all necessary collection equipment and facilitating collection logistics through mobile applications. However, treatment is usually operated through a unique unit at the country level which tend to be not cost effective when considering high logistic costs.

The City of Marrakech offers a unique opportunity under this project for setting a circular used oil management system in the region. The project offers an opportunity to engage all potential used oil producers through awareness raising and partnerships to expand locally used oil collection networks. On another hand, the engagement of the Professional Association of the Sidi Ghanem Industrial district will be key for developing a local treatment unit. Based

[20] https://ekogeste.com/

[21] https://www.theswitchers.eu/fr/switchers/au-maroc-une-entreprise-locale-permet-deconomiser-de-largent-grace-a-la-collecte-des-huiles-usagees/

on initial discussions, to be finalized during project implementation, the project will provide a financial contribution to the set-up of the treatment unit.

- **Activity 2.1.4.2:** Contribution to the financing of the municipal platform for sorting and recovering construction and demolition waste

With the development of large infrastructure and real estate projects in response to the continuous urban evolution, uncontrolled management of construction and demolition waste (CDW) is causing more and more damage to the environment. In fact, informal landfills are being created everywhere in large cities, weakening ecosystems, and contributing to the degradation of natural resources.

In order to face the issues of uncontrolled dumping of residues and waste from construction sites, Marrakech has already initiated several programs for sustainable development and environmental preservation related to the problems posed by these residues and waste. In fact, a feasibility study and the environmental impact assessment (EIA) of the implementation of a construction and demolition waste treatment center were already conducted. The city has also secured the land dedicated to this platform.

This center will ensure the treatment of the entire construction and demolition waste stream generated in the city (about 230,000 tons per year) and production of a list of possible finished byproducts that can be used in building and roads.

Through this activity, based on an initial assessment to be finalized during implementation, the project will provide a financial contribution of around 30% of the investment costs required for the establishment of the CDW processing and recovery platform.

- **Activity 2.1.4.3:** Support for the establishment of a standardization system for construction and demolition waste treatment and recovery byproducts

Building materials produced by the construction and demolition waste processing platform can be used in construction sites, buildings or roads, however they first have to be described and be subject to specialized normative requirements or standards to guarantee the expected performance and meet energy efficiency standards for building materials.

These standards are available for the majority of construction products and generally identify the basic characteristics to which construction materials placed on the market must conform whether it is limits of diameters, density, water absorption, porosity, granularity, etc.

The adoption of these standards at the construction and demolition waste treatment center will enable the city to benefit from its byproducts, to use them in earthworks and pavements instead of extracting and transporting them to quarries. These standards will have national benefits as they can be used by other construction and demolition waste processing platforms in other cities and subregions of the country, especially given the foreseen investments in such waste treatment platforms through a new funding program, namely the "Green Ecosystem" led by the Ministry of Industry & Green Economy, the Department of Environment, among other public and private stakeholders, to support the implementation of the National Strategy for Waste Reduction and Recovery[22]

- **Output 2.1.5:** Resilient investments are performed at the Palm grove and urban and peri-urban gardens to ensure biodiversity restoration, conservation and sustainable land management. This will include a vulnerability analysis and a restoration of critical areas.

[22] https://www.environnement.gov.ma/images/D%C3%A9chets/Rapport_de_synth%C3%A8se_SNRVD_FR.pdf

The organization of sessions of the Conference of the Parties to the UNCCCF, in 2001 and then in 2016 in Marrakech, has considerably enriched the national and territorial visibility of climate risk. Aware of the importance of putting in place a local adaptation framework, Marrakech established its territorial climate plan in 2018. This plan enabled a study for the realization of the Greenhouse Gas Balance and the development of a Territorial Climate Plan, including a vulnerability profile, for the Prefecture of Marrakech.

Climate change is in Marrakech predicted to result in increased variability in precipitation and the frequency of periods of low rainfall, high temperatures and intense periods of heat waves, which in urban landscapes may translate into high peaks in water flow and damage to construction, business and transport, alternated with drought episodes calling for high water demand.

The Palm Grove of Marrakech located on the north side of the city has a significant social, cultural and environmental importance (UNESCO World Heritage site). The western part of the palm grove, classified in 1995 as a Site of Biological and Ecological Interest, known especially for its flora and ecological physical characteristics is an original ecosystem and a unique heritage in the City of Marrakech. Considered as a Moroccan natural heritage, this ecosystem was spontaneously created around the 11th century following the arrival of the Almoravids from the South. The 15,500 ha on which it was spread a few decades ago, has been reduced significantly. Presently the surface area of the Palm grove is estimated to 12,000 ha.

Despite the protection efforts deployed under the leadership of the The Mohammed VI Foundation for Environmental Protection (a public utility foundation) part of its flagship programme "Safeguard and Development of the Marrakech Palm Grove[23]" launched in March 2007 the palm grove has been identified as highly vulnerable. This site is now subject to continuous degradation due to the combined effects of drought, pressure from human activities, lack of maintenance and the aging of palms. This ecosystem is also facing increasing land pressure. Changes in land use and land cover are among the main determinants of palm plantation changes. Climate change is an additional stressor exacerbating impacts on the global carbon cycle, climate, biodiversity and landscape ecology as well as socio-economic and demographic development that strongly determine the level of exposure of the palm grove.The city's biodiversity database is still not available. Appropriate indicators, especially those related to ecosystem services, need to be designed as soon as possible.

- **Activity 2.1.5.1:** Vulnerability assessment including evaluation of the City Biodiversity Index (CBI) of Marrakech and proposal of green charter to be adopted by the city

The City Biodiversity Index (CBI) [24] is a strong strategic tool that can evaluate the current state of (1) native biodiversity, (2) ecosystem services, and (3) governance and management. These three aspects are necessary to understand biodiversity in urban areas and to ensure its adequate management and conservation.

First of all, the different types of biodiversity existing in urban areas must be identified (indigenous biodiversity) and their importance in terms of ecosystem services must be evaluated, then the methods of monitoring the current situation of biodiversity and the policies of its management must be developed (governance and management).

The CBI will be used for a better integration of climate risk at the urban level, in particular through its two indicators, indicator 11; regulation of quantity of water and indicator 12: climate regulation: carbon storage and cooling effect of vegetation.

Moreover, the application of the CBI will facilitate the development of a Local Biodiversity Strategy and Action Plan.

[23] https://www.fm6e.org/fr/palmeraie-de-marrakech/introduction.html

[24] The City Biodiversity Index (CBI) was proposed as part of the Convention on Biological Diversity (CBD) in the ninth Conference of the Parties (COP9, 2008) and applied internationally to enable municipalities and cities to manage biodiversity and ecosystem services in a sustainable manner.

The CBI database of Marrakech will be built as part of component 1 (Activity 1.1.2.4) as a territorial platform and will involve the municipal administrations and the University of Marrakech. The technical procedure will include (1) data collection for indicators, (2) the establishment of spatial territories and definitions of indicators, and (3) elucidation of the different ecological contexts of the city.

Component 4 includes a capacity building activity for municipal administrations at the onset of the project. The CBI profile of Marrakech will serve as a baseline to optimize and guide the implementation of a green charter for the city. This index, taken intermittently at regular intervals, can in fact be used to observe the improvement of the conservation of the charter relative to its own individual baseline and signify the progress of the city towards sustainable development.

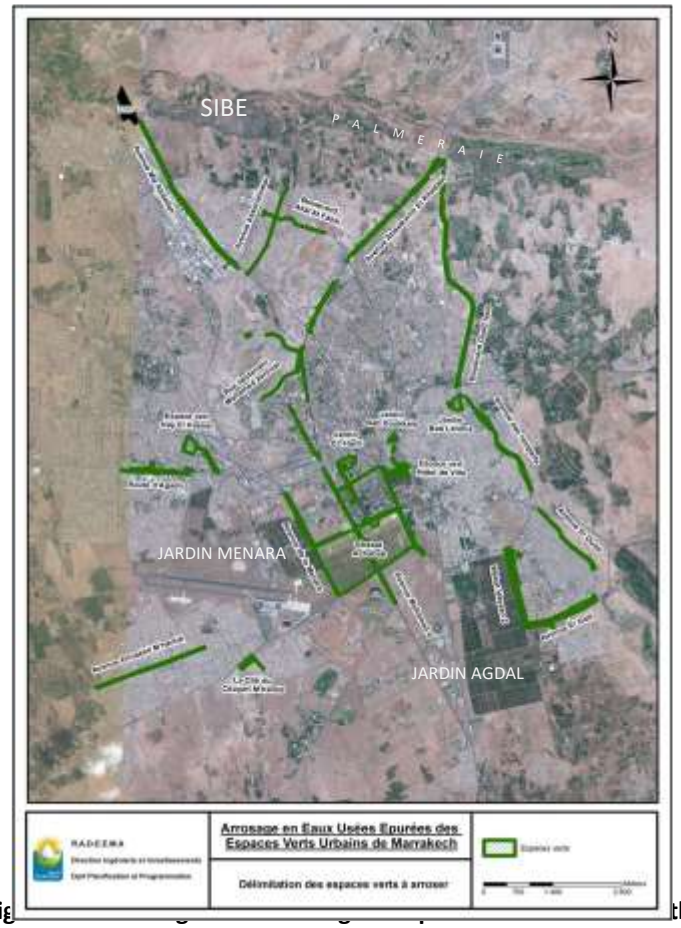
- **Activity 2.1.5.2:** Intelligent green areas management system: Developing an IoT (Internet of Things) solution through the installation of technological equipment in green areas of Marrakech to ensure their management from a central location, minimize the costs of maintenance and generate water and energy savings

Currently, watering green areas triggers an excessive consumption of groundwater, an estimation of 12 million m^3 of water is used each year to irrigate 1,500 hectares (ha) of public green areas in Marrakesh. By 2030, the demand for water irrigation for Marrakesh is estimated at about 35 million m^3/year[25].

Capitalizing on the experiences of international innovative irrigation solutions, this activity aims to connect the city's green areas with an intelligent water management system, that meets the major challenges of the city: annual water savings of nearly 3.6 Mm3[26], estimation of monthly bills, preserving drinking water, fighting against heat spots, ensuring energy self-sufficiency, reducing on-site visits; and finally saving gardener's time.

The compatibility of the new equipment with existing watering devices was crucial to consider the IoT (Internet of Things) solution at an acceptable cost. Thus, the installation of this system will be connected to the network for the reuse of treated wastewater of the city's Autonomous Water and Electricity Distribution Authority (RADEEMA), intended for watering urban green areas.

The green areas targeted by this network cover a total area of 307 ha with a useful waterable area of 228 ha. As shown in figure 6, this activity will contribute significantly to the development of biological corridors that will allow ecological connectivity between fragmented habitats within historic gardens, the palm grove classified as a biological and ecological site of interest and other green spaces (local gardens, school yards, etc.).



Fig… …th treated wastewater

[25] Dahan Stephane. 2017. Managing Urban Water Scarcity in Morocco. World Bank Group, Washington, DC.

[26] RADEEMA report. The watering requirements are defined by considering a ratio of 1 L / s / ha and are presented as follows: Average annual requirement: 3.6 Mm3, Peak daily requirement: 19,708 m3 / day

Given the source of the treated wastewater, this action will be preceded and supported by training sessions for operators and gardeners and by civil society awareness raising (in synergy with awareness activities foreseen in component 4).

- **Activity 2.1.5.3.:** Restoration and landscaping of certain urban green areas (historic garden, public gardens), greening of schoolyards and the creation of 2 agro-ecological gardens

The selection of the sites was based on an analysis according to the following criteria: a) consolidation of the urban green area, including support for historic gardens; b) increasing the structural connectivity through the restoration of school grounds; and c) support the implementation of public garden restoration initiatives by ensuring a good distribution of green space/capita ratio.

The safeguarding of the historic garden of the Bahia Palace will be done in parallel with the adoption of the Florence Charter[27] but also in connection with the contribution and the implementation of the SDG indicator 11.4.1: "…*the preservation, protection and conservation of all cultural and natural heritage…".* The restoration requires differentiated interventions such as maintenance, conservation, and landscaping.

Schools have been identified to optimize the connectivity and build bridges between existing spaces, but also to play a potential conservation role in order to promote urban biodiversity. Two appropriate institutions will receive pilot demonstration facilities for the deployment and the testing of Nature Based Solutions (NbS) and agrobiodiversity.

The main aim is to build ambitious targets for urban biodiversity over the next decade in order to strengthen the contribution that the city must make to the conservation, restoration and blossoming of nature to guide the urban action. Ex 6

NbS activities include the combination of different types of vegetation to support the conservation of urban biodiversity through the creation of new habitats; preserve and strengthen habitat connectivity; reduce negative impacts and avoid the alteration and damage of ecosystem; undertake specific measures to protect native and endangered species and protect and apply traditional knowledge and conservation practices. NBS activities will also take the impact in drought and desertification prevention and amelioration into account as the same level as urban flood prevention and regulation, as climate change often causes increased floods in some areas and shortages and droughts in others.

These schools are also sites that offer opportunities for efficient awareness and for the development of effective and socially responsible strategies.

Two public gardens, that are too mineralized and inert, will be equipped with NbS and transformed into interactive and functional environments providing services to regulate urban heat islands, improve recreational services and strengthen social cohesion.

- **Activity 2.1.5.4** Development of a digitalized monitoring and evaluation system of the Palm Groove

The Mohammed VI Foundation for Environmental Protection has been working since 2007 with different stakeholders under the Programme "Safeguard and Development of the Marrakech Palm Grove" to assess the vulnerabilities of this fragile ecosystem and develop a sustainable management plan. Key actions have been initiated, such as set-up of a nursery with a production capacity of 80,000 plants per year, planting of 610,017 young palm trees at an average rate of 40,000 trees/year (as of June 30, 2021), reuse of treated municipal wastewater for irrigation and installation of solar irrigation systems covering 218,920 planted young palm trees, development of an agroecology programme and capacity building of local farmers as 49 farming families benefited from support over a

[27] The Florence Charter (1982) is a text that institutionally defined historic gardens for the first time and gave recommendations for their maintenance, restoration and opening to the public.

global period of 5 years on agroecological practices including composting. An additional 15,000 palm trees are planned to be planted between 2022 and 2026 under the Voluntary Carbon Offset program of the Mohamed VI Foundation for Environmental Protection[28].

Despite these efforts, the Palm grove still lacks a robust monitoring and evaluation system to sustain its planning and management. Through this activity, the project will support the development of various thematic maps of the Palm grove by acquiring and processing satellite and drone images using GIS technology tools. This will help precisely define the surface area covered by the Palm grove and also assess the number of available palm trees. A set of M&E indicators will be developed and integrated in the GIS system, which will be managed through an online platform.

To ensure the sustainability of the GIS M&E system, training sessions will be organized for key stakeholders involved in the Programme "Safeguard and Development of the Marrakech Palm Grove", including the Mohammed VI Foundation for Environmental Protection, Marrakech Palm Grove Observatory[29], City of Marrakech, Wilaya of Marrakech-Safi, Marrakech Autonomous Water and Electricity Distribution Authority (RADEEMA), Marrakech Urban Agency, Regional Environment Directorate, among others.

- **Activity 2.1.5.5** Supporting the organic transition of local farmers at the Palm groove

A "Sustainable development of agricultural activities" project began in April 2015 at the Palm grove. The actions carried out aimed to strengthen the resilience of local populations by improving their agricultural income through agroecology and the structuring of agricultural productions.

A total of 49 pilot families covering an agricultural surface area of 130 ha have been supported in implementing agroecological practices and tools for managing their agricultural activity, including biological composting. So far, these local farmers have been able to diversify their production, increased the produced quantities, improve the sanitary quality of products, set up new distribution channels mainly through the local touristic establishments of the City of Marrakech. The farmers were assisted to get professionally organized through a professional organization (named "GUINDO Co-op"). To ensure sustainability, an "Endowment Fund" has been set up which receives sales revenues of produced vegetables and aromatic herbs. The "GUINDO Co-op" of local famers at the Palm grove benefited from various training workshops on invasive plants and pests at the Hassan II International Center of Environmental Training[30] established by the Mohammed VI Foundation for Environmental Protection.

Considering the increasing demand for certified organic agriculture products at local and international markets, the positive socio-economic impacts for farmers and environmental impacts on soils and biodiversity, the project intend through this activity to assist the GUINDO Co-op in acquiring a collective organic certification either according to the national labeling system set by Law No. 39-12 relating to the organic production of agricultural and aquatic products (January 16, 2013)[31], or international frameworks (e.g., EU organic certification regulations) if export of products to be sought. Accordingly, the project support process will be established in accordance with the requirements of the standard or the certification label that will be selected. An audit protocol for the installations / farms concerned will be prepared upstream to guide the diagnosis, the identification of conformities and non-conformities with respect to the selected certification benchmark. This will allow to better design the actions to be implemented to remove non-conformities and prepare the installations / farms to access the requested certification. The objective being to guide the Co-op to respect the guiding principles of organic certification. Through this process, the project will provide technical assistance to formally set up an Internal Control System (ICS) on collective certification intended in full transparency for all the players involved. This is a documented quality assurance system that allows the

[28] https://www.fm6e.org/fr/-compensation-volontaire-carbone/introduction.html
[29] In 2006, the Marrakech Palm Grove Observatory was created to introduce civil society into the protection process.
[30] https://centre-hassan2-environnement.ma/home
[31] http://www.onssa.gov.ma/fr/195-reglementation/972-agriculture-biologique

external certification body to delegate the periodic inspection of producers to an operator from the group subject to certification. The project will support also the Co-op in identifying and mobilizing appropriate service and material providers, including accredited certifiers, trainers, certified organic inputs and equipment.

Furthermore, considering the need for funding to ensure organic conversion and extension, the project will provide assistance to the Co-op in identify appropriate governmental subsidies and concessional bank loans dedicated to agriculture.

- **Activity 2.1.5.6** Supporting the regulatory protection of the Palm groove marsh site under the framework of Law 22-09 relating to Protected Areas

The western part of the palm grove covering a surface area of 280 hectares, was classified in 1995 as a site of biological and ecological interest. This site is known especially for its flora and ecological physical characteristics is an original ecosystem and a unique heritage at the City of Marrakech. Unique environment, particularly "wild" on a very small "continental island" with original marsh vegetation. This site is home to 3 major plant classes divided into 43 Families, 101 genera represented by 250 species. The Palm groove marsh has 14 species of mammals, 3 of which are considered rare or threatened; 49 species of birds, of which 13 are considered threatened and one species considered rare. There are also 24 species of reptiles and amphibians, including 2 endemic and 5 rare. Groundwater at this site level is also much more difficult to perceive, the reservoir of an original biological diversity represented by Oligochaetes, Gastropods, Ostracods and Crustaceans. All these species are endemic to Morocco[32]. Today this site is under the effects of several stressors. It is at the limit of the irreversible effects threshold and evolves rapidly towards a reversal of regime: passage of a wet zone towards an arid and dry zone.

Palm groove marsh site (North West) in 2005 (on the left) and in 2014 (on the right).

Under the Palm Grove Safeguard Program, the Mohammed VI Foundation for Environmental Protection launched in 2014 the classification process of the march site as a protected area under Law No. 22-07 relating to protected areas promulgated in 2010[33]. Since the classification process requires the organization of a public hearing according to article 10 of Law No. 22-07, this process could not be pursued between 2014 and 2020 given the lack of a regulatory framework regarding the organization of a public hearing under Law 22-07.

[32] Messouli, M., 1984, Recherches sur la faune aquatique endogée des sources du Haouz. Mémoire C.E.A. Faculté des Sciences Marrakech, 46 p

[33] https://adala.justice.gov.ma/production/legislation/fr/Nouveautes/Aires%20prot%C3%A9g%C3%A9es.pdf

A Decree No. 2.18.242 implementing certain provisions of Law No. 22.07 relating to protected areas was adopted by the Government only in April 2021. This decree determines the mechanisms for applying Law No. 22.07 regarding the creation of protected areas, the procedure for approving their development and management plans, their deadline and modalities for revision. This regulatory framework also determines the procedure for the delegation of the management of protected areas to any legal person, the model of the professional card of the civil servants of the administration authorized to note the infringements of the provisions of law 22.07 and of the texts adopted for its application, in addition to the procedure for classifying national parks.

The present project will tap on the initial efforts launched by the Mohammed VI Foundation for Environmental Protection and its partners to support the classification process of the marsh site of the Palm grove according to the new regulatory framework of Law 22.07 (Decree No. 2.18.242).

Component 3: Innovative financing and scaling-up

The analysis of financing schemes of Moroccan cities made it possible to highlight several difficulties, in particular when it comes to investments linked to the fight against climate change, which generally require dedicated and adapted financing solutions. The financing of cities remains dependent on the State budget and thus limits the possibilities of sustainable and climate-related investments for cities, which still struggle to ensure the management of basic services and infrastructure.

Based on this situation, this component proposes to examine in-depth different possible options for financing local authorities, in particular through the involvement of the private sector; an approach already developed in several countries. Nevertheless, it should be remembered that the diversification of the sources of financing of local authorities presupposes financial solvency and an appropriate legal framework. As a result, this component will first address the modalities of improving the solvency of the city of Marrakech as well as the conditions conducive to the evolution of the financing framework of cities and will then propose, on the basis of consultations with the key stakeholders, innovative financing mechanisms adapted to the needs of the city and meeting the requirements of the financial contributors.

This work will be carried out first for the city of Marrakech but the scheme and the mechanisms that will be proposed could be duplicated in other cities, thus allowing results scaling-up, in particular in terms of solvency, access to financing and implementation of sustainable and climate investments.

This component includes the following outcome and outputs:

Outcome 3.1: Local and national governments initiate innovative financing and business models for scaling-up sustainable urban solutions

- **Output 3.1.1:** Support to the city of Marrakech to improve its creditworthiness for scaling-up sustainable investments, including review of existing legal frameworks, revenue collection and management, and capital planning
    - **Activity 3.1.1.1.:** Assessment of the financial planning modalities and processes applied in Marrakech

Financial planning is a key parameter of good territorial governance, it allows local authorities to have operating procedures capable of directing, supervising and controlling their finances. It is of paramount importance in a context where the financial resources of local authorities in Morocco remain dependent on the central State and insufficient to meet the growing needs of cities in terms of infrastructure and sustainable investments. In addition, the Covid-19 crisis has taken a heavy toll on central and local government budgets.

A review of the financial planning methods and process of the city of Marrakech will thus be carried out in order to identify gaps and dysfunctions that the city will have to remedy before opening up to new financing solutions.

Indeed, financial solvency is a key criterion and a requirement of private investors whose involvement is sought in the implementation of innovative business models and financial instruments.

- **Activity 3.1.1.2.:** Support for improving financial planning to strengthen financial solvency

Good financial planning is a key element in strengthening the city's financial solvency, a prerequisite for any innovative financing mechanism. Thus, and on the basis of the findings made during the evaluation of the current financial planning of the city of Marrakech, support will be provided to the departments of the City to implement the recommendations to strengthen the solvency of the City. This will notably involve a logic of performance rather than means, a participatory and inclusive process of the gender dimension, intelligent mobilization of resources, upgrading of financial and fiscal management, etc.

To this end, an action plan will be developed for each of the areas of improvement identified and according to a phasing and short- and medium-term objectives. Depending on the progress of this action plan and the results obtained, a rating process at national and international level may be initiated to provide the city of Marrakech with a financial rating measuring the level of its solvency and demonstrating its capacity to access private capital for financing its sustainable investments.

- **Activity 3.1.1.3.:** International benchmark on the upgrading of legal frameworks associated with business models and innovative financing mechanisms for cities

In addition to the issue of financial solvency of the city of Marrakech, the feasibility of introducing new business models and innovative financial mechanisms will also depend on the removal of legal barriers. The financing of local authorities in Morocco is currently limited to local taxation, state grants and indebtedness to the Communal Equipment Fund[34] (FEC). As for business models, cities have the possibility of creating Local Development Companies (SDLs) in addition to the delegation of public services to private companies (e.g., waste management).

Accordingly, a new legal framework would be required to allow local authorities in general and the city of Marrakech in particular, to involve more the private sector in sustainable investments through new business models and innovative financial mechanisms as it is being developed internationally.

The purpose of this activity is to carry out a benchmarking study of pioneer cities in terms of financing their energy transition and sustainable development to analyze their legal frameworks that support the establishment of business models and innovative mechanisms at the level of these cities by paying particular attention to the modalities of upgrading their legal frameworks.

This activity will make it possible to draw lessons likely to shed light on the best approaches to upgrade the legal framework of Moroccan cities and to know the best practices to facilitate and accelerate such upgrade.

- **Activity 3.1.1.4. :** Review and recommendations for upgrading the legal framework associated with business models and innovative financing mechanisms for the city of Marrakech

Certain business models and financial mechanisms require a specific legal framework, hence the need for an assessment of the current legal framework of local authorities in Morocco. This assessment will highlight the weak points of the existing legal framework which may represent barriers to the establishment of new business models and financial mechanisms.

In light of the lessons learned from international benchmarking, proposals for reforming the legal framework will be formulated to allow the implementation of new business models and financial mechanisms. For each proposal, the objective of the reform, the laws to be amended and the expected impact in terms of new business models and financial mechanisms to be authorized will be determined. It is also a matter of proposing procedures for carrying

[34] Public bank created in 1958 and specializing in the financing of local authorities and local public establishments projects.

out this legal upgrade, the means required and the conditions to support the implementation of the proposed reforms.

These proposals will be prepared for discussion with the departments of the relevant ministries namely Interior, Finance and Environment. The proposals selected will then be formulated in draft legal texts (law, decree, etc.).

This activity will be carried out in a participatory manner in order to properly prepare for the introduction of draft texts into the legislative process and to ensure coordination before the implementation of the proposed texts. A follow-up plan will be also proposed to monitor progress made.

- **Output 3.1.2:** Innovative and new business, revenue and procurement models to engage private sector are specified and designed for the City of Marrakech

    - **Activity 3.1.2.1.:** International benchmark relating to the methods of private sector involvement in the financing of Citi's assets and services

Faced with the territorial and environmental challenges of development and the exhaustion of traditional business models, cities and subregions around the world have developed tools and skills to develop business models based on originality and sustainability by involving the private sector and taking advantage of its technical expertise, know-how and its capacity for investment and financing.

Several business models have thus emerged in the form of public private partnerships, special investment vehicles (e.g., SDL, ESCO, etc.), associative economic models, ecosystem services, etc. Understanding the originality of these examples of business models and many others, their construction and mode of operation and the feasibility of their reproduction at the level of the city of Marrakech requires a more in-depth analysis of the experiences carried out at the international level. Several aspects will have to be studied: the genesis of these business models, the underlying programs and projects, the operating methods, the stakeholders involved, the methods of encouraging the private sector, the integration of the gender issue, barriers and associated risks, regulatory measures taken, impact on cities and their finances, etc. Carrying out this work will international experts specialized in the development of innovative business models whose costs and delivery times have prevented this activity from being carried out during the PPG.

The objective of this activity is thus to identify innovative business models and analyze them through international benchmarking and draw recommendations and guidelines for choosing the most relevant models to reproduce and adapt for the city of Marrakech.

    - **Activity 3.1.2.2. :** Design of innovative business, revenue and procurement models to engage the private sector

This activity will be based on the results of the international benchmark and discussions with local and national stakeholders during training workshops to design business models adapted to the city of Marrakech and to the sustainable investments identified through business plans developed in Component 2.

Depending on the underlying projects, the stakeholders s involved in the execution of each project will be mapped and the intervention methods, the role of each party, the types of contracts managing these interactions, the management of material and financial flows, economic, social and environmental externalities will be defined.

Priority will be given to business models that do not require profound review of the legal framework and whose implementation will not delay the realization of the investments planned.

- **Activity 3.1.2.3.:** Training of national and local stakeholders on innovative and new business, income and supply models at city level

In order to ensure the feasibility of the identified business models, a training program will be set up for the benefit of national and local stakeholders. The list of beneficiaries will be defined according to their direct or indirect involvement in the achievement of the selected business models.

These trainings will ensure both the success of the use of the new business models at the level of the city of Marrakech and for the identified sustainable investments, as well as the reproduction of these models for other investment programs and their scaling up at the national level.

Trained participants will be able to support the implementation and proper functioning of these business models. An interactive and participatory approach will be adopted in order to identify possible areas for improvement to be considered when designing the new business models.

Given the health situation caused by the Covid-19 pandemic, these training courses can be provided online.

- **Output 3.1.3:** Innovative financial mechanisms are designed and tested at the City of Marrakech. This may include, but not limited to green bonds infrastructure asset-recycling, and value capture investments.
  - **Activity 3.1.3.1.:** Feasibility analysis of innovative financing mechanisms for the city of Marrakech

The energy transition represents an economic opportunity for cities that has been well understood by the financial sector since COP21. This transition is based on an intelligent mobilization of the resources of cities through, in particular, a diversification of financing methods, the use of innovative financial tools, the development of new public-private partnerships and the involvement of the various stakeholders through the use of participatory financing methods.

Across the city of Marrakech, a range of innovative financial tools is needed in order to make the city's sustainable investments. A benchmarking of financing schemes of city's climate plans at the international level was carried out during the PPG and has made it possible to identify different modes of financing depending on the nature and size of investment projects but also on the type of involved stakeholders (financial market, companies, citizens, etc.). These financial mechanisms are listed in the following table:

Table 1: Financial mechanisms for Territorial Communities

Financial mechanism	Description
International climate finance	International climate finance brings together a wide range of public and private stakeholders whose mission is to channel funds provided by developed countries (donors) to developing countries (beneficiaries). Some institutions have even developed financing solutions adapted and dedicated to local communities. At the national level, the Casablanca-Settat subregion kicked off in 2019 with a fundraising of $ 100 million from the International Finance Corporation (IFC). The subregion of Fès-Meknes did the same in 2020 with $ 30 million borrowed from the IFC. For private projects, international financial institutions have forged partnerships with national commercial banks to set up sustainable financing lines (e.g., Morseff[35] and Green Value Chain[36]).

[35] http://www.morseff.com/
[36] https://ebrdgeff.com/morocco/fr/the-programme/the-facility/

Green bonds	These are bonds issued on the capital market to finance projects with climate co-benefits. Initially reserved for the private sector and governments, several cities at the international level are now turning to the bond market to diversify their sources of financing thanks to the evolution of regulations and policies.
Energy Saving Certificates (ESC)	This is a document issued which proves that an energy saving action is being carried out. This certificate gives the right to an energy bonus. This system allows local authorities to free up additional sources of funding based on the energy savings made on their green projects.
Energy service companies (ESC0)	This mechanism is similar to a specific contractual arrangement, that of the energy performance contract (EPC) with guaranteed energy savings and sharing of these between the partners. Through the EPC, the City will be able to transfer the planning, financing and implementation of its energy efficiency and renewable energy projects to an ESCO which makes these investments and is remunerated through the cost of energy savings.
Green investment funds	Subregions and cities around the world have set up dedicated green investment funds. The purpose of such funds is to raise funding mainly from private and institutional investors and to invest them in sustainable development projects. The funded companies will need to be able to demonstrate their contribution to the city's environmental projects. The management of this fund is generally entrusted to a private and independent management company selected through a call for tenders and according to well-defined specifications.
Crowdfunding	This mechanism makes it possible to strengthen citizen involvement in the city's energy transition by putting an online platform through which citizens can contribute with donations, loans or equity investments in green projects. It will also be a means of communication and awareness about ecological transition challenges of Marrakech city and to publicize the actions and projects programmed for this purpose.
Green sponsorship	Some cities are setting up a system enabling them to receive green sponsorship in order to mobilize funding from local businesses wishing to contribute to sustainable investments in their regions of establishment.
Eco fiscal mechanism	This mechanism makes it possible to generate substantial income for public actors to help finance sustainable investments while encouraging eco-responsible behavior. In addition, the revenues from the eco-tax mechanism can be used to support the State incentive policy that encourages the use of renewable energies or to achieve energy efficiency targets without impacting the budget.

The objective of this activity is to analyze the feasibility of implementing each of these financial mechanisms at the level of the city of Marrakech. Indeed, the choice of feasible and most relevant financial mechanisms will depend on several factors. These are political, legal, financial and technical frameworks specific to the city of Marrakech. The feasibility of the financial mechanisms also depends on the type of investments to be financed, including those identified in component 2.

Also, the conditions and prerequisites for the establishment of the financial mechanisms identified will make it easier to implement some in less time and at a low cost, while others will first require the removal of certain barriers. Added to this the fact that financial mechanisms do not have the same levels of impact in terms of ability to raise funds and finance projects.

This activity must be carried out during the implementation phase of the project since it is closely linked to the activities planned under Output 3.1.1, namely the evaluation of the financial planning of the City of Marrakech and the upgrading of the legal framework, which are determinants and prerequisites to seek new financing solutions. Thus, the feasibility and the choice of innovative financial mechanisms to be implemented should take into account the results of these activities.

- **Activity 3.1.3.2.:** Design of innovative mechanisms adapted to the city of Marrakech

After the feasibility analysis of innovative financial mechanisms and the selection of those most suited to the city of Marrakech, this activity will focus on the design and structuring of these mechanisms to meet the financial and support needs of identified sustainable investments in component 2 but also other investments to be programmed beyond the Project.

For each mechanism to design, it will be a question of identifying the following components: the objective of the mechanism and the type of investments to be financed, the fundraising needs, the eligibility criteria, the financial instruments, the funding conditions, the governance system, the human, technical and organizational resources necessary for its implementation and operation, as well as the monitoring and evaluation system of results and impacts.

First, the mechanisms that can be implemented in the short term, such as concessional financing, green sponsorship or even investment funds, will first be designed. Then come the mechanisms requiring a legal upgrade such as green bonds, crowdfunding platform or even energy saving certificates.

- **Activity 3.1.3.3.:** Training of national and local stakeholders on innovative financial mechanisms for cities

In order to promote the use of the designed financial mechanisms, training workshops are planned for the benefit of national and local stakeholders. The objective is to build the capacities of participants by training them on the operation of these mechanisms, their use and their impact. It is also a matter of preparing the implementation phase by involving the relevant stakeholders to facilitate the deployment at the level of the city of Marrakech and the scaling up at the national level.

Given the health situation caused by the Covid-19 pandemic, these training courses can be provided online.

- **Activity 3.1.3.4.:** Support for the implementation of the developed mechanisms

Once the financial mechanisms are designed, the city of Marrakech will be supported for their implementation. A roadmap will thus be drawn up to involve the various stakeholders and monitor the process and stages of deployment of these mechanisms.

Given the diversity of mechanisms to be implemented, support for the city will differ depending on the nature of the mechanism and the modalities of implementation. For example, in the case of a green bond issuance, the city will be supported in the selection of a financial and legal advisory body approved by the Moroccan Capital Markets Authority[37] (AMMC) (in the case of an issuance at national level) for the preparation and examination of information and placement documents on the market and for the selection of an independent verifier qualified for labeling the issued bonds as Green Bond in conformity with applicable international standards (e.g, standards and criteria set by

[37] https://www.ammc.ma/en

the Climate Bonds Initiative[38]). In the case of the establishment of an investment fund, the city of Marrakech will be supported in the selection of a management company to create the fund in accordance with the identified design methods, manage the operation of the fund and ensure the monitoring and evaluation of its performance and impacts.

Component 4: Advocacy, knowledge exchange, capacity building and partnerships

Apart from financing, the implementation of sustainable climate investments requires technical skills capable to implement and monitor progress, outreached stakeholders, including citizens, to support local initiatives, and a common vision for sustainable development, etc. As a city that benefited from a series of actions for sustainable development and fight against climate change, the city of Marrakech was able to provide to its stakeholders a series of awareness-raising and capacity building events, consolidated in particular with the organization of COP22 in 2016. However, assessment of carried out initiatives highlights several shortcomings, particularly in terms of technical capacities at the local level, certain aspects related to local culture like the high use of motorcycles for example, among others.

Through this component, the project aims to ensure a global upgrade, by providing the necessary support to political decision-makers, economic and institutional stakeholders, technical staff, civil society and citizens so that they become key stakeholders in the project, able to support an effective implementation. In this context, awareness raising and capacity building events are planned, based on a detailed analysis of the needs of all stakeholders.

In parallel with these activities, the project also aims to support the advocacy activity which can be carried out in particular by civil society. Thus, the most dynamic actors will benefit from a series of sessions to support the organization of the advocacy activity, notably through upgrading of knowledge related to sustainable development, climate change, sustainable planning and urbanism, etc. The ultimate goal is to train participants to formulate a solid advocacy strategy to promote reforms at the local level, but which can also be used at the subnational or even national level.

In order to maximize the effects of the project, this component aims to ensure large-scale communication based on several communication tools. Key channels include the Sustainable Cities Impact Program Global Platform (SCIP GP[39]), a partnership and knowledge platform that promotes integrated solutions and cutting-edge support for cities seeking to improve their urban sustainability. The platform currently has a network of 23 cities in 9 countries and works with practitioners and opinion leaders around the world to develop solutions for sustainable urban growth. In this context, it supports in this context the partner cities to progress towards their visions and objectives of being competitive, inclusive and resilient cities.

Thus, in partnership with the SCIP GP the results of the project will be shared and disseminated to ensure the sharing of knowledge but also of the various constraints of integrating sustainability at the city level.

This component comprises one outcome and three outputs listed below:

Outcome 4.1: Policy making, and action are influenced at local, regional and national levels to advance the urban sustainability agenda

- **Output 4.1.1:** Specific and differentiated outreach and awareness campaigns targeting urban practitioners, the general public are conducted

[38] https://www.climatebonds.net/
[39] https://www.thegpsc.org/

BOX 5: Role of the Urban Municipalities under Component 4.

The Urban Municipalities of Marrakech, as any other urban municipalities, are in charge of planning, budgeting and delivery of a set urban services (e.g;, waste management, transport, public lighting, leisure & culture, green spaces, etc.). To ensure an appropriate implementation of these services up to the expectations of the city's citizens, elected councils and municipal servants are expected to engage in close consultations and partnerships with different categories of citizens, be it from the private sector, public institutions, civil society, academia, etc.. To ensure that the activities under this output will contribute to the City's long-term sustainability vision, the two Urban Municipalities of Marrakech, mainly their Communication departments, will be strongly be involved in all the activities of this output, including the mapping of stakeholders, development of an awareness plan on urban sustainability , preparation of awareness-raising material, organization of awareness campaigns and events and organization of advocacy learning and capacity building sessions adapted to the local context.

- **Activity 4.1.1.1.:** Mapping of stakeholders to be outreached on urban sustainability at national and local level (decision-makers, institutions, civil society, companies, young people, etc.)

Awareness is an effective lever to ensure that key stakeholders are aware of the importance of urban sustainability, understand project objectives and activities, to ensure engagement and effective implementation of the project.

Awareness requires first that a mapping of potential stakeholders is conducted among all categories (e.g., political decision-makers, institutional, technical staff, civil society or citizens).

The segmentation of the target audience is essential in order to ensure that the messages addressed, and the awareness-raising tools used are the most adapted to the needs and characteristics of each target group in order to effectively promote the recommended behavior and expected results.

- **Activity 4.1.1.2.:** Development of an awareness plan on urban sustainability combining standard (workshops and media.) and digital (e.g., social networks, web, blogs) approaches

As soon as the key stakeholders are identified, an awareness plan will be prepared to ensure dissemination of urban sustainability concepts to all targeted groups. The plan will cover an assessment of the level of awareness and knowledge of the targeted groups, specification of the key awareness thematic, identification of appropriate means and tools of implementation (e.g., digital and/or conventional awareness materials, necessary human and financial resources, etc.) and planning. The roles and responsibilities of each stakeholder who will be involved in the implementation of the awareness plan should be clearly defined.

- **Activity 4.1.1.3.:** Preparation of awareness-raising material specific to the various identified target groups covering the various themes of sustainability (energy, transport, waste, water resources, biodiversity, etc.)

There is a wide range of awareness raising methods, generally more effective when used together than separately. Awareness can be achieved through organizing workshops, sending brochures, using mass media and social networks, setting up a digital platform, among others. The choice of these means need to consider the specificities of each identified target group (e.g., governmental and city officials, NGOs, citizens, private sector, etc.) in order to ensure an efficient awareness and credibility.

The objective of this activity is to develop awareness-raising material (e.g., website, newsletter, animated digital material, thematic brochures, guides, etc.) identified part of the development of the awareness-raising plan

according to the targeted groups and urban sustainability themes such as energy, transport, waste management, water resources, biodiversity and others.

- **Activity 4.1.1.4.:** Deployment of the awareness plan through the organization of awareness campaigns and events targeting key stakeholders (national and local)

This will consist on launching all awareness-raising activities identified within the framework of the awareness-raising plan, in particular through the organization of awareness-raising campaigns and events to disseminate awareness-raising tools and materials. Deployment will be gradual according to the planned schedule and requires the mobilization of organizational, financial, human and material resources. This will ensure a better ownership of the sustainable development challenges and will allow for a better action or change in urban sustainability practices.

To achieve the various established awareness-raising objectives, awareness activities will be structured according to each target group and sustainability theme. Effective and continuous monitoring of implementation of the awareness-raising plan will be carried out as well as a final evaluation to ensure that the expected objectives are achieved.

- **Activity 4.1.1.5.:** Strengthening national and local advocacy capacities to promote urban sustainability (civil society, press, young people, etc.)

Advocacy on issues related to climate change and urban sustainability is an important element in influencing certain institutions or decision makers with the aim of bringing about changes in policy, practice, and social behavior to trigger reforms at the local, subnational and even national level.

In this context, the project will support the organization of a series of advocacy learning sessions adapted to the local context and to sustainable development, climate change, and urban planning, among others.

Capacity building will target the most dynamic stakeholders in relation with urban sustainability addressed by the project (energy efficiency, sustainable waste management, biodiversity, etc.), in particular civil society organizations and private sector through professional associations. Such stakeholders will be trained and guided in the design of a strong advocacy strategy.

- **Output 4.1.2:** In close partnership with SCIP GP, key experiences and lessons learned are compiled and widely disseminated for replication through a range of communication tools including the project website, project stories, issue papers, and scaling up of project results supported
    - **Activity 4.1.2.1.:** Development of a specific communication plan for the dissemination of project results

The dissemination and communication of project results is an essential step in ensuring the availability of information to the general public, the exchange of good practices among peers and encouragement of replication in other Moroccan cities and other developing countries.

Accordingly, this activity will focus on the elaboration of an effective communication plan on project results, by defining communication tools (website, social networks, etc.).

- **Activity 4.1.2.2.:** Development of communication and knowledge sharing tools (e.g., website, social networks, etc.)

Effective communication tools for the dissemination of project results identified in the framework of the communication plan will be developed. Communication on project results will opt for the combination of several tools in order to gain in efficiency regarding transmission of messages to different target groups. Communication

media will be multiple and can be divided into two main categories: media (TV, radio, internet) and non-media (workshops, seminars, conferences, etc.).

- **Activity 4.1.2.3.:** Sharing of project results via SCIP GP

This activity will be dedicated to sharing solutions and best practices with the Sustainable Cities Impact Programme (SCIP) Global Platform, which represents a partnership between cities from all continents concerned with establishing sustainable and resilient development. This activity will tap into experiences and lessons learned in terms of integrated solutions for urban sustainability in order to ensure an inclusive global partnership and present support for cities seeking to improve their urban sustainability. The barriers and constraints encountered in integrating urban sustainability will also be shared.

- **Output 4.1.3:** Project gender mainstreaming plan, stakeholder engagement plan, and a Monitoring and Evaluation (M&E) plan implemented
  - **Activity 4.1.3.1.:** Implementation of the Gender Action Plan: This action plan, presented in Annex 11, is composed of two parts: (i) an Action Plan by component and by activity linked to gender, and (ii) a detailed gender action plan relating to this activity 4.1.3.1.
  - **Activity 4.1.3.2.:** Implementation of the stakeholder engagement plan (see Annex 9)
  - **Activity 4.1.3.3.:** Implementation of the social and environmental management framework (see Annex 10)
  - **Activity 4.1.3.4.:** Implementation of the monitoring & evaluation plan (see Annex 5).

Partnerships:

Whether at the national or territorial level, Morocco witnesses the engagement of a multitude of stakeholders when it comes to urban planning, sustainable development, and the fight against climate change. Most economic sectors are involved and are increasingly aware of the need to take into account and integrate sustainability into their sectoral planning.

Thus, the implementation of this project will require the involvement, support, and commitment of a multitude of stakeholders, presented below.

- **National stakeholders**

The table below presents the main stakeholders at the national level who will be involved in the project. The table also provides an overview of the managers and potential roles in the project:

Table 2: List of national stakeholders involved in the project

Stakeholder	Responsibility	Potential roles in the project
Department of the Environment (DE)	The DE, through the Climate Change and Biodiversity Directorate, is the main coordinator of climate and biodiversity policy in Morocco on behalf of the government. The DE is in charge of preparing various documents of national and international scope (e.g., GHG inventories, national communications, BURs, NDCs, national climate change plans, etc.). The DE also acts as the focal point of the UNFCCC, CBD, GEF and GCF.	The DE, with its extensive experience in the design and implementation of climate change, biodiversity, waste management and sustainable development projects will act as the main implementing partner of the project and will ensure alignment of activities with national priorities.

Stakeholder	Responsibility	Potential roles in the project
	In the context of advanced regionalization, the DE supports the territories in the development of Territorial Climate Plans and the establishment of a monitoring and evaluation system for vulnerability and adaptation within the framework of Environment and Sustainable Development Regional Information Systems (SIREDD).	
Ministry of Planning of the National Territory, Urban Planning, Housing and City Policy	This Ministry is the main responsible for the development of strategies and plans to promote the field of town planning and city policy in coordination with key ministerial departments and concerned authorities. This Ministry develops town planning and space use rules, as well as town planning schemes and studies related to urban planning.	This Ministry will be involved in the various stages of the project to ensure the development of a renovated and sustainable model of urban development for the City of Marrakech, in order to establish the principles of sustainable urban planning, ensuring consistency and anticipating territorial impacts.
Ministry of Interior / Directorate-General for Local Territories (DGCT)	The DGCT provides technical and financial support to local communities (Provinces, Prefectures, and Communes) to improve their planning and management of local affairs (e.g, infrastructure, waste management, etc.). This directorate also provides legal support to local communities.	The DGCT will play an important role in the mobilization of local stakeholders that are under its tutorship and will provide support for the realization of certain activities proposed within the framework of the project, in particular those related to "national-local" political dialogue, investments related to waste management, urban transport, public lighting, as well as the establishment of innovative financial mechanisms and their legal frameworks.
Ministry of Economy and Finance	The Ministry of the Economy and Finance intervenes in the control of local finances and the fiscal system of communities. It also supervises the national financial market and is thus responsible for the introduction of new financial instruments and mechanisms for the private or public sector.	This Ministry will be involved in component 3 of the project which aims to improve the financial planning of the City of Marrakech and the establishment of innovative financial mechanisms. In particular, it will be requested to allow the City to access financial mechanisms that already exist in Morocco but previously reserved for the private sector, and also to introduce new financing modes.
Ministry of Industry, Trade, Green and Digital Economy	This Ministry is an essential partner in the Kingdom's industrial development and its upgrading. During the last decade, this ministry developed various Industrial Acceleration Plans. In January 2021, this ministry launched the "Green Growth - Tatwir" part of the deployment of the 2021-2023 industrial recovery plan, which includes	As part of the project and with the support of Agency "MarocPME" under tutorship of the Ministry and in charge of the implementation of the “Green Growth Tatwir” program, an important technical and financial support will be provided and will thus facilitate the transformation of

Stakeholder	Responsibility	Potential roles in the project
	among its strategic axes the positioning of the kingdom as a "low-carbon and circular industrial base". This program will provide investment subsidies and technical assistance to support decarbonization of SMEs[40]. In addition, this ministry is planning to set up an investment support program called "Green Ecosystem" in partnership with other ministries to promote the development of waste recycling and circular economy.	the Sidi Ghanem industrial district as an industrial Eco-Park, considering that subsidies for audit services (energy, water, waste) are up to 90% and subsidies for investments resulting from the recommended measures are up to 30%.
Ministry of Culture, Youth and Sports - Department of Culture	The Department of Culture prepares and implements government policy related to the management of Morocco's cultural and natural heritage	Management and preservation of the historic gardens of the City of Marrakech and contribution to the project in terms of communication and awareness.
Mohammed VI Foundation for the Protection of the Environment	The Foundation was created in June 2001, on the initiative of His Majesty King Mohammed VI. The presidency was entrusted from the outset to HRH Princess Lalla Hasnaa. The fundamental mission of the Foundation is to raise awareness and educate for sustainable development. In this context, the Foundation ensures awareness on environmental issues, the right to a healthy environment and sustainable development. In Marrakech, the Foundation is piloting two flagship programs: - Safeguarding & Development of the Marrakech Palm Grove; - Restoration of historic gardens.	Within the framework of this project, the Foundation's main role will be to mobilize stakeholders, raise their awareness and catalyze efforts to ensure the safeguard and development of the Palm grove of Marrakech and historical gardens.
General Directorate of Meteorology (DGM)	This Directorate, under the Ministry of Equipment, Transport, Logistics and Water, ensures multiple public service missions and as a service provider for different economic sectors of the country. The DGM has six regional meteorological directorates (Centre, Centre-East, Centre-West, North-West, North-East, South) in order elaborate and provide adapted services at the territorial level.	The DGM through its regional bureau in the City of Marrakech will be engaged to improve knowledge on climate change vulnerability data.
Energy Engineering Company (SIE)		Part of this project, the SIE has expressed its interest and is ready to support both public and private entities in the implementation of energy efficiency measures to generate GHG emission reductions.

[40] http://www.mcinet.gov.ma/fr/content/plan-de-relance-industrielle-lancement-du-programme-%C2%AB-tatwir-croissance-verte-%C2%BB-pour-l-0

Stakeholder	Responsibility	Potential roles in the project
		Furthermore, given its expertise in supporting the public and private sectors in EE and RE projects, SIE will also be called upon in the development phases of business models and innovative financial arrangements involving public and private sectors, where SIE could act as a trusted third party.
The Communal Equipment Fund (FEC)	The FEC is a public financial institution specialized in financing territorial communities. With more than 60 years of experience in financing the local public sector, the FEC has developed an expertise and capitalized a know-how that consolidates its role as a technical and financial partner of territorial communities. The FEC offers financing solutions adapted to its clients' needs: - Loans intended to finance their investment projects; - Lines of credit intended to finance their development programs.	Within the framework of this project, existing financing mechanisms will be reviewed, and new and innovative ones will be proposed, designed and developed to support the financing of activities, projects and programs integrating sustainability in Marrakech. The FEC will be involved at this level given its crucial role in the financing of territorial communities in Morocco.
4C Morocco	A public interest group that acts as a platform for capacity building on climate change for different stakeholders (public, economic, research, civil society, local authorities, etc.). 4C Morocco is structured around four groups: 1) Public Administrations and territorial communities, 2) Private and public companies, 3) Research & Expertise and 4) Civil society.	4C Morocco provides a unique platform for knowledge management, dissemination and engagement of different stakeholders. This platform will therefore contribute to the mobilization of stakeholders but can also be involved in facilitating exchange between stakeholders and facilitating the sharing of project results at the national level and contributing to capacity building efforts.

- **Territorial stakeholders**

As for the national level, the territorial level also requires the involvement of a series of stakeholders that are key for the success of the project. A process of exchange and consultation will be implemented to foster the cooperation of key players at the local level.

The table below presents the main stakeholders, their responsibilities as well as the respective roles in the project.

Table 3: List of territorial stakeholders involved in the project

Stakeholder	Responsibility	Potential roles in the project
Regional Environment Directorate (DRE)	The DRE represents the governmental authority in charge of the environment at the regional level and was created to support the implementation of the national policy of environmental protection and sustainable development. The missions of the DRE are multiple: - Contribute to the development of the ministry's action programs and ensure their implementation at the regional level - Monitor the implementation of environmental upgrading programs and plans at the regional and local levels; - Operationalize the content of the National Sustainable Development Strategy at the regional level, in coordination with local stakeholders and partners;	The DRE in Marrakech has participated in several studies and projects integrating climate change and sustainable development in the region.Therefore, the DRE will provide support at several levels: strategic support, steering, mobilization of stakeholders,provision of data and studies andimplementation of project activities.
Wilaya of Marrakech-Safi subnational region	The Walis and Governors represent the central power in territories, ensuring the application of laws and implementation of regulations and governmental decisions. They exercise administrative control and assist elected local communities' presidents, especially the presidents of regional councils, in implementing their development plans and programs. Under the authority of key ministries concerned,they coordinate the activities of the decentralized services of central administration and ensure their proper functioning.	The Wilaya will be involved in thestrategic steering of the project and its technical team will be involved in the planning and implementation of project activities.
Urban communes of Marrakech and Méchouar Kasbah	The City of Marrakech is made of two urban communes: the urban commune of Marrakech and the urban commune of Méchouar Kasbah. These communes have legal status and financial autonomyin accordance with the 2011 constitution. Their mainrole is to contribute to the economic, social, cultural, and environmental development of these two municipalities, to the territory planning, to the execution of the budget as well as to the management of the territorie's public services and heritage.	Due to their attributions, the urban communes of Marrakech and Méchouar Kasba are responsible for the management of a number of services and are involved in the different components that may have strong impacts on the territory. Therefore, they will be involved in the strategic steering and implementation of project activities. Technical representatives from both urban communes will be involved with the Project Management Unit activities through different Technical Committees (see Chapter VII. Governance and Management Arrangements).

Stakeholder	Responsibility	Potential roles in the project
Council of the Marrakech-Safi Region	The Council of the Region of Marrakech-Safi is composed of elected members responsible for managing this territory. The President of the Council has all ability to decide on the affairs of the Region as per the national regulations. It is therefore consideredthe "authorizing officer" instead of the Wali. Consequently, under the principle of free management and democratic deliberations, that subnational regions are governed regions. Specific development competences include the following areas: economic development, rural development, culture, environment and international cooperation.	The Regional Council will have an important role to play in this project, particularly in the dialogue between local elected officials and national authorities, the mobilization of investments and the dissemination of good practices in other municipalities in the region.
Regional Investment Center (CRI)	The CRI contributes to the implementation of State policy in terms of development, incentive, promotion, and attraction of investment at the regional level and comprehensive support for businesses, including SMEs. CRIs in Morocco are governed by boards of directorsand managed by a general manager. Regarding economic incentive, CRIs are engaged to: - Ensure regional economic vigilance by gathering macroeconomic data for the region; - Create a database of investment opportunities; - Contribute with the regions, administrations, andconcerned authorities in the preparation and realization of investment development strategies and plans addressed to investors, and to assist in the operationalization of sectoral investment strategies.	Considering the innovativeinvestment and financing aspects targeted by the project, the CRI will be involved in the activities that will be deployed within the framework of Component 3 and which aim in particular at the implementation of businessmodels and innovative financial mechanisms involving private sector investors which are the main target of the CRI's actions.
Urban Agency of Marrakech (AUM)	The AUM is a public institution with legal entity and financial autonomy, under the supervision of the Ministry of Planning of the National Territory, Urban Planning, Housing and City Policy and the financial control of the State. Among its attributions, within the framework of its territory, the AUM is responsible for carrying out the studies necessary for the establishment of the Master Plan of Urban Development (SDAU), monitor its execution, program the development projectsinherent in the realization of the objectives of the Master Plan, establish regulatory urban planning documents in particular the development plans and their regulations.	The AUM is a key player in the design and implementation of this project, particularly component 1. The AUM will make it possible to mobilize all key stakeholders concerned by urban planning, to provide the necessary data and information, to validate adjustments, to clarify the long-term vision of theterritory.

Stakeholder	Responsibility	Potential roles in the project
Regional Delegation of Tourism	Represents the Department of Tourism, ensures in liaison with the authorities, local communities, and tourism professionals the harmonious and integrated development of the sector at the regional level.	The Regional Delegation of Tourism will mobilize actors from the hotel sector, to validate the proposed project activities for energy efficiency improvement and support their implementation.
RADEEMA	RADEEMA is responsible for providing potable water and electricity, as well as managing the city's waste water treatment plant. Its scope of intervention represents approximately 658 km² and covers the city of Marrakech and part of the neighboring rural communes.	RADEEMA will provide essential support to the project, particularly those related to wastewater treatment and reuse in watering public gardens and energy efficiency activities.
of Intercommunity Cooperation Establishment (ECI)	The ECI of Greater Marrakech, composed of all the territorial communes of the prefecture, represents a legal framework for cooperation between the communes. It aims to exploit and rationalize expenses through the sharing of mechanisms and techniques in the field of treatment and recovery of household and similar waste.	The ECI will be primarily involved in the solid waste management. Having a global vision of the sector, The ECI will provide project guidance, a long-term vision, as well as needed data
Hadirate Al Anwar	Hadirate Al Anwar is a Local Development Company (SDL),created in 2017 by the municipality of Marrakech and the company Enertika Magreb. The main goal of the SDL is to achieve an energy saving of at least 60% but also to offer Marrakchi citizens a fair and safe public lighting that meets international standards.	Hadirate Al Anwar as the manager of public lighting in Marrakech, will be involved in the implementation of activities related to public lighting at the Sidi Ghanem industrial district.
Bus City Motajadida	BUS City Motajadida, was created in 2016 as Local Development Company (SDL) by the Regional Council and the municipality to manage urban transport.	This SDL will be engaged in all project activities related to mobility.
Tensift Hydraulic Basin Agency (ABHT)	The ABHT is in charge of development of the integrated water resources management master plan (PDAIRE) and ensure its application, issuance of authorizations and concessions for the use of the public hydraulic domain, realization hydrological and hydrogeological quality studies in case of declared water shortage or to prevent flood risks as well as proposal and execution of adequate measures to ensure drinking water supply to the populations.	The main role of the ABHT is to provide technical assistance to the implementation of activities related to water savings and to ensure synergies with projects being planned or under implementation.
Cadi Ayyad University of Marrakech	Created in 1978, the Cadi Ayyad University of Marrakech is a public university federating the higher education institutions in Marrakech, El Kelaâ des Sraghna, Essaouira and Safi. It is ranked by the Times Higher	The university will ensure the followings: - Provide scientific support to planning and sustainable development processes of Marrakech. - Ensure the science-policy interface by ensuring a link between science

Stakeholder	Responsibility	Potential roles in the project
	Education among the 100 best universities in the world with less than 50 years of existence. The university has several institutions, including ▪ Faculty of Science - Semlalia; ▪ Faculty of Arts and Humanities; ▪ Faculty of Law, Economics and Social Sciences; ▪ Faculty of Science and Technology; ▪ Faculty of Medicine and Pharmacy - Marrakech ; ▪ Higher School of Technology of Essaouira ; ▪ National School of Applied Sciences - Safi; ▪ Polydisciplinary Faculty of Safi ; ▪ National School of Applied Sciences of Marrakech; ▪ National School of Business and Management of Marrakech; ▪ Higher Normal School; ▪ National School of Architecture (ENA); ▪ University Center Kelâa des Sraghnas.	and policy, also by creating synergy while meeting the requirements of political stakeholders. - Reconcile scientific rigor and the expectations of the political stakeholders. - Contribute to the calculation of the CBI of Marrakech.
Civil Society Organizations, including NGOs	Social mobilization: information and training of the population, promotion of citizen participation. Counter-power through control of actions, lobbying and advocacy, defending the interests of marginalized populations.	Raising citizen awareness and structuring urban sustainability advocacy in general. Supporting greening of schools and cemeteries in particular.

- **Private sector actors**

In addition to the above-mentioned actors, the project will collaborate with the private sector. The stakeholders to be involved are presented in the following table:

Table 4: List of private stakeholders involved in the project

Stakeholder	Responsibility	Potential roles in the project
Professional Group of Banks of Morocco (GPBM)	The GPBM is the association of banks currently governed by the Banking Law No. 103-12 of December 24, 2014. Its mission is to organize the representativeness of banks in Morocco to make it a body of consultation, proposals, and support for the economic development of the country.	The consortium will be involved in this project to coordinate project activities, particularly regarding the development of innovative financing mechanisms and their implementation modalities. The group will mobilize key players from the financial sector of Morocco.
General Confederation of Moroccan Enterprises (CGEM	The CGEM is the representative of the private sector to public authorities and institutions. Among its missions, the enhancement of the role of companies in the economic and social development. CGEM has a	The contribution of the CGEM-Marrakech will be through the promotion of the project's activities among its members as well as the proposal of business models involving private

Stakeholder	Responsibility	Potential roles in the project
Marrakech Safi)	regional representation in Marrakech, which aims to spur economic development of the region and the promotion of its potential and investments in partnership with local public stakeholders. The CGEM has a Corporate Social Responsibility (CSR) label which rewards contributions of companies to sustainable development and environmental preservation.	companies in the realization and financing of sustainable investments planned within the framework of the project.
–Alsa - Delegated manager of public bus transport –	ALSA Group started its activity in Morocco in 1999, particularly in Marrakech to manage urban bus transport in the city. ALSA Marrakech's transport network has increased significantly to reach 45 bus lines.	Through its role in the urban transport sector, ALSA will be involved at several levels, particularly in line with urban transport activities. It has an important role in the future planning of the sector, in the provision of historical and current data, in the validation of activities and in their implementation and monitoring. With their long experience in the field, the technical staff may also be of great interest to the project and could also benefit from the capacity building workshops to be planned.
Ecomed Marrakech - Delegated manager of waste landfill and recovery center -	A subsidiary of the ECOMED Group, Ecomed Marrakech was created in 2014. This company is in charge of the downstream management of collected household waste, particularly the management of the landfill and waste sorting site since February 2015 on behalf of the Urban Municipality of Marrakech for a period of 20 years.	With its experience in household waste management, Ecomed Marrakech will provide technical advice and will be involved in project activities, especially those related to solid waste management.
ARMA Company Delegated Urban Waste Manager -	The company is specialized in the upstream collection of household and similar waste, as well as the transportation of the collected waste to the landfill and sorting site. Since January 2021, this company is in charge of urban waste in the districts of Guéliz, Medina, Sidi Youssef Ben Ali and the Palmeraie of the Citry of Marrakech for a period of 6 years	ARMA and MECOMAR will provide technical assistance to the project and will be involved in activities related to sustainable waste management.

Stakeholder	Responsibility	Potential roles in the project
MECOMAR Company - Delegated Urban Waste Manager	MECOMAR belongs to the SAHYOUN family group and its main activity is the production of waste equipment for local communities and adapted to the needs of Morocco. It is also in charge of municipal contracts related and street cleaning. Since January 2021, the company is the delegated manager of urban waste at the level of the district of EL-Menara of the City of Marrakech for a period of 6 years	
Mdina Bike	MEDINA BIKE is a company launched during COP22 in Marrakech. Supported by UNIDO, GEF and set up by the Ministry of the environment of the Kingdom of Morocco. It is the manager of the 1st self-service bicycle system installed in Africa.	MEDINA BIKE will bring its support to activities related to the transport sector, in particular in the elaboration of a sustainable urban mobility plan as well as the establishment of the routes dedicated to the two wheels and the recharging stations which will be able to serve electric bikes.
EMOB	EMOB is a company that operates in the sector of clean and sustainable mobility. Its mission is to democratize access to electric mobility in Morocco by offering a wide range of electric vehicles for everyone.	EMOB will be mainly involved in the deployment of self-service rental of electric motorcycles.
Professional Association of the Industrial District Sidi Ghanem	This association is involved in the management and organization of this industrial district, considered to be the main showcase of the city's industrial and artisanal know-how.	The role of the Professional Association of the Industrial District Sidi Ghanem is to provide technical assistance for the transformation of the district Sidi Ghanem into an industrial Eco-Park.

The project will benefit from results and lessons learned of other projects and programs already completed or under implementation in the City of Marrakech, and which will be particularly relevant to the results of this GEF project. An overview of these project and programs is presented in the following table:

Table 5: List of programs and projects concerned by partnerships and synergies

Program/Project	Partners	Description and link to the project
Integration of the global environment aspects into the local strategic planning process	▪ GEF ▪ UNDP ▪ Department of Environment	Carried out at the level of 3 pilot regions, this project developed and tested a set of tools for integrating sustainable development into local strategic planning, through a participatory process mobilizing all key stakeholders.

Program/Project	Partners	Description and link to the project
		The results of this project, in particular the developed tools, will be an important contribution to this project. It is therefore recommended to take into consideration these tools, in particular within the framework of component 1 of the project to ensure synergy and tap on best practices.
Watering of green spaces with wastewater	▪ Ministry of the Interior-Directorate General of Territorial Communities (DGCT), ▪ City of Marrakech, ▪ RADEEMA, ▪ Mohammed VI Foundation for the Protection of the Environment ▪ ABHT.	This project is set through an agreement between public partners to mobilize treated wastewater for the irrigation of palm groves, golf courses and gardens in Marrakech. This project will support the implementation of the activity related to the implementation of an intelligent green space management system.
National Program of Mutualized Liquid Sanitation and Reuse of Treated Wastewater (PNAM)	▪ Ministry of the Interior-Directorate General of Territorial Communities (DGCT).	The PNAM aims to increase the overall connection rate to the drinking water network in urban areas, reduce pollution generated by wastewater and promote the reuse of treated wastewater. Therefore, it is important to ensure synergy between the PNAM and the planned activities related to water saving and rational management.
Water efficiency	▪ Department of Environment ▪ ABHT ▪ RADEEMA ▪ Regional Association of the Hotel Industry - Marrakech ▪ Regional Council of Tourism - Marrakech ▪ Wilaya of Marrakech-Safi	This project is set through an agreement between public partners aiming at the economical management of water in public buildings in the City of Marrakech and rationalization of water use in the hotel sector. The activities planned in connection with water saving will be able to benefit from this project, in particular to aspects related to outreach and waste consumption audit.
Rehabilitation of the historical garden of Agdal Ba-HMAD	▪ City of Marrakech	The project foresees the requalification and rehabilitation of the historic garden of Agdal Ba-HMAD located in the Medina district and covering an area of about 7 ha. Thus, it can provide support for activities related to the restoration and development of some historical and public gardens.
Upgrading of the public lighting network at the industrial district of Sidi Ghanem	▪ SDL - Hadirat Al Anwar	A diagnosis of the public lighting network of the Sidi Ghanem industrial district was carried out by the SDL to identify the works to be implemented on the lighting system as well as the required investments. This diagnosis will serve for the activity related to the implementation of an intelligent public lighting network at the Sidi Ghanem industrial district.
BRT system scaling-up	▪ SDL-Bus City Motajadida ▪ City of Marrakech	The project foresees the extension of the Massira BRT lane through the implementation of 40 new electric BRT lanes

Program/Project	Partners	Description and link to the project
		that will serve the Medina, the airport, the new bus station, Sidi Youssef Ben Ali and Gueliz districts. Data provided by the SDL will be used to conduct the social and environmental impact study of the scaling-up of the BRT system.
Greening CO22 in Marrakech	▪ Department of Environment, ▪ UNIDO ▪ GEF.	This project implemented various activities intended to reduce the carbon footprint through development of public gardens and eco-districts, promotion of low-carbon public buildings, and encouragement and installation of various low-GHG modes of transportation (e.g., Medina Bike system). The results of this project will be key to ensure successful implement of Outputs 2.1.2 and related low carbon transport, energy efficiency and renewable energy.
Public lighting upgrade in the City of Marrakech	▪ Ministry of Interior, ▪ City of Marrakech, ▪ SDL public lighting - Hadirate Al Anwar.	This project aims to reduce up to 40% of the annual energy consumption related to public lighting and 60% of its energy bill, through the integration of modern quality lighting. This project is relevant to output 2.1.3 specifically the implementation of a new public lighting network at the industrial district of Sidi Ghanem.
The Green Key Label	▪ Mohammed VI Foundation for the Protection of the Environment, ▪ Foundation for Environmental Education	An international label launched in Morocco in 2008 that rewards all types of hotels that are strongly committed to responsible environmental preservation practices. This project will serve as the basis for the implementation of the activity related to the selection of future Green Key recipients part of Output 2.1.3
The Safeguard and Development of the Marrakech Palm Grove Programme	▪ Mohammed VI Foundation for the Protection of the Environment, ▪ Wilaya of the Marrakech – Safi region ▪ City of Marrakech ▪ RADEEMA ▪ Marrakech Palm Grove Observatory	Considered as one of the flagship programmes of the Mohammed VI Foundation for the Protection of the Environment, the “Safeguard and Development of the Marrakech Palm Grove Programme” seeks the following objectives: i) reconstruct the palm heritage, ii) rethinking water resource management, iii) mitigate urbanization and iv) ensure inclusion of the local population and the civil society organizations. Activities related to the Palm Grove need to be coordinated with this on-going programme.
Territorial climate plan of the prefecture of Marrakech	▪ Ministry of Interior ▪ Mohammed VI Foundation for the Protection of the Environment, ▪ Wilaya of the Marrakech – Safi region.	This Territorial Climate Plan assessed GHG emissions and vulnerability to climate change of the prefecture of Marrakech along with a mitigation and adaptation strategy and an operational action plan. The Territorial Climate Plan r can be consulted, particularly for activities related to energy efficiency, renewable energy, low carbon urban mobility and sustainable waste management.

Program/Project	Partners	Description and link to the project
Launch of the first electric BRT line	▪ GEF, ▪ UNDP, ▪ SDL "Bus City Motajadida; ▪ City of Marrakech ▪ SIE ▪ RADEEMA ▪ Department of Environment	A GEF project supported the launch of the first electric BRT lane, particularly through investment in a solar power plant to ensure supply of clean electricity to this first BRT lane, among other technical feasibility studies and outreach activities. The results of this project need to be considered for the scaling up of the electric BRT system.
Low carbon motorcycles	▪ Council of the Marrakech-Safi Region, ▪ Swiss company AAQIUS and the Emerging Business Factory ▪ EMOB ▪ City of Marrakech ▪ Moroccan Agency for Energy Efficiency (AMEE)	AMEE and the municipality of Marrakech have replaced gasoline motorcycles with electric motorcycles. Thus, the Council of the Marrakech-Safi Region, the Swiss company AAQIUS, EMOB and the Emerging Business Factory have signed a partnership agreement to create a factory for the production of electric motorcycles. Synergies are required with this initiative and the deployment of the electric motorcycles sharing system planned in Output 2.1.2.
MobiliseYourCity	▪ Ministry of Interior ▪ Cities of Casablanca, Rabat-Salé & Oujda	MobiliseYourCity is an international transport initiative under the UN Marrakesh Partnership for Global Climate Action. It has established itself as the leading global Partnership of nearly 100 partners for sustainable urban mobility planning, policy development, and increasing investment for sustainable transport in developing and emerging economies. The initiative is supported by the European Union, the French Ministry for the Ecological Transition (MTE), the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety (BMU), and the Agence Française de Développement (AFD). In Morocco, the initiative supported the national level in Developing a National Urban Mobility Plan and provided technical assistance to three cities (Casablanca, Rabat-Salé and Oujda) in developing their PMUD. Synergies are required between the outcomes of this initiative and activity 2.1.1.1.

The programs and projects listed in the table above provide a favorable ground for the successful implementation of the four project components. The programs and projects carried out or planned in the identified initiatives will accelerate the transition to urban sustainability and strengthen the commitment and involvement of project stakeholders.

Since most partners involved in the above programs and projects are part of the project stakeholders and target groups (see Table 6), they will lay a fovorable ground for synergies and coordination with the present GEF project. The proposed Technical Committees (see Chapter VII – Organisation Structure) who will work under the leadership of the PMU at different stages of project activites (e.g., planning, design, ToRs drafting, tendering and validation of deliverables) will ensure that the project will tap on existing results and outcomes, create synergies and avoid duplications.

Risks*:*

All potential project risks were identified and assessed (see Annex 7). Project activities are designed to ensure that there is little or no risk of negative social or environmental impacts. During the design phase of the project, the UNDP Social and Environmental Screening Procedure (SESP) was performed (see Annex 6) and an Environmental and Social Management Framework (ESMF) was developed (see Annex 10). In addition, a comprehensive stakeholder engagement plan has been developed (see Annex 9).

In accordance with UNDP requirements, the project PMU will monitor risks on a quarterly basis and report on the risk status to the UNDP country office. The latter will record progress in the UNDP ATLAS risk register. Risks will be considered critical when the impact and likelihood are high (i.e.; when the impact is rated at 5, and when the impact is rated at 4 and the likelihood at 3 or more). Management responses to critical risks will also be reported to the GEF in the annual assessment report.

Stakeholder engagement and South-South cooperation:

The implementation of the project requires a strong commitment from several stakeholders, whose role can be decisive for the implementation of associated activities. Such implementation is mainly based on effective coordination and communication to achieve the expected results. Any action of urban sustainability implies the participation of diversified stakeholders to ensure the successful implementation of the project. In this sense, the stakeholder analysis was developed and allowed to identify and mobilize more than twenty key stakeholders to the project. These are mainly institutional partners (Department of Environment, DRE, Wilaya, urban municipalities of Marrakech, ABHT, FEC, , RADEMAA, SDLs, SIE, etc.) as well as private sector entities (e.g., EMOB, delegated managers of urban waste such as ARMA and MECOMAR, CGEM, GPBM, etc.). This analysis was a key step in the development of the project's stakeholder engagement plan (Annex 9), which includes information summarizing the main organized PPG meetings, workshops and consultations, the roles of stakeholders in the project, the mechanisms for ensuring their participation and engagement throughout project implementation, monitoring and evaluation arrangements, among other aspects.

South-South and triangular cooperation (SSTrC) is essential for knowledge sharing and exchange between countries in the South and for ensuring an inclusive global partnership for urban sustainability and fight against climate change. Therefore, the project will establish a knowledge sharing flow through its component 4 which aims at disseminating and capitalizing on the results of the project through the Sustainable Cities Impact Program Global Platform (SCIP GP) in order to present opportunities for replication in other countries. The project will codify good practices and facilitate information dissemination and technology transfer to enable other countries to benefit from the lessons learned and best practices to be adopted, thus creating opportunities for learning and exchange with the aim of leading to constructive replication in other developing countries in the South. The project will also create opportunities for regional cooperation with other countries that are implementing similar initiatives in geopolitical, social and environmental contexts relevant to this project.

Gender equality and Women's Empowerment:

The gender analysis and the gender action plan were developed to reflect the gender equality mainstreaming perspectives of UNDP and GEF.

UNDP makes gender mainstreaming its main strategy to achieve gender equality and the empowerment of women. For the GEF, gender equality is a strategic and operational imperative. The gender analysis (detailed in Annex 11) followed the guidelines proposed by the UNDP Guide on Mainstreaming Gender in GEF Funded Projects and identified gender concerns that can be meaningfully integrated into the project.

This gender analysis identified key elements that can advance the integration of gender in the project, these elements are:

- ✓ Improve gender-specific knowledge and data related to the City of Marrakech in different areas of the project: transport and mobility, energy, water, green spaces, solid waste, biodiversity, etc. Make this gender-sensitive data available by developing communication supports (e.g. website).
- ✓ Ensure equal and effective participation of women and men and involve women in all project activities. Consider women as active agents of development and avoid sexist and exclusive practices in all activities and accomplishments of the project.
- ✓ Support the active inclusion and representation of women in all consultation, information and decision-making processes.
- ✓ Support the development and implementation of Communal Action Plans (PAC) using a gender-sensitive participatory approach. Indeed, the municipal charter has set up a consultative commission called the Committee for Parity and Equal Opportunities, made up of personalities belonging to local associations and civil society actors. This commission gives its opinion on issues relating to parity and equal opportunities and the social gender approach.
- ✓ Support the establishment of violence prevention and reception services for victims of violence in transport stations. These services could play a dissuasive role against crime in transport, in particular against gender-based violence, while providing people who are victims of violence with multifaceted assistance (medical, psychological, administrative, legal, etc.). These services should be operational during the opening hours of the transport stations and would be sustained well beyond the project closing date.

The Gender Action Plan (presented in Annex 11) provides a series of gender-sensitive measures geared to promote gender equality and women empowerment. This action plan consists of two parts: (i) an Action Plan by component and by activity linked to gender, and (ii) a detailed Gender Action Plan related to activity *4.1.3.1. Implementation of the Gender Action Plan* (Component 4).

<u>Innovativeness, Sustainability and Potential for Scaling Up</u>:

The project proves its innovative character, sustainability, and scaling potential through its strategic components:

- **Innovation:**

Thinking about and making a city sustainable always involves deep and multidimensional changes through innovative approaches. Under this project, urban planning is reinforced on the basis of an innovative and specific approach at the territorial level. The project aims to develop a roadmap for urban planning specific to Marrakech; an approach which remains new at the national level. In addition, the project aims to include urban planning in a multisectoral dynamic, by involving various stakeholders at several scales, and by aiming to conceive the city differently under a set of policy, strategic, technical, technological, and social aspects, by ensuring the inter-complementarity among stakeholders. This is a new approach proposed within the framework of this project to meet the growing needs of the city and the willingness of the stakeholders to place the city in a dynamic that differs from the classic urban planning schemes followed until now in Moroccan territories.

The activities proposed within the framework of the project give an important interest to the innovation aspect. In terms of sustainable mobility activities, technological innovation is at the center of the current electrification of the system. The sharing system of electric scooters by E-MOB represents a first of its kind in Morocco, and even in Africa, and constitutes an important change in terms of mobility in Marrakech which is characterized by the strong use of two thermal motorcycles. This electric motorcycle sharing system integrates also a digital innovation through a mobile application for the use of the service and should contribute to democratize use of this kind of technology. Just as the mobile application dedicated to public transport is a new initiative that will solve many problems such as waiting times at transport stations or optimizing the choice of transport modes. Concerning the solar electric charging stations, these also represent an unprecedented innovation in Morocco, especially at the urban level where

the network of such stations remains quite weak, pushing the population to adopt the choice of electric vehicles in the future.

As for the Low Emission Zones (LEZ), which are already adopted in several European cities and have already demonstrated their effectiveness, however, their adaptation to the Jamaa Lafna Square and the Marrakech Medina, touristic areas with extremely high traffic, is an innovation that will better preserve this local heritage and will further enhance the cultural aspect of this historically pedestrian area of the city. The LEZ also offers other social, health and environmental benefits, including the reduction of toxic air pollutants and GHG in one of the city's densest traffic areas.

The energy efficiency and renewable energy activities are a gateway to innovation through the use of new smart technology in Morocco, notably the smart grid system that will enable the remote management of the public lighting network in the Sidi Ghanem industrial district, as well as the intelligent management of electricity production by renewable energy. These activities illustrate how energy consumption can be reduced and optimized in cities and how new technologies and digitalization open the way for innovation. On the other hand, although the realization of energy audits for public buildings and tourist establishments is not directly affiliated with the innovation process, this step is essential in order to identify the levers of improvement and encourage investment in innovative and promising projects. In addition, the present project, through the GREEN KEY labeling, promotes awareness of the tourism sector stakeholders on the energy efficiency innovations to be implemented.

In terms of waste treatment, neither Construction and Demolition Waste nor used oils were treated or recovered in the city. The treatment and recovery of these two types of waste remains an innovative initiative in Morocco and will therefore generate economic, social, and environmental benefits, and pave the way for other cities in Morocco where the organization of waste management streams within the framework of a circular economy remains to be developed.

In addition, the project aims, in its component 3, at an intelligent and innovative mobilization of financial resources that will allow the city of Marrakech to finance its sustainable development. A benchmarking of business models used to implement climate change plans of cities at the international level will identify innovative models involving more the private sector and attracting national and international financial institutions. With this project, Marrakech will also be a pioneer at the national and regional level by setting-up innovative financial mechanisms mobilizing new players at the municipal level s (capital market, citizens, etc.). It will thus have the opportunity to be the first city in Morocco and in the region to issue green bonds or to have its own crowdfunding platform dedicated to climate co-benefit projects.

The project will also adapt innovations to convert degraded, neglected and undynamic environments into interactive functional ecosystems. The innovative introduction of low-carbon technologies in these spaces (water and energy efficient technologies) and the adoption Nature-based Solutions (NBS) will stimulate biodiversity and improve ecosystem services, including urban climate regulation.

On the other hand, the implementation of a computerized system, SMART GREEN Solution, to operate, automate and efficiently manage irrigation and environmental control systems for green spaces will optimize water and energy savings. The integration of these innovations into the city's urban design and planning will contribute to improved human health and well-being, social cohesion, and community support, while providing ecological and economic co-benefits.

- **Sustainability:**

Sustainability beyond the end of the project will be ensured in several ways. Under Component 1, the targeted outputs constitute the foundations for the adoption and implementation of sustainable urban planning. The targeted results go beyond the project and set the city's adopted processes on new, longer-term, and more sustainable

trajectories. The upgrading of the framework conditions for urban sustainability, the dialogues (between the territorial and national level), the elaboration of the new Municipal Action Plan integrating sustainability, among others, constitute interventions that will ensure transformative changes, with lasting effects.

In addition, the central multi-sectoral data management unit will monitor the progress of the initiatives launched in Marrakech, ensure a continuation of successful activities, and reshape interventions to ensure greater sustainability beyond the project duration. The dialogues (national and territorial) that will be organized will ensure an increased awareness and involvement of key urban planning stakeholders, who will be able to continue the efforts started under the project and fully integrate sustainability into their future planning documents and interventions.

In terms of sustainable mobility activities, the sustainability and empowerment of these activities is fundamental since E-MOB is a private initiative and its management follows a private logic that guarantees efficiency, know-how and sustainability of the project. While the electric charging stations, the two-wheeler lanes and the Low Emission Zones represent new assets at the service of citizens, whose lifespan is measured in decades and whose maintenance should ensure their longevity. The design of the project has mobilized the commitment of all stakeholders who should then ensure proper management and maintenance.

Regarding the activities of energy efficiency and renewable energies, the sustainability and durability is represented by the continuity of the operation of energy optimization technologies and clean energy production set up thanks to their lifespan. Contracts for the management of their maintenance will also be put in place by their operator at the level of public and tourist buildings and at the Sidi Ghanem industrial district to guarantee their operation in better performance and consequently ensure the sustainability of their impact in terms of energy saving and reduction of GHG emissions.

The Construction and Demolition Waste treatment platform will also remain an asset of the City, which should organize its management, maintenance, and the sale of finished products through one of the business models used by cities (Local Development Company, delegated management or public-private partnerships, etc.). The structuring of a new waste stream other than household waste, where significant resources are provided by the city through the new delegated management contracts, in particular the recovery of used oil, should include a private operator for the implementation and sustainability of the project. The private operator should provide technical know-how and should be supported to ensure the collection of used oils on a larger scale.

In addition, Component 3 aims to provide the City of Marrakech with the tools to structurally improve its creditworthiness and financing methods, along with the appropriate legal framework, in order to make the planned sustainable investments d under the project a reality, as well as those to be planned in the future. Through the training programs under this component, these tools will be made available to local stakeholders not only for the duration of the project but well beyond, ensuring that stakeholders will continue to adopt these new practices and deploy them without further intervention by the Project.

Under Component 4, the project will promote training sessions on the development and deployment of Nature-based Solutions that maximize ecosystem service returns and co-benefits (e.g., local climate regulation, disease regulation...). Furthermore, in addition to the physical infrastructure, the project will also create sustainable human capacity to maintain this infrastructure through training of managers and decision makers, as well as sustainable institutional support through the adoption of formal government policies.

Scaling-up nature-based solutions across the city will also be achieved through a better evidence base. Under Component 1, the project will compile a comprehensive database on social, economic, and environmental effectiveness of potential solutions to strengthen environmental resilience, including a comparison with respect to traditional solutions.

Particular attention will be given to empowerment, societal and individual involvement in restoration and other nature-based solutions, with the aim of reconnecting people with nature, raising awareness of societal benefits, and

creating a public demand for healthy natural environments. In this context, actions at school level, for example, allow for the development and experimentation of new forms of social engagement and can be a potential instrument for sustainability.

- **Potential for Scaling-up:**

Scaling-up will be achieved through replication and expansion. Having hosted COP7 in 2001 and COP22 in 2016, among other global and regional events, Marrakech is among the pioneering Moroccan cities in terms of integrating sustainable development and climate change practices. As a result, the city is an example for Moroccan cities; a position that will be further confirmed following the implementation of the activities planned within the framework of this project.

In terms of urban planning, Marrakech is no exception in Morocco and all collectivities in the country are looking for solid approaches to ensure urban planning of their territories, while integrating sustainability to maximize the effects and provide solutions to environmental and social issues, in addition to the desired urban development. Therefore, the approach followed by the City of Marrakech in this project will allow other territories to find solutions to their local problems and to respond effectively to their desire to integrate sustainability. Indeed, with local awareness, territories are looking for solutions adapted to their local context and that can also provide solutions to environmental and social issues, in addition to the desired economic development. Thus, the project will provide an example for other Moroccan territories and will lead to a strong involvement at the local level, placing the project in a replication process, especially in a framework where the country calls for local efforts to honor its commitments at the national level and towards the international community. In addition, the sharing of experiences and lessons learned with the cities participating in the GEF program through the SCIP GP will strengthen the scaling up and replication of integrated urban sustainability solutions.

The scaling-up of innovative and sustainable practices and methods demonstrated by the project (such as low carbon technologies, biodiversity conservation through NBS, circular economy, resource efficiency) will be done first by expansion, diversifying partners and users and expanding the coverage within the City of Marrakech. This scaling-up will be done through the transfer of good practices during the implementation of priority projects identified in recent territorial planning documents of (e.g., SDAU, Green Plan of the Agglomeration of Marrakech, PDR ...).

Implementation of component 3 activities in the City of Marrakech will also prepare the ground for the financing of sustainable development in the other cities of Morocco. These activities will provide best practices in financial planning for cities. Also, new business models and innovative financial mechanisms will be introduced, and lessons will be learned to improve their replicability in other cities. The review of the legal framework for local governments, which is expected to pave the way for new financing solutions, should also support and accelerate the scaling-up of the project.

The project will produce local and national policy guidance for the adoption of Nature-based Solutions and ensure the integration of biodiversity and ecosystem values into local land use and development planning and budgeting that will apply nationally and thus have replication value. In addition, guidance will be provided to all local government organizations to integrate biodiversity criteria into their performance management systems.

V. PROJECT RESULTS FRAMEWORK

This project will contribute to the following Sustainable Development Goal (s): 3- Good Health and Well-Being, 5-Gender Equality, 7 – Affordable and Clean energy, 9-Industry, Innovation and Infrastructure, 10 - Reduced inequalities, 11 - Sustainable cities and communities, 13 – Climate Action, 15 - Life on land				
This project will contribute to the following country outcome (UNDAF/CPD, RPD, GPD): Outcome 2 - Sustainable inclusive development				
	Objective and Outcome Indicators (no more than a total of 20 indicators)	**Baseline**	**Mid-term Target**	**End of Project Target**
Project Objective: **To foster integration and innovative urban planning and financing for Marrakech's sustainable development**	**Mandatory** Indicator 1 *(GEF Core Indicators 11):* # direct project beneficiaries disaggregated by gender (individual people)	*0*	*464,425* *Male: 50%* *Female:50%*	*928,850* *Male: 50%* *Female: 50%*
	Mandatory GEF Core Indicators: **Mandatory** Indicator 2 *(GEF Core Indicator 1):* *Terrestrial protected areas created or under improved management for conservation and sustainable use*	*0*	*132 ha of green spaces rehabilitated and / or created and whose resilience is strengthened*	*12,000 ha of terrestrial protected areas created or under improved management for conservation and sustainable use*
	Mandatory Indicator 3 *(GEF Core Indicator 4):* *Area of landscapes under improved practices (hectares - ha)*			*460.50 ha of green spaces rehabilitated and / or created and whose resilience is strengthened (including green spaces irrigated with treated wastewater, and smart irrigation techniques, multifunctional garden equipment, urban agriculture, cemeteries, schools …)*
	Mandatory Indicator 4 *(GEF Core Indicator 6):* *Mitigated greenhouse gas emissions (metric tons of CO2e)*	*0*	25% of direct project mitigation potential	971,813 tCO2e direct Direct after 25 years: 5,543,580 in tCO2e
Project component 1	**Evidence-based sustainable and integrated urban planning & policy reform**			
Outcome 1.1 **Local and national governments have strengthened institutions,**	Indicator 4: Number of instruments (legal, institutional, technical) available promoting the integration of sustainability into urban planning at the national level	3 (SNAT, SRAT, SDAU)	1	*2 (roadmap, draft new decree, etc.)*

processes, and capacities to undertake evidence-based sustainable integrated planning and policy reform	Indicator 5: Number of action plans integrating urban sustainability informed by reliable data	0	1	3(a new sustainable PAC for the urban commune of of Marrakech and urban commune of Mechouar Kasbah and SNDD action plan for the Marrakech-Safi Region)
Outputs to achieve Outcome 1.1	Output 1.1.1: Enabling framing conditions to support vertical integration are improved at the national level. This will be in line with the tools developed by the Sustainable Cities Impact Program Global Platform (SCIP GP) Output 1.1.2: Evidence-based sustainable integrated planning and processes are improved and implemented at the City of Marrakech			
Project component 2	**Sustainable integrated low carbon, resilient, conservation and land restoration investments**			
Outcome 2.1 **Local and national governments have undertaken integrated sustainable low-carbon, resilient, conservation and land restoration investments**	Indicator 6: Public and private investments (USD) mobilized to support the multi-dimensional sustainability of the city of Marrakech, measured through: 1) Financing of energy efficiency (public lighting, building, industry) 2) Financing of solid waste management 3) Financing the efficiency of water resources 4) Financing of sustainable transport 5) Financing of biodiversity conservation and green spaces	will be determined at the start of the project: *1) aa* *2) bb* *3) cc* *4) dd* *5) ee*	Figures to be expressed as a % increase over the baseline: *1) xx%* *2) xx%* *3) xx%* *4) xx%* *5) xx%*	Figures to be expressed as a % increase over the baseline: *1) yy%* *2) yy%* *3) yy%* *4) yy%* *5) yy%*
	Indicator 7: State of urban biodiversity and urban green spaces, measured through the City Biodiversity Index (CBI): indigenous biodiversity, Ecosystem services and governance	Baseline value of CBI will be established during the first year of project implementation after conducting activity 2.1.5.1	Mid-term target of CBI value will be established during the first year of project implementation after conducting activity 2.1.5.1	End of project target of CBI value will be established during the first year of project implementation after conducting activity 2.1.5.1
Outputs to achieve Outcome 2.1	Output 2.1.1. Business plans of low carbon, resilient and integrated investments are available for the City of Marrakech. Output 2.1.2. Low carbon investments are performed in urban mobility. This includes BRT system, electrical motorcycles and bicycles Output 2.1.3. Energy efficiency and renewable energies Investments are performed in public and residential buildings. This includes street lighting, buildings and hotels Output 2.1.4. New investments are leveraged to improve the efficient use of resources in urban and peri-urban areas. This includes energy efficiency and water efficiency Output 2.1.5. Resilient investments are performed in urban and peri-urban gardens to ensure biodiversity restoration, conservation and sustainable land management. This will include a vulnerability analysis and restoration of critical areas.			
Project component 3	**Innovative financing and scaling-up**			

Outcome 3.1 **Local and national governments launch innovative financing and business models for scaling-up sustainable urban solutions**	Indicator 8: Number of designed business models that are innovative, relevant and involving the private sector	2 (SDL public lighting / BRT and delegated waste and bus management)	3 (+ESCO or PPP)	5 (+ Ecosystem services, energy saving certificates)
	Indicator 9: Number of designed innovative and relevant financial mechanisms	0	1 (Concessional debt or green sponsorship ...)	3 (+ Green bonds, investment funds, Crowdfunding ...)
Outputs to achieve Outcome 3.1	Output 3.1.1. Support to the City of Marrakech to improve its creditworthiness for scaling-up sustainable investments, including review of existing legal frameworks, revenue collection and management and capital planning Output 3.1.2. Innovative and new business, revenue and procurement models to engage private sector are specified and designed for the City of Marrakech Output 3.1.3. Innovative financial mechanisms are designed and tested at the City of Marrakech. This may include, but is not limited to green bonds, infrastructure asset-recycling, and value capture investments.			
Project component 4	**Advocacy, knowledge exchange, capacity building and partnerships**			
Outcome 4.1 **Policy making, and action are influenced at local, regional and national levels to advance the urban sustainability agenda**	Indicator 10: Number of people outreached on urban sustainability	0	250	500
	Indicator 11: Number of experiences and lessons learned disseminated through communication tools	0	2	4
Outputs to achieve Outcome 4.1	Output 4.1.1: Specific and differentiated outreach and awareness campaigns targeting urban practitioners, the general public are carried out Output 4.1.2: In close partnership with the SCIP GP, key experiences and lessons learned are compiled and widely disseminated for replication through a range of communication tools, including the project website, project stories, issue papers, and scaling up of project results supported . Output 4.1.3: Project gender mainstreaming plan, stakeholder engagement plan, and a Monitoring and Evaluation (M&E) plan implemented.			

VI. MONITORING AND EVALUATION (M&E) PLAN

The project results, corresponding indicators and mid-term and end-of-project targets in the project results framework will be monitored annually and evaluated periodically during project implementation. If baseline data for some of the results indicators is not yet available, it will be collected during the first year of project implementation. The Monitoring Plan included in Annex details the roles, responsibilities, and frequency of monitoring project results.

Project-level monitoring and evaluation will be undertaken in compliance with UNDP requirements as outlined in the UNDP POPP and UNDP Evaluation Policy. The UNDP Country Office is responsible for ensuring full compliance with all UNDP project monitoring, quality assurance, risk management, and evaluation requirements.

Additional mandatory GEF-specific M&E requirements will be undertaken in accordance with the GEF Monitoring Policy and the GEF Evaluation Policy and other relevant GEF policies[41]. The costed M&E plan included below, and the Monitoring plan in Annex, will guide the GEF-specific M&E activities to be undertaken by this project.

In addition to these mandatory UNDP and GEF M&E requirements, other M&E activities deemed necessary to support project-level adaptive management will be agreed during the Project Inception Workshop and will be detailed in the Inception Report.

Additional GEF monitoring and reporting requirements:

Inception Workshop and Report: A project inception workshop will be held within 60 days of project CEO endorsement, with the aim to:

a. Familiarize key stakeholders with the detailed project strategy and discuss any changes that may have taken place in the overall context since the project idea was initially conceptualized that may influence its strategy and implementation.
b. Discuss the roles and responsibilities of the project team, including reporting lines, stakeholder engagement strategies and conflict resolution mechanisms.
c. Review the results framework and monitoring plan.
d. Discuss reporting, monitoring and evaluation roles and responsibilities and finalize the M&E budget; identify national/regional institutes to be involved in project-level M&E; discuss the role of the GEF OFP and other stakeholders in project-level M&E.
e. Update and review responsibilities for monitoring project strategies, including the risk log; SESP report, Social and Environmental Management Framework and other safeguard requirements; project grievance mechanisms; gender strategy; knowledge management strategy, and other relevant management strategies.
f. Review financial reporting procedures and budget monitoring and other mandatory requirements and agree on the arrangements for the annual audit.
g. Plan and schedule Project Board meetings and finalize the first-year annual work plan.
h. Formally launch the Project.

GEF Project Implementation Report (PIR):
The annual GEF PIR covering the reporting period July (previous year) to June (current year) will be completed for each year of project implementation. Any environmental and social risks and related management plans will be monitored regularly, and progress will be reported in the PIR. The PIR submitted to the GEF will be shared with the Project Board. The quality rating of the previous year's PIR will be used to inform the preparation of the subsequent PIR.

GEF Core Indicators:

[41] See https://www.thegef.org/gef/policies_guidelines

The GEF Core indicators included as Annex will be used to monitor global environmental benefits and will be updated for reporting to the GEF prior to MTR and TE. Note that the project team is responsible for updating the indicator status. The updated monitoring data should be shared with MTR/TE consultants prior to required evaluation missions, so these can be used for subsequent ground truthing. The methodologies to be used in data collection have been defined by the GEF and are available on the GEF website.

Independent Mid-term Review (MTR):
The terms of reference, the review process and the final MTR report will follow the standard templates and guidance for GEF-financed projects available on the UNDP Evaluation Resource Center (ERC).

The evaluation will be 'independent, impartial and rigorous'. The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project under review.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.

The final MTR report and MTR TOR will be publicly available in English and French and will be posted on the UNDP ERC by no later than 30/06/2024. A management response to MTR recommendations will be posted in the ERC within six weeks of the MTR report's completion.

Terminal Evaluation (TE):
An independent terminal evaluation (TE) will take place upon completion of all major project outputs and activities. The terms of reference, the evaluation process and the final TE report will follow the standard templates and guidance for GEF-financed projects available on the UNDP Evaluation Resource Center.

The evaluation will be 'independent, impartial and rigorous'. The evaluators that will be hired to undertake the assignment will be independent from organizations that were involved in designing, executing or advising on the project to be evaluated. Equally, the evaluators should not be in a position where there may be the possibility of future contracts regarding the project being evaluated.

The GEF Operational Focal Point and other stakeholders will be actively involved and consulted during the terminal evaluation process. Additional quality assurance support is available from the BPPS/GEF Directorate.

The final TE report and TE TOR will be publicly available in English and posted on the UNDP ERC by 31/10/2026. A management response to the TE recommendations will be posted to the ERC within six weeks of the TE report's completion.

Final Report:
The project's terminal GEF PIR along with the terminal evaluation (TE) report and corresponding management response will serve as the final project report package. The final project report package shall be discussed with the Project Board during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.

Agreement on intellectual property rights and use of logo on the project's deliverables and disclosure of information:
To accord proper acknowledgement to the GEF for providing grant funding, the GEF logo will appear together with the UNDP logo on all promotional materials, other written materials like publications developed by the project, and project hardware. Any citation on publications regarding projects funded by the GEF will also accord proper

acknowledgement to the GEF. Information will be disclosed in accordance with relevant policies notably the UNDP Disclosure Policy[42] and the GEF policy on public involvement[43].

Monitoring and Evaluation Plan and Budget: This M&E plan and budget provides a breakdown of costs for M&E activities to be led by the Project Management Unit during project implementation. These costs are included in Component 4 of the Results Framework and TBWP.		
GEF M&E requirements	**Indicative costs (US$)**	**Time frame**
Inception Workshop	5,000	Within 60 days of CEO endorsement of this project.
Inception Report	None	Within 90 days of CEO endorsement of this project.
M&E of GEF core indicators and project results framework	50,000	Annually and at mid-term and closure.
GEF Project Implementation Report (PIR)	*None*	Annually typically between June-August
Monitoring of the Gender Action Plan, Stakeholder Engagement Plan and Social and Environmental Management Framework.	70,000	On-going
Supervision missions	None[44]	Annually
Independent Mid-term Review (MTR)	70,000	30/06/2024
Independent Terminal Evaluation (TE)	90,000	31/10/2024
TOTAL indicative COST	285,000	

[42] See http://www.undp.org/content/undp/en/home/operations/transparency/information_disclosurepolicy/
[43] See https://www.thegef.org/gef/policies_guidelines
[44] The costs of UNDP CO and UNDP-GEF Unit's participation and time are charged to the GEF Agency Fee.

VII. GOVERNANCE AND MANAGEMENT ARRANGEMENTS

Roles and responsibilities of the project's governance mechanism:

Implementing Partner: The Implementing Partner for this project is Ministry of Energy, Mines and the Environment - Department of the Environment.

The Implementing Partner is the entity to which the UNDP Administrator has entrusted the implementation of UNDP assistance specified in this signed project document along with the assumption of full responsibility and accountability for the effective use of UNDP resources and the delivery of outputs, as set forth in this document.

The Implementing Partner is responsible for executing this project. Specific tasks include:

- Project planning, coordination, management, monitoring, evaluation, and reporting. This includes providing all required information and data necessary for timely, comprehensive, and evidence-based project reporting, including results and financial data, as necessary. The Implementing Partner will strive to ensure project-level M&E is undertaken by national institutes and is aligned with national systems so that the data used and generated by the project supports national systems.
- Risk management as outlined in this Project Document.
- Procurement of goods and services, including human resources.
- Financial management, including overseeing financial expenditures against project budgets.
- Approving and signing the multiyear workplan
- Approving and signing the combined delivery report at the end of the year; and,
- Signing the financial report or the funding authorization and certificate of expenditures.

Project stakeholders and target groups:

The project partners bring together stakeholders s from:

- National level ;
- Territorial level; and
- Private sector.

These stakeholders have been presented in section IV. Results and partnerships. Roles and responsibilities were also described, including their involvement in decision making. The table below summarizes their roles in the implementation of the 4 project components:

Table 6: Roles of the actors in the implementation of the project components

Stakeholder	Potential role in the project	Involvement in the project	
		Components	Outputs
National level			
Department of the Environment (DE)	The DE, with its extensive experience in the design and implementation of climate change projects, will Ensure implementation, management and monitoring of the project.	1, 2, 3 & 4	All outputs
Ministry of National Land Use Planning, urban Planning, Housing and City Policy	This Ministry will be involved in the various stages of the project to ensure the development of a renovated and sustainable model of urban development for the city of Marrakech, with a view to establishing the	1	1.1.1 1.1.2

Stakeholder	Potential role in the project	Involvement in the project	
		Components	Outputs
	principles of sustainable urban planning, ensuring consistency and anticipating territorial impacts		
Ministry of the Interior - General Directorate of Territorial Authorities (DGCT)	DGCT will play an important role in the mobilization of local stakeholders under its supervision and will provide support for the realization of certain activities proposed under the project, in particular those in connection with the "national-local" political dialogue, the investments relating to waste management, urban transport, public lighting, etc.	1, 2, 3 & 4	All outputs
Mohammed VI Foundation for the Protection of the Environment	The Foundation's main role will be to mobilize the actors involved, sensitize them and catalyze efforts to ensure the Safeguarding of the Palm grove, historic parks and gardens.	2, 4	2.1.5 4.1.1
General Directorate of Meteorology (DGM)	DGM will be mobilized to improve data and knowledge in terms of climate vulnerability in Marrakech	1,2	1.1.2 2.1.5
Communal Equipment Fund (FEC)	As part of this project, existing financing mechanisms will be reviewed and other new and innovative ones will be proposed, designed and developed to support the financing of activities, projects and programs integrating sustainability at the level of Marrakech. The FEC will be involved at this level given its crucial role in the financing of territorial authorities in Morocco.	3	3.1.1 3.1.2 3.1.3
4C Maroc	4C Maroc provides a unique platform for knowledge management and dissemination and brings together all stakeholders. This platform will therefore contribute to the mobilization of stakeholders but can also be involved to facilitate exchange and the sharing of project results at the national level.	4	4.1.1
Moroccan Agency for Energy Efficiency (AMEE)	As a key player in the implementation of Morocco's energy strategy and the promotion of energy efficiency, AMEE will be involved in activities related to energy efficiency and renewable energies.	2	2.1.3
Energy Engineering Company (SIE)	The SIE, whose main objective is to reduce the energy consumption of public and private organizations by improving their energy performance, will be involved in activities related to energy efficiency and renewable energies	2	2.1.3

Stakeholder	Potential role in the project	Involvement in the project	
		Components	Outputs
Solar Energy and New Energies Research Institute (IRESEN)	As an institute specializing in applied R&D in the field of new energies and sustainable mobility, IRESEN will provide its support in activities related to renewable energies and the deployment of the system of electric scooters and charging stations.	2	2.1.2 2.1.3
Ministry of Industry, Trade and Green and Digital Economy (MICEVN)	MICEVN will play an important role in activities related to the promotion of the construction and marketing of sustainable vehicles as well as the integration of energy efficiency and renewable energies in the QI of Sidi Ghanem.	2	2.1.2 2.1.3
Ministry of Equipment, Transport, Logistics and Water (METLE)	The METLE will be mainly involved in activities relating to the transport sector for the promotion of sustainable urban mobility.	2	2.1.1 2.1.2
Territorial level			
Wilaya	The Wilaya will be involved in the strategic management of the project and its technical team involved in the planning and implementation of project activities.	1, 2, 3 & 4	All outputs
Urban municipalities of Marrakech and Méchouar Kasbah	Due to their attributions, the urban municipalities of Marrakech and Méchouar Kasbah are responsible for the management of several services and are involved in the various aspects that may impact the territory. As a result, they will be involved in both: 1) the strategic steering and 2) the operational implementation of project activities. To ensure a strong ownership and that project activities are aligned with the city level needs, technical representatives from both urban communes will be involved with the Project Management Unit activities through different Technical Committees.	1, 2, 3 & 4	All outputs
Council of the Marrakech-Safi Region	The Regional Council will have an important role to play in this project, in particular in the dialogue between the local elected representatives and the national authorities, the mobilization of investments and the dissemination of good practices in other municipalities in the region.	1, 2, 3 & 4	All outputs
Regional Investment Council (CRI)	Considering the innovative component in terms of investment targeted by the project, the CRI will be involved in the activities to be deployed under Component 3	3	3.1.1 3.1.2 3.1.3

Stakeholder	Potential role in the project	Involvement in the project	
		Components	Outputs
Marrakech Urban Agency (AUM)	Given its mandate, AUM is a key player in the design and implementation of this project. AUM will enable to mobilize the sectors concerned by urban planning, to provide the necessary data and information, to validate the adjustments, to clarify the long-term vision of the territory, etc.	1	1.1.1 1.1.2
Regional Environment Directorate (DRE)	The DRE in Marrakech has participated in several studies and projects integrating climate change and sustainable development at the regional level. As a result, the DRE will provide substantial support at several levels: strategic support, steering, mobilization of stakeholders, provision of data and studies carried out, validation of the activities proposed in the project, support for implementation.	1, 2, 3 & 4	All outputs
Cadi Ayyad University Marrakech	Provide scientific support to the planning and sustainable development process of Marrakech. Ensure the science-policy interface by ensuring a link between science and policy by creating synergy while meeting the requirements of political actors. Conciliate scientific rigor and the expectations of the policy stakeholders. Contribute to the calculation of the CBI of Marrakech.	1,2 & 4	1.1.2 2.1.5 4.1.1 4.1.2
Regional tourism delegation	The regional tourism delegation will mobilize stakeholders in the hotel sector to conduct water and energy audit and engage resource efficiency investments. .	2 & 4	2.1.3 4.1.1 4.1.2
RADEEMA	Radeema will provide essential support to the project for the planning of activities, particularly those related to the treatment and reuse of wastewater. It will be involved throughout the project, from design to monitoring and evaluation, including the implementation of the associated activities.	1,2 & 4	1.1.2 2.1.1 2.1.3 2.1.5 4.1.1 4.1.2
of Intercommunal Cooperation Establishment (ECI)	The ECI will be mainly involved in the component relating to solid waste management.	2 & 4	2.1.4 4.1.1 4.1.2
SDL public lighting - Hadirate Al Anwar	The SDL is the manager of public lighting in Marrakech. It will be involved in the project at several levels: provision of data and results obtained, validation of the remaining potential that can be	1,2, 3 & 4	1.1.2 2.1.1 2.1.3 3.1.2

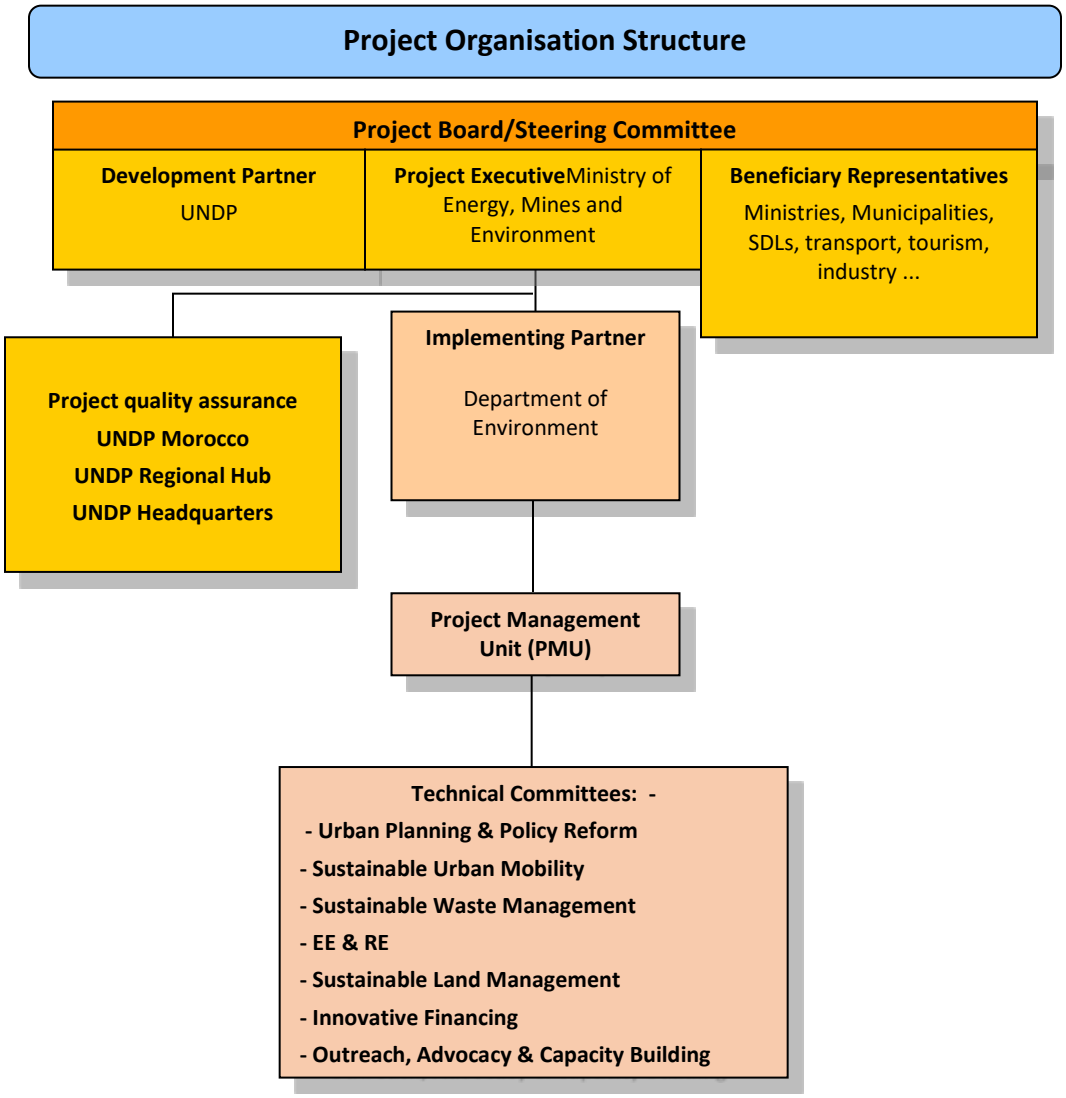
Stakeholder	Potential role in the project	Involvement in the project	
		Components	Outputs
	exploited by the project, implementation of the activities proposed in the project and falling within its field of expertise, monitoring implementation.		3.1.3 4.1.1 4.1.2
SDL BRT - Bus City Motajadida	The SDL will provide its support for the mobilization of data, implementation as well as their monitoring of activities related to transport	1,2, 3 & 4	1.1.2 2.1.1 2.1.2 3.1.2 3.1.3 4.1.1 4.1.2
Tensift Hydraulic Basin Agency (ABHT)	The main role of ABHT will be to provide technical assistance for the implementation of activities related to the water economy and ensure synergy with projects planned or underway.	1,2 & 4	1.1.2 2.1.1 2.1.3 2.1.5 4.1.1 4.1.2
Civil society, including NGOs : Association of Teachers of Life and Earth Sciences & the High Atlas Foundation	Outreach and awareness of citizens, structuring of advocacy regarding urban sustainability in general, as well as participation in the territorial dialogue. Contribution to supporting the greening of schools and cemetery, in particular.	1 & 4	1.1.2 4.1.1 4.1.2
Regional Directorate of Water and Forests (DREF)	Due to its responsibilities in the conservation and sustainable development of continental water resources and forestry, DREF will be involved in activities related to the restoration of biodiversity, conservation and sustainable land management.	2, 4	2.1.5 4.1.1 4.1.2
Private sector			
Professional Group of Banks of Morocco (GPBM)	The group will be involved to coordinate the project activities, in particular in terms of financing mechanisms and their implementation modalities. The group will enable to mobilize the key players in financing solutions in Morocco.	3	3.1.1 3.1.2 3.1.3
Delegate Manager for Bus Transport - Alsa	Given its role in the urban transport sector, ALSA will be involved at several levels, particularly in connection with the urban transport component. It has an important role in the future planning of the sector, the provision of historical and current data, implementation and monitoring of activities.	2 & 4	2.1.1 2.1.2 4.1.1 4.1.2
Delegate manager responsible for the	With its strong experience in household waste management, Ecomed Marrakech will provide	2, 3 & 4	2.1.1 2.1.4

Stakeholder	Potential role in the project	Involvement in the project	
		Components	Outputs
management of the landfill and recovery center for household and similar waste - Ecomed Marrakech	technical advice and will be involved in the implementation of project activities, particularly those related to the solid waste component.		3.1.2 3.1.3 4.1.1 4.1.2
Delegate manager of urban waste - ARMA company	The companies ARMA and MECOMAR will provide technical assistance to the project and will be involved in activities related to sustainable waste management	2, 3 & 4	2.1.1 2.1.4 3.1.2 3.1.3 4.1.1 4.1.2
Delegate manager of urban waste - MECOMAR company		2, 3 & 4	2.1.1 2.1.4 3.1.2 3.1.3 4.1.1 4.1.2
Mdina Bike	MEDINA BIKE will provide support to transport activities in particular in the development of a sustainable urban mobility plan, new business models as well as the establishment of a dedicated two-wheel route.	2, 3 & 4	2.1.1 2.1.2 3.1.2 3.1.3 4.1.1 4.1.2
EMOB	EMOB will be mainly involved in the deployment of self-service rental of electric motorcycles but also in the development of new business models and outreach activities	2, 3 & 4	2.1.1 2.1.2 3.1.2 3.1.3 4.1.1 4.1.2
Professional Association of the Sidi Ghanem Industrial District	The role of the Professional Association of the Sidi Ghanem Industrial District is to provide technical assistance for the transformation of the Sidi Ghanem district into an Eco industrial park, development of new business models and ensure engagement and awareness of industrial stakeholders.	2, 3 & 4	2.1.3 3.1.2 3.1.3 4.1.1 4.1.2

UNDP: UNDP is accountable to the GEF for the implementation of this project. This includes oversight of project execution to ensure that the project is being carried out in accordance with agreed standards and provisions. UNDP is responsible for delivering GEF project cycle management services comprising project approval and start-up, project supervision and oversight, and project completion and evaluation. UNDP is also responsible for the Project Assurance role of the Project Board/Steering Committee.

Project organisation structure:

In order to guarantee good governance, it is important to have a complementary governance scheme, to meet all the institutional needs of the project and to create productive synergies. The proposed organizational structure for the project is presented below.



The **Project Board (also called Project Steering Committee)** is responsible for taking corrective action as needed to ensure the project achieves the desired results. In order to ensure UNDP's ultimate accountability, Project Board decisions should be made in accordance with standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition.

In case consensus cannot be reached within the Board, the UNDP Resident Representative (or their designate) will mediate to find consensus and, if this cannot be found, will take the final decision to ensure project implementation is not unduly delayed.

Specific responsibilities of the Project Board include:

- Provide overall guidance and direction to the project, ensuring it remains within any specified constraints;
- Address project issues as raised by the project manager;

- Provide guidance on new project risks, and agree on possible mitigation and management actions to address specific risks;
- Agree on project manager's tolerances as required, within the parameters set by UNDP-GEF, and provide direction and advice for exceptional situations when the project manager's tolerances are exceeded;
- Advise on major and minor amendments to the project within the parameters set by UNDP-GEF;
- Ensure coordination between various donor and government-funded projects and programs;
- Ensure coordination with various government agencies and their participation in project activities;
- Track and monitor co-financing for this project;
- Review the project progress, assess performance, and appraise the Annual Work Plan for the following year;
- Appraise the annual project implementation report, including the quality assessment rating report;
- Ensure commitment of human resources to support project implementation, arbitrating any issues within the project;
- Review combined delivery reports prior to certification by the implementing partner;
- Provide direction and recommendations to ensure that the agreed deliverables are produced satisfactorily according to plans;
- Address project-level grievances;
- Approve the project Inception Report, Mid-term Review and Terminal Evaluation reports and corresponding management responses;
- Review the final project report package during an end-of-project review meeting to discuss lesson learned and opportunities for scaling up.
- Ensure highest levels of transparency and take all measures to avoid any real or perceived conflicts of interest.

The composition of the Project Board must include the following roles:

a. Project Executive: Is an individual who represents ownership of the project and chairs the Project Board. The Executive is normally the national counterpart for nationally implementing project.

   The Project Executive is: Ministry of Energy, Mines and Environment - Department of Environment

b. Beneficiary Representative(s): Individuals or groups representing the interests of those who will ultimately benefit from the project. Their primary function within the board is to ensure the realization of project results from the perspective of project beneficiaries. Often civil society representative(s) can fulfil this role. The Beneficiary representative (s) is/are: City of Marrakech - Department of Environment - Ministry of the Interior - MATNUHPV – Wilaya – Marrakech-Safi Region Council – Tourism, Industry, RADEEMA, ECI, SDL Bus City Moutajadida, SDL Hadirate Al Anwar, EMOB, Professional Association of the Sidi Ghanem district, among others.

c. Development Partner(s): Individuals or groups representing the interests of the parties concerned that provide funding and/or technical expertise to the project. The Development Partner(s) is/are: UNDP

d. Project Assurance: UNDP performs the quality assurance and supports the Project Board and Project Management Unit by carrying out objective and independent project oversight and monitoring functions. This role ensures appropriate project management milestones are managed and completed, and conflict of interest issues are monitored and addressed. The Project Board cannot delegate any of its quality assurance responsibilities to the Project Manager. UNDP provides a three – tier oversight services involving the UNDP Country Offices and UNDP at regional and headquarters levels. Project assurance is totally independent of project execution.

The **project management unit (PMU)** has the following staff:

- National coordinator;
- Junior technical expert;
- Administrative assistant.

The PMU performs the following functions:

- Day-to-day management of the project under the supervision of the Project Director;
- Organization of Technical Committee's activities (e.g., meetings, site visits, ToRs drafting, tendering evaluation and validation of deliverables);
- Monitoring of the implementation of project activities;
- Guidance on technical and financial management, quality control of interventions;
- Production of the results expected by the project, according to the required quality standards, and taking into account the specificities and constraints of time and costs allocated;
- Management of possible risks associated with the development of the project;
- Resource and purchasing management;
- Focal point for coordinating the implementation of the project with the various partners, including NGOs and the private sector.

Project extensions: The UNDP Resident Representative and the UNDP-GEF Executive Coordinator must approve all project extension requests. Note that all extensions incur costs and the GEF project budget cannot be increased. A single extension may be granted on an exceptional basis and only if the following conditions are met: one extension only for a project for a maximum of six months; the project management costs during the extension period must remain within the originally approved amount, and any increase in PMC costs will be covered by non-GEF resources; the UNDP Country Office oversight costs in excess of the CO's Agency fee specified in the DOA during the extension period must be covered by non-GEF resources.

VIII. FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project is ***USD* 307,972,555***.* This is financed through a **GEF grant of *USD* 9,416,167**, ***USD 200,000*** **in co-financing administered by UNDP and additional support of *USD* 298,356,388**. UNDP as the GEF Implementing Agency, is responsible for the oversight of the GEF resources and the cash co-financing transferred to UNDP bank account only.

Confirmed Co-financing: The actual realization of project co-financing will be monitored during the *mid-term review* and terminal evaluation process and will be reported to the GEF. Note that all project activities included in the project results framework that will be delivered by co-financing partners (even if the funds do not pass through UNDP accounts) must comply with UNDP's social and environmental standards. Co-financing will be used for the following project activities/outputs:

Co-financing source	**Co-financing type**	**Co-financing amount (USD)**	**Planned Co-financing Activities/Outputs**	**Risks**	**Risk Mitigation Measures**
UNDP	Grant	200,000	PMU	*No identified risk*	*NA*
	In-Kind	300,000	PMU	*No identified risk*	*NA*
Ministry of Energy, Mines and Environment - Department of the Environment	Grant, Inv Mobilised	8,933,888	Activity 1.1.2.4/ Output 1.1.2 Activity 2.1.4.1/ Output 2.1.4 Activity 2.1.4.2/ Output 2.1.4 Activity 2.1.5.2 / Output 2.1.5 Activity 2.1.5.3 / Output 2.1.5 Activity 4.1.1.4 / Output 4.1.1.	*No identified risk*	*NA*
SDL Hadirat Al Anwar	Grant, Inv Mobilised	30,720,000	Activity 2.1.3.3/ Output 2.1.3	*No identified risk*	*NA*
SDL Bus city Motajadida	Grant, Inv Mobilised	164,282,500	Activity 2.1.1.1/ Output 2.1.1 Activity 2.1.1.2 /Output 2.1.1 Activity 2.1.2.4/Output 2.1.2 Activity 2.1.2.4/Output 2.1.2	*No identified risk*	*NA*

RADEEMA	Grant, Inv Mobilised	92,120,000	Activity 2.1.3.1/ Output 2.1.3 Activity 2.1.3.2/ Output 2.1.3 Activity 2.1.3.3/ Output 2.1.3 Activity 2.1.5.2 / Output 2.1.5 Activity 2.1.5.3 / Output 2.1.5	*No identified risk*	*NA*
Professional Association of Sidi Ghanem IZ	Grant, Inv Mobilised	1,000,000	Activity 2.1.3.3/ Output 2.1.3	*No identified risk*	*NA*
EMOB	Grant, Inv Mobilised	1,000,000	Activity 2.1.2.1 / Output 2.1.2	*No identified risk*	*NA*

Budget Revision and Tolerance: As per UNDP requirements outlined in the UNDP POPP, the project board will agree on a budget tolerance level for each plan under the overall annual work plan allowing the project manager to expend up to the tolerance level beyond the approved project budget amount for the year without requiring a revision from the Project Board.

Should the following deviations occur, the Project Manager/CTA and UNDP Country Office will seek the approval of the BPPS/GEF team to ensure accurate reporting to the GEF:

a) Budget re-allocations among components in the project budget with amounts involving 10% of the total project grant or more;
b) Introduction of new budget items that exceed 5% of original GEF allocation.

Any over expenditure incurred beyond the available GEF grant amount will be absorbed by non-GEF resources (e.g. UNDP TRAC or cash co-financing).

Audit: The project will be audited as per UNDP Financial Regulations and Rules and applicable audit policies. Audit cycle and process must be discussed during the Inception workshop.

Project Closure: Project closure will be conducted as per UNDP requirements outlined in the UNDP POPP. All costs incurred to close the project must be included in the project closure budget and reported as final project commitments presented to the Project Board during the final project review. The only costs a project may incur following the final project review are those included in the project closure budget.

Operational completion: The project will be operationally completed when the last UNDP-financed inputs have been provided and the related activities have been completed. This includes the final clearance of the Terminal Evaluation Report (that will be available in English) and the corresponding management response, and the end-of-project review Project Board meeting. **Operational closure must happen with 3 months after posting the TE report to the UNDP ERC**. The Implementing Partner through a Project Board decision will notify the UNDP Country Office when operational closure has been completed. At this time, the relevant parties will have already agreed and confirmed in writing on the arrangements for the disposal of any equipment that is still the property of UNDP.

Transfer or disposal of assets: In consultation with the Implementing Partner and other parties of the project, UNDP is responsible for deciding on the transfer or other disposal of assets. Transfer or disposal of assets is recommended to be reviewed and endorsed by the project board following UNDP rules and regulations. Assets may be transferred to the government for project activities managed by a national institution at any time during the life of a project. In all cases of transfer, a transfer document must be prepared and kept on file[45]. The transfer should be done before Project Management Unit complete their assignments.

45 See https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PPM_Project%20Management_Closing.docx&action=default.

Financial completion (closure): The project will be financially closed when the following conditions have been met: a) the project is operationally completed or has been cancelled; b) the Implementing Partner has reported all financial transactions to UNDP; c) UNDP has closed the accounts for the project; d) UNDP and the Implementing Partner have certified a final Combined Delivery Report (which serves as final budget revision).

The project will be financially completed **within 6 months of operational closure or after the date of cancellation**. Between operational and financial closure, the implementing partner will identify and settle all financial obligations and prepare a final expenditure report. The UNDP Country Office will send the final signed closure documents including confirmation of final cumulative expenditure and unspent balance to the BPPS/GEF Unit for confirmation before the project will be financially closed in Atlas by the UNDP Country Office.

Refund to GEF: Should a refund of unspent funds to the GEF be necessary, this will be managed directly by the BPPS/GEF Directorate in New York. No action is required by the UNDP Country Office on the actual refund from UNDP project to the GEF Trustee.

IX. TOTAL BUDGET AND WORK PLAN

Total Budget and Work Plan			
Atlas Award ID:	00128412	Atlas Output Project ID:	00122433
Atlas Proposal or Award Title:	Strengthening Marrakech's sustainable development through innovative planning and financing		
Atlas Business Unit	MAR10		
Atlas Primary Output Project Title	Strengthening Marrakech's sustainable development through innovative planning and financing		
UNDP-GEF PIMS No.	6411		
Implementing Partner	*Ministry of Energy, Mines and Environment - Department of the Environment*		

Atlas Activity (GEF Component)	**Atlas Implementing Agent (Responsible Party[2] , IP or UNDP)**	**Atlas Fund ID**	**Donor Name**	**Atlas Budgetary Account Code[3]**	**ATLAS Budget Account Description[3]**	**Amount Year 1 (USD)**	**Amount Year 2 (USD)**	**Amount Year 3 (USD)**	**Amount Year 4 (USD)**	**Amount Year 5 (USD)**	**Total (USD)**	***See Budget Note:***
COMPONENT 1: *Evidence-based sustainable and integrated urban planning & policy reform*	**Department of Environment**	**62000**	**GEF**	71300	Local Consultants	10,000	20,000	30,000	20,000		80,000	*1*
				72100	Contractual Services-Companies	15,000	80,000	85,000	30,000		210,000	*2*
				75700	Training, Workshops and Confer	5,000	5,000	5,000	5,000		20,000	*3*
				71600	Travel	5,000	5,000	5,000	5,000		20,000	*4*
				72800	Information Technology equipment			10,000	10,000		20,000	*5*
					sub-total GEF	**35,000**	**110,000**	**135,000**	**70,000**	**-**	**350,000**	
					Total Outcome 1	**35,000**	**110,000**	**135,000**	**70,000**	**-**	**350,000**	
COMPONENT 2: *Sustainable integrated low carbon, resilient, conservation and land restoration investments*	**Department of Environment**	**62000**	**GEF**	71200	International Consultants	75,625	75,625	75,625	75,625		302,500	*6*
				71300	Local Consultants	60,000	100,000	100,000	100,000	100,000	460,000	*7*
				72100	Contractual Services-Companies	400,000	1,346,250	1,875,000	1,846,250	774,811	6,242,311	*8*
				72200	Equipment and Furniture			25,000	25,000		50,000	*9*
				71600	Travel	3,000	3,000	3,000	3,000	3,000	15,000	*10*
				75700	Training, Workshops and Confer	5,000	10,000	10,000	10,000	5,000	40,000	*11*
					sub-total GEF	**543,625**	**1,534,875**	**2,088,625**	**2,059,875**	**882,811**	**7,109,811**	

					Total Outcome 2	**543,625**	**1,534,875**	**2,088,625**	**2,059,875**	**882,811**	**7,109,811**	
COMPONENT 3: *Innovative financing and scaling-up*	**Department of Environment**	**62000**	**GEF**	71200	International Consultants	40,000	60,000	60,000	50,000	40,000	250,000	*12*
				71300	Local Consultants	20,000	40,000	40,000	30,000	20,000	150,000	*13*
				72100	Contractual Services-Companies	50,000	70,000	70,000	60,000	50,000	300,000	*14*
				71600	Travel	5,000	5,000	5,000	5,000	5,000	25,000	*15*
				75700	Training, Workshops and Confer	5,000	5,000	5,000	5,000	5,000	25,000	*16*
					sub-total GEF	**120,000**	**180,000**	**180,000**	**150,000**	**120,000**	**750,000**	
COMPONENT 4: *Advocacy, knowledge exchange, capacity building and partnerships*	**Department of Environment**	**62000**	**GEF**		**Total Outcome 3**	**120,000**	**180,000**	**180,000**	**150,000**	**120,000**	**750,000**	
				72100	Contractual Services-Companies	20,000	20,000	20,000	20,000	20,000	100,000	*17*
				71300	Local Consultants	20,000	20,000	20,000	20,000	20,000	100,000	*18*
				74200	Audio Visual&Print Prod Costs	2,000	2,000	2,000	2,000	2,000	10,000	*19*
				71600	Travel	51,000	51,000	56,000	51,000	57,000	266,000	*20*
				75700	Training, Workshops and Confer		5,000	5,000	5,000	5,000	20,000	*21*
					Subtotal KM	**93,000**	**98,000**	**103,000**	**98,000**	**104,000**	**496,000**	
				71200	International Consultants			50,000		70,000	120,000	*22*
				71300	Local Consultants	25,000	25,000	40,000	30,000	40,000	160,000	*23*
				75700	Training, Workshops and Confer	5,000					5,000	*24*
					Subtotal M&E	**30,000**	**25,000**	**90,000**	**30,000**	**110,000**	**285,000**	
					Total Outcome 4	**123,000**	**123,000**	**193,000**	**128,000**	**214,000**	**781,000**	
Project management costs: PMU [6]	**Department of Environment**	**62000**	**GEF**	71400	Contractual Services – Individ	76,000	76,000	76,000	76,000	76,000	380,000	*25*
				72500	Supplies	3,000	3,000	3,000	3,000	3,000	15,000	*26*
				72200	Equipment and Furniture	6,356					6,356	*27*
				72100	Contractual Services-Companies	600	600	600	600	600	3,000	*28*

				72800	Information Technology equipment	7,000					7,000	*29*
				74100	Professional Services	2,000	2,000	2,000	2,000	2,000	10,000	*30*
				74200	Audio Visual&Print Prod Costs			2,000		2,000	4,000	*31*
					sub-total GEF	**94,956**	**81,600**	**83,600**	**81,600**	**83,600**	**425,356**	
		4000	**UNDP**	71400	Contractual Services – Individ	40,000	40,000	40,000	40,000	40,000	200,000	*32*
					sub-total UNDP	**40,000**	**40,000**	**40,000**	**40,000**	**40,000**	**200,000**	
					Total Project Management	**134,956**	**121,600**	**123,600**	**121,600**	**123,600**	**625, 356**	
SUB-TOTAL GEF						**901,581**	**2,059,475**	**2,695,225**	**2,479,475**	**1,280,411**	**9,416,167**	
SUB-TOTAL UNDP						**40,000**	**40,000**	**40,000**	**40,000**	**40,000**	**200,000**	
PROJECT TOTAL (GEF+UNDP)						**941,581**	**2,099,475**	**2,735,225**	**2,519,475**	**1,320,411**	**9,616,167**	

Summary of Funds:

	Amount Year 1 (USD)	Amount Year 2 (USD)	Amount Year 3 (USD)	Amount Year 4 (USD)	Amount Year 5 (USD)	Total (USD)
GEF grant administered by UNDP	901,581	2,059,475	2,695,225	2,479,475	1,280,411	9,416,167
UNDP – Cash	40,000	40,000	40,000	40,000	40,000	200,000
UNDP – In-Kind	60,000	60,000	60,000	60,000	60,000	300,000
Department of Environment	1,780,000	1,780,000	1,780,000	1,780,000	1,813,888	8,933,888
SDL Hadirat Al Anwar	6,144,000	6,144,000	6,144,000	6,144,000	6,144,000	30,720,000
SDL Bus city Motajadida	32,856,500	32,856,500	32,856,500	32,856,500	32,856,500	164,282,500
RADEEMA	18,424,000	18,424,000	18,424,000	18,424,000	18,424,000	92,120,000
Professional Association of Sidi Ghanem IZ	200,000	200,000	200,000	200,000	200,000	1,000,000
EMOB	500,000	500,000	0	0	0	1,000,000
TOTAL	**60,906,081**	**62,063,975**	**62,199,725**	**61,983,975**	**60,818,799**	**307,972,555**

Please see also the co-financing letters in Annex 19.

Budget note number	
Component 1. Evidence-based sustainable and integrated urban planning & policy reform	
1	**71300 : National consultants – $80,000** • National expert for carrying out a diagnosis of the framework conditions relating to territorial urban planning (institutional framework, legal framework, procedures, documents, tools, etc.) - Output 1.1.1 ($400 daily rate x 75 days = $ 30,000) • National expert to support the territorial dialogue to ensure the alignment of the objectives and priorities of the strategic documents and the identification of integrated and sustainable orientations for the city - Output 1.1.2 ($400 daily rate x 125 days= $ 50,000)
2	**72100 : Contractual service companies - $210,000** • Multidisciplinary consultancy firm to organize and support a multisectoral policy dialogue on the integration of sustainability in urban planning and in sector strategic planning documents - Output 1.1.1 ($ 40,000) • Multidisciplinary consultancy firm to develop a national roadmap relating to the establishment of the framework conditions relating to the integration of sustainability in urban planning, to be operationalized through a legal instrument - Output 1.1.1 ($ 70,000) • Multidisciplinary consulting firm to develop an action plan to reflect the commitment of the Marrakech-Safi Region within the framework of the implementation of the SNDD - Output 1.1.2 ($ 20,000) • Multidisciplinary consulting firm to carry out the upgrade of the Communal Action Plan (PAC) and other strategic documents of the city of Marrakech for the integration of sustainability - Output 1.1.2 ($ 40,000) • Multidisciplinary consulting firm to support the city of Marrakech in setting up a multisectoral data management unit (waste, energy, transport, green spaces, etc.) to scientifically inform the process of integrating sustainability into urban planning - Output 1.1.2 ($ 40,000)
3	**75700 : Organization of workshops and conferences - $20,000** • National Stakeholder Consultation Meetings - Output 1.1.1 ($ 10,000) • Territorial Stakeholder Consultation Meetings - Output 1.1.2 ($ 5,000) • Capacity building of the multisectoral data management unit of Marrakech city - Output 1.1.2 ($ 5,000)
4	**71600: Working Travel Expenses - $20,000** • • Travel expenses for PMU team and national consultants for component 1
5	**72800 : Information Technology Equipment - $20,000** • Purchase of IT equipment and software (e.g., GIS tools) for the multisectoral data management unit of the city of Marrakech
Component 2: Sustainable integrated low carbon, resilient, conservation and land restoration investments	
6	**71200: International Consultants – $302,500** International expert to design dedicated two-wheel tracks on certain city streets - Output 2.1.2 ($600 daily rate x 50 days = $ 30,000) • International expert to design the Pilot Low Emission Zone (LEZ) near the tourist area of Jamaa Lafna Square - Output 2.1.2 ($650 daily rate x 76,9 days = $ 50,000) • International expert to design a network of solar charging stations for motorcycles and electric vehicles - Output 2.1.2 ($650 daily rate x 76,9 days = $ 50,000) • International expert for the development of at least one non-household waste management sector (non-hazardous and / or hazardous) with a treatment and recovery center at the level of the Industrial Zone of Sidi Ghanem - Output 2.1.4 ($500 daily rate x 100 days = $ 50,000) • International Expert for the Development of a Standardization System for Construction and Demolition Waste Treatment and Recovery Products - Output 2.1.4 ($500 daily rate x 50 days = $ 25,000)

	• International experts to reassess the financial, legal and technical assessments to define the level of concessionality of activities under Component 2 - Output 2.1.2, 2.1.3; 2.1.4; 2.1.5 ($650 daily rate x 150 days = $ 97,500)
7	**71300 : National Consultants – $460,000** • National experts for the development of new business plans to promote sustainable solutions concerning waste management (hazardous and non-hazardous waste), biodiversity and water resources - Output 2.1.1 ($400 daily rate x 250 days= $ 100,000) • National expert for the development of a smartphone application to promote the use of public transport available to the City of Marrakech - Output 2.1.2 ($400 daily rate x 125 days= $ 50,000) • National experts for carrying out energy audits (public buildings and hotels) and design studies for energy installations in the Sidi Ghanem industrial eco-district - Output 2.1.3 ($ 200,000; 100% audit cost coverage for 20 public buildings and 20% for 50 hotels) ($400 daily rate x 500 days= $ 200,000) • National expert to develop a vulnerability study, supported by the Biodiversity index for the city of Marrakech, and proposal for a plant charter to be adopted at the city level - Output 2.1.5 ($400 daily rate x 150 days= $ 60,000) • National expert to prepare plans for the restoration and development of green spaces – Output 2.1.5 ($400 daily rate x 125 days= $ 50,000)
8	**72100 : Contractual service companies - $6,242,311** • Technical studies office for the realization of the Marrakech City Sustainable Mobility Plan - Output 2.1.1 ($ 280,000; representing 50% of the cost of the PMD and 50% supported by the city of Marrakech) • Technical studies office for carrying out environmental and social impact studies relating to the scaling up of the BRT system - Output 2.1.1 ($ 222,500; representing 50% of the cost of the ESIA and 50% covered by the SDL City Bus Moutajadida) • Company in charge of the supply, installation and commissioning of solar charging stations for motorcycles and electric vehicles - Output 2.1.2 ($ 90,000; 30 stations at $ 30.00 / terminal) • Company in charge of the creation of dedicated two-wheeled routes on certain arteries of the city - Output 2.1.2 ($ 600,000; 10 linear km on a 1.5 m strip based on a unit cost of $ 40 / m2) • Company responsible for the supply, installation and commissioning of energy efficient equipment in public buildings - Output 2.1.3 ($ 500,000; a 25% contribution to the investment costs for 10 public buildings) • Company responsible for the supply, installation and commissioning of energy efficient equipment in hotels - Output 2.1.3 ($ 333,333; a contribution of 10% to the investment costs for 50 hotels) • Company in charge of the supply, installation and commissioning of an efficient and intelligent public lighting system (1,100 light points), deployment of an intelligent network for the production of electricity from solar PV in roof (2,650 kWp) with a smart grid in the industrial eco-district Sidi Ghanem - Output 2.1.3 ($ 839,905; contributions of 30%, 5% and 50% respectively to the investment costs relating to the light points of public lighting, solar PV solar and smart solar PV grid) • Company in charge of the supply, installation and commissioning of an intelligent sprinkler system in 330 Ha of green spaces - Output 2.1.5 ($ 436,852; representing 65% of the total cost and 35% supported by the city of Marrakech) • Company in charge of the restoration and development of 330 Ha of green spaces – Output 2.1.5 ($1,171,083; representing 65% of the total cost and 35% supported by the city of Marrakech) • Company planned to supply to EMOB 30% of the first 320 electric scooters of the sharing system - Product 2.1.2 ($ 214,176; unit cost of a scooter estimated at $ 2,231) • Company in charge of the construction and equipment of the City's of Marrakech treatment platform construction and demolition waste equivalent to 25% of the total cost - Product 2.1.4 ($769,462) • Company in charge of the construction and equipment of a waste treatment and recovery unit at to be managed by the professional association of the Sidi Ghanem industrial eco-district - Product 2.1.4 ($ 400,000)

	• Company in charge of the development of a GIS M&E system of the Palm Grove including acquisition and assessment of satellite and drone images - Output 2.1.5 ($ 185,000); • Company in charge of the technical assistance and training of local farmers of the GUINDO Co-op at the Palm groove to ensure their organic transition and certification - Output 2.1.5 ($ 100,000); • Company in charge of the classification process of the marsh site at the Palm grove including public consultations - Output 2.1.5 ($ 100,000).
9	**72200: Equipment and furniture - $50,000** • Purchase of test equipment for products from the treatment of construction and demolition waste - Output 2.1.4 ($ 50,000; representing 50% of the cost)
10	**71600: Working Travel Expenses - 15,000** • Working Travel Expenses of the PMU team and consultants (national and international) under component 2
11	**75700: Organization of workshops and conferences - $ 40,000** • Territorial Stakeholder Consultation Meetings - Output 2.1.1 ($ 5,000) • Territorial Stakeholder Consultation Meetings - Output 2.1.2 ($ 5,000) • Territorial Stakeholder Consultation Meetings - Output 2.1.3 ($ 5,000) • Territorial Stakeholder Consultation Meetings - Output 2.1.4 ($ 5,000) • Territorial Stakeholder Consultation Meetings - Output 2.1.5 ($ 20,000)
Component 3: Innovative financing and scaling-up	
12	**71200 : International Consultants – $250,000** • International expert to carry out an international benchmark on the upgrade of legal frameworks associated with business models and innovative financing mechanisms for cities - Output 3.1.1 ($500 daily rate x 80 days = $ 40,000) • International expert to support the upgrade of the legal framework associated with business models and innovative financing mechanisms for the city of Marrakech - Output 3.1.1 ($600 daily rate x 100 days =$ 60,000) • International expert to carry out an international benchmark relating to the modalities of private sector involvement in the financing of the assets and services of local authorities - Output 3.1.2 ($500 daily rate x 80 days =$ 40,000) • International expert to design and implement trainings for national and local actors on innovative and new business, income and procurement models at city level - Output 3.1.2 ($500 daily rate x 100 days = $ 50,000) • International expert to design innovative business, revenue and procurement models to engage the private sector - Output 3.1.2 ($600 daily rate x 100 days = $ 60,000)
13	**71300 : National Consultants – $150,000** • National expert to assess the financial planning modalities and processes applied in Marrakech - Output 3.1.1 ($400 daily rate x 100 days = $ 40,000) • National expert to support the improvement and strengthening of planning and financial solvency - Output 3.1.1 ($500 daily rate x 100 days = $ 50,000) • National expert to support the design and implementation of training for national and local actors on innovative and new business, income and supply models at city level - Output 3.1.2 ($300 daily rate x 100 days = $ 30,000) • National expert to support the design of innovative business, revenue and procurement models to engage the private sector - Output 3.1.2 ($300 daily rate x 100 days = $ 30,000)
14	**72100 : Contractual service companies - $300,000** • Financial consulting firm to analyze the feasibility of innovative financing mechanisms for the city of Marrakech - Output 3.1.3 ($ 100,000)

	• Financial consulting firm to design innovative mechanisms adapted to the city of Marrakech - Output 3.1.3 ($ 100,000) • Financial consulting firm to support and accompany the implementation of the financial mechanisms developed - Output 3.1.3 ($ 100,000)
15	**71600 : Working Travel Expenses - 25,000** • Travel costs of the PMU team and consultants (national and international) under component 3
16	**75700 : Organization of workshops and conferences - $25,000** • Territorial Stakeholder Consultation Meetings - Output 3.1.1 ($ 5,000) • Territorial level stakeholder consultation meetings - Output 3.1.2 ($ 5,000) • Territorial level stakeholder consultation meetings - Output 3.1.3 ($5,000) • Training workshops for national and local actors on innovative and new business, income and procurement models at city level - Output 3.1.2 ($ 5,000) • Training workshops for national and local actors on innovative financial mechanisms for cities - Output 3.1.3 ($ 5,000)
Component 4. Advocacy, Knowledge Exchange, Capacity Building and Partnerships	
17	**72100 : Contractual service companies - $100,000** • Communication agency to develop awareness-raising materials specific to the different target actors identified and covering the different themes of sustainability (energy, transport, waste, water resources, biodiversity, ...) - Output 4.1.1 ($ 50,000) Communication agency to implement the awareness plan through the organization of awareness campaigns and events targeting key actors (national and local) Output 4.1.1 ($ 50,000)
18	**71300 : National Consultants – $100,000** • National expert to map the actors to be sensitized on urban sustainability at national and local level (decision-makers, institutions, civil society, companies, young people….) - Output 4.1.1 ($400 daily rate x 25 days = $ 10,000) • National expert to develop an awareness plan on urban sustainability combining standard (workshops, press, etc.) and digital (social networks, web ...) - Output 4.1.1 ($375 daily rate x 40 days = $ 15,000) • National expert to design and implement a national and local capacity building plan in advocacy to promote urban sustainability (civil society, press, young people, etc.) - Output 4.1.1 ($375 daily rate x 40 days = 15,000) Environmental and Social Safeguards Specialist - Output 4.1.3 ($400 daily rate x 150 days= $ 60,000)
19	**74200 : Audiovisual production and printing costs - $10,000** Costs of audiovisual production and printing of awareness materials - Output 4.1.1 ($ 10,000)
20	**71600 : Working Travel Expenses - 266,000** • Travel expenses to participate in SCIP Global Program events - Output 4.1.2 ($ 250,000; $ 50,000 / year) • Travel expenses for the mid-term evaluation - Output 4.1.3 ($ 5,000; year 3) • Travel expenses for final evaluation - Output 4.1.3 ($ 6,000; year 5) Travel expenses for follow-up activities. Output 4.1.3 ($5,000; $1,000/year)
21	**75700: Organization of workshops and conferences - $20,000** • Mid-term review workshop - Output 4.1.3 ($ 2,500) • Final Assessment Workshop - Output 4.1.3 ($ 2,500) • PMU and institutional partners training workshops on environmental and social safeguards - Ouput 4.1.3 ($ 5,000)

	• Workshops to ensure stakeholder engagement - Output 4.1.3 ($ 2,500) Training workshops on gender mainstreaming and associated indicators - Output 4.1.3 ($ 7,500)
22	**71200 : International Consultants – $120,000** • International experts to carry out the mid-term evaluation and the final evaluation - Output 4.1.3 ($ 120,000); mid-term evaluation ($625 daily ate x 80 days = $ 50,000) and final evaluation ($625 daily rate x 112 days = $ 70,000)
23	**71300 : National Consultants – $160,000** • National experts to contribute to mid-term and final evaluation - Output 4.1.3 ($ 40,000); mid-term evaluation ($400 daily rate x 50 days= $ 20,000) and final evaluation ($400 daily rate x 50 days= $ 20,000) • Monitoring and evaluation specialist to coordinate and conduct project monitoring and evaluation activities in accordance with government, UNDP country office and UNDP-GEF requirements, including updating indicators in the project results framework and GEF 7 core indicators and other necessary monitoring tools (UNDP scoring dashboard) annually, mid-term and at the end of the project - Output 4.1.3 ($400 daily rate x 125 days=$ 50,000) • Environmental and Social Safeguards Specialist - Output 4.1.3 ($400 daily rate x 100 days= $ 40,000) • Gender Specialization and Stakeholder Engagement - Output 4.1.3 ($400 daily rate x 75 days= $ 30,000)
24	**75700: Organization of workshops and conferences - $5,000** • Starter Workshop - Output 4.1.3 ($ 5,000)
Project management costs	
25	**71400 : Contractual services – individual - $380,000** • Senior Technical Expert - ($ 220,000; $ 3,666.66 per month for 60 months) • Junior Technical Expert - ($ 80,000; $ 1,333.33 per month for 60 months) • Administrative Assistant - ($ 80,000; $ 1,333.33 per month for 60 months)
26	**72500: Supplies - $15,000** • Office and IT Supplies and Consumables- ($ 15,000; $ 3,000 / year)
27	**72200: Equipment and Supplies - $6,356** • Purchase of office furniture in the first year – ($6,356)
28	**72100: Contractual service companies - $3,000** • Mobile phone call charges - ($ 3,000; $ 50 / month for 3 mobile phones for 60 months)
29	**72800: IT Equipment - $7,000** • Purchase of three computers in the first year - ($ 4,500; $ 1,500 each) • Purchase of three printers during the first year - ($ 750; $ 250 each) • Purchase of three cell phones during the first year - ($ 750; $ 250 each) • Purchase of a video projector during the first year - ($ 500) • Purchase of a TV for video projection during the first year - ($ 500)
30	**74100: Professional Services -$ 10,000** Financial audits as per UNDP and GEF requirements (USD 2,000/year)

31	**74200 : Audio Visual & Print Prod Costs - $4,000** Translation firm to translate the mid-term evaluation report and the final evaluation report from French to English - Output 4.1.3 ($ 4,000)
32	**71400 : Contractual Services-Individuals** National Coordinator - ($ 200,000; $ 3,333 per month for 60 months)

X. LEGAL CONTEXT

Option a. Where the country has signed the Standard Basic Assistance Agreement (SBAA)

This project document shall be the instrument referred to as such in Article 1 of the Standard Basic Assistance Agreement between the Government of (country) and UNDP, signed on (date). All references in the SBAA to "Executing Agency" shall be deemed to refer to "Implementing Partner."

This project will be implemented by [Ministry of Energy, Mines and Environment] ("Implementing Partner") in accordance with its financial regulations, rules, practices and procedures only to the extent that they do not contravene the principles of the Financial Regulations and Rules of UNDP. Where the financial governance of an Implementing Partner does not provide the required guidance to ensure best value for money, fairness, integrity, transparency, and effective international competition, the financial governance of UNDP shall apply.

The designations employed and the presentation of material on this map do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations or UNDP concerning the legal status of any country, territory, city or area or its authorities, or concerning the delimitation of its frontiers or boundaries.

XI. RISK MANAGEMENT

Implementing Partner is a Government Entity (NIM)

1. Consistent with the Article III of the SBAA, the responsibility for the safety and security of the Implementing Partner and its personnel and property, and of UNDP's property in the Implementing Partner's custody, rests with the Implementing Partner. To this end, the Implementing Partner shall:
   a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
   b) assume all risks and liabilities related to the Implementing Partner's security, and the full implementation of the security plan.

2. UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of the Implementing Partner's obligations under this Project Document.

3. The Implementing Partner agrees to undertake all reasonable efforts to ensure that no UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/sc/committees/1267/aq_sanctions_list.shtml.

4. The Implementing Partner acknowledges and agrees that UNDP will not tolerate sexual harassment and sexual exploitation and abuse of anyone by the Implementing Partner, and each of its responsible parties, their respective sub-recipients and other entities involved in Project implementation, either as contractors or subcontractors and their personnel, and any individuals performing services for them under the Project Document.

   (a) In the implementation of the activities under this Project Document, the Implementing Partner, and each of its sub-parties referred to above, shall comply with the standards of conduct set forth in the Secretary General's Bulletin ST/SGB/2003/13 of 9 October 2003, concerning "Special measures for protection from sexual exploitation and sexual abuse" ("SEA").

(b) Moreover, and without limitation to the application of other regulations, rules, policies and procedures bearing upon the performance of the activities under this Project Document, in the implementation of activities, the Implementing Partner, and each of its sub-parties referred to above, shall not engage in any form of sexual harassment ("SH"). SH is defined as any unwelcome conduct of a sexual nature that might reasonably be expected or be perceived to cause offense or humiliation, when such conduct interferes with work, is made a condition of employment or creates an intimidating, hostile or offensive work environment.

5. a) In the performance of the activities under this Project Document, the Implementing Partner shall (with respect to its own activities), and shall require from its sub-parties referred to in paragraph 4 (with respect to their activities) that they, have minimum standards and procedures in place, or a plan to develop and/or improve such standards and procedures in order to be able to take effective preventive and investigative action. These should include: policies on sexual harassment and sexual exploitation and abuse; policies on whistleblowing/protection against retaliation; and complaints, disciplinary and investigative mechanisms. In line with this, the Implementing Partner will and will require that such sub-parties will take all appropriate measures to:

    i. Prevent its employees, agents or any other persons engaged to perform any services under this Project Document, from engaging in SH or SEA;

    ii. Offer employees and associated personnel training on prevention and response to SH and SEA, where the Implementing Partner and its sub-parties referred to in paragraph 4 have not put in place its own training regarding the prevention of SH and SEA, the Implementing Partner and its sub-parties may use the training material available at UNDP;

    iii. Report and monitor allegations of SH and SEA of which the Implementing Partner and its sub-parties referred to in paragraph 4 have been informed or have otherwise become aware, and status thereof.

    iv. Refer victims/survivors of SH and SEA to safe and confidential victim assistance; and

    v. Promptly and confidentially record and investigate any allegations credible enough to warrant an investigation of SH or SEA. The Implementing Partner shall advise UNDP of any such allegations received and investigations being conducted by itself or any of its sub-parties referred to in paragraph 4 with respect to their activities under the Project Document, and shall keep UNDP informed during the investigation by it or any of such sub-parties, to the extent that such notification (i) does not jeopardize the conduct of the investigation, including but not limited to the safety or security of persons, and/or (ii) is not in contravention of any laws applicable to it. Following the investigation, the Implementing Partner shall advise UNDP of any actions taken by it or any of the other entities further to the investigation.

    b) The Implementing Partner shall establish that it has complied with the foregoing, to the satisfaction of UNDP, when requested by UNDP or any party acting on its behalf to provide such confirmation. Failure of the Implementing Partner, and each of its sub-parties referred to in paragraph 4, to comply of the foregoing, as determined by UNDP, shall be considered grounds for suspension or termination of the Project.

6. Social and environmental sustainability will be enhanced through application of the UNDP Social and Environmental Standards (http://www.undp.org/ses) and related Accountability Mechanism (http://www.undp.org/secu-srm).

7. The Implementing Partner shall: (a) conduct project and programme-related activities in a manner consistent with the UNDP Social and Environmental Standards, (b) implement any management or mitigation plan prepared for the project or programme to comply with such standards, and (c) engage in a constructive and timely manner to address any

concerns and complaints raised through the Accountability Mechanism. UNDP will seek to ensure that communities and other project stakeholders are informed of and have access to the Accountability Mechanism.

8. All signatories to the Project Document shall cooperate in good faith with any exercise to evaluate any programme or project-related commitments or compliance with the UNDP Social and Environmental Standards. This includes providing access to project sites, relevant personnel, information, and documentation.

9. The Implementing Partner will take appropriate steps to prevent misuse of funds, fraud or corruption, by its officials, consultants, responsible parties, subcontractors and sub-recipients in implementing the project or using UNDP funds. The Implementing Partner will ensure that its financial management, anti-corruption and anti-fraud policies are in place and enforced for all funding received from or through UNDP.

10. The requirements of the following documents, then in force at the time of signature of the Project Document, apply to the Implementing Partner: (a) UNDP Policy on Fraud and other Corrupt Practices and (b) UNDP Office of Audit and Investigations Investigation Guidelines. The Implementing Partner agrees to the requirements of the above documents, which are an integral part of this Project Document and are available online at www.undp.org.

11. In the event that an investigation is required, UNDP has the obligation to conduct investigations relating to any aspect of UNDP projects and programmes in accordance with UNDP's regulations, rules, policies and procedures. The Implementing Partner shall provide its full cooperation, including making available personnel, relevant documentation, and granting access to the Implementing Partner's (and its consultants', responsible parties', subcontractors' and sub-recipients') premises, for such purposes at reasonable times and on reasonable conditions as may be required for the purpose of an investigation. Should there be a limitation in meeting this obligation, UNDP shall consult with the Implementing Partner to find a solution.

12. The signatories to this Project Document will promptly inform one another in case of any incidence of inappropriate use of funds, or credible allegation of fraud or corruption with due confidentiality.

    Where the Implementing Partner becomes aware that a UNDP project or activity, in whole or in part, is the focus of investigation for alleged fraud/corruption, the Implementing Partner will inform the UNDP Resident Representative/Head of Office, who will promptly inform UNDP's Office of Audit and Investigations (OAI). The Implementing Partner shall provide regular updates to the head of UNDP in the country and OAI of the status of, and actions relating to, such investigation.

13. UNDP shall be entitled to a refund from the Implementing Partner of any funds provided that have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document. Such amount may be deducted by UNDP from any payment due to the Implementing Partner under this or any other agreement. Recovery of such amount by UNDP shall not diminish or curtail the Implementing Partner's obligations under this Project Document.

    Where such funds have not been refunded to UNDP, the Implementing Partner agrees that donors to UNDP (including the Government) whose funding is the source, in whole or in part, of the funds for the activities under this Project Document, may seek recourse to the Implementing Partner for the recovery of any funds determined by UNDP to have been used inappropriately, including through fraud or corruption, or otherwise paid other than in accordance with the terms and conditions of the Project Document.

    Note: The term "Project Document" as used in this clause shall be deemed to include any relevant subsidiary agreement further to the Project Document, including those with responsible parties, subcontractors and sub-recipients.

14. Each contract issued by the Implementing Partner in connection with this Project Document shall include a provision representing that no fees, gratuities, rebates, gifts, commissions or other payments, other than those shown in the proposal, have been given, received, or promised in connection with the selection process or in contract execution, and that the recipient of funds from the Implementing Partner shall cooperate with any and all investigations and post-payment audits.

15. Should UNDP refer to the relevant national authorities for appropriate legal action any alleged wrongdoing relating to the project, the Government will ensure that the relevant national authorities shall actively investigate the same and take appropriate legal action against all individuals found to have participated in the wrongdoing, recover and return any recovered funds to UNDP.

16. The Implementing Partner shall ensure that all of its obligations set forth under this section entitled "Risk Management" are passed on to each responsible party, subcontractor and sub-recipient and that all the clauses under this section entitled "Risk Management Standard Clauses" are included, *mutatis mutandis*, in all sub-contracts or sub-agreements entered into further to this Project Document.

XII. MANDATORY ANNEXES

1. GEF Budget Template (available from BPPS NCE-VF)
2. Terms of Reference of the Project Management Unit (PMU)
3. Project Map and geospatial coordinates of the project area
4. Multiyear Workplan
5. Monitoring Plan
6. UNDP Social and Environmental Screening Procedure (SESP)
7. UNDP Atlas Risk Register
8. Overview of technical consultancies/subcontracts
9. Stakeholder Engagement Plan
10. Environmental Social Management Framework (ESMF) or other SES frameworks/plans
11. Gender Analysis and Gender Action Plan
12. Procurement Plan – for first year of implementation especially
13. GEF focal area specific annexes (e.g. METT, GHG calculations, target landscape profile, feasibility study, other technical reports)
14. Details on GHG emission reduction calculations
15. Additional agreements: such as cost sharing agreements, project cooperation agreements signed with NGOs (where the NGO is designated as the “executing entity”), letters of financial commitments etc..
16. GEF and/or LDCF/SCCF Core indicators
17. GEF Taxonomy
18. Detailed Theory of Change
19. Co-financing letters

Annex 1: GEF Budget Template

Expenditure Category	Detailed Description	Component (USDeq.)							Total (USDeq.)	Responsible Entity
		Component 1	*Component 2*	*Component 3*	*Component 4*	*Sub-Total*	*M&E*	*PMC*		(Executing Entity receiving funds from the GEF Agency)[1]
		Sub-component 1.1	*Sub-component 2.1*	*Sub-component 3.1*	*Sub-component 4.1*					
Equipment	• Purchase of IT equipment and software (e.g., GIS tools) for the multisectoral data management unit of the city of Marrakech	20,000				20,000				Department of Environment
Equipment	• Purchase of three computers in the first year - ($ 4,500; $ 1,500 each) • Purchase of three printers during the first year - ($ 750; $ 250 each) • Purchase of three cell phones during the first year - ($ 750; $ 250 each) • Purchase of a video projector during the first year - ($ 500) • Purchase of a TV for video projection during the first year - ($ 500)					-		7,000		Department of Environment
Vehicle	• Purchase of test equipment for products from the treatment of construction and demolition waste - Output 2.1.4 ($ 50,000; representing 50% of the cost)		50,000			50,000				Department of Environment
Vehicle	• Purchase of office furniture in the first year – ($6,356)					-		6,356		Department of Environment
Contractual Services – Individual	Senior Technical Expert - ($ 220,000; $ 3,666 per month for 60 months) • Junior Technical Expert - ($ 80,000; $ 1,333.33 per month for 60 months) • Administrative Assistant - ($ 80,000; $ 1,333.33 per month for 60 months)					-		380,000		Department of Environment

Contractual Services – Company	72100 : Contractual service companies - $210,000 • Multidisciplinary consultancy firm to organize and support a multisectoral policy dialogue on the integration of sustainability in urban planning and in sector strategic planning documents - Output 1.1.1 ($ 40,000) • Multidisciplinary consultancy firm to develop a national roadmap relating to the establishment of the framework conditions relating to the integration of sustainability in urban planning, to be operationalized through a legal instrument - Output 1.1.1 ($ 70,000) • Multidisciplinary consulting firm to develop an action plan to reflect the commitment of the Marrakech-Safi Region within the framework of the implementation of the SNDD - Output 1.1.2 ($ 20,000) • Multidisciplinary consulting firm to carry out the upgrade of the Communal Action Plan (PAC) and other strategic documents of the city of Marrakech for the integration of sustainability - Output 1.1.2 ($ 40,000) • Multidisciplinary consulting firm to support the city of Marrakech in setting up a multisectoral data management unit (waste, energy, transport, green spaces, etc.) to scientifically inform the process of integrating sustainability into urban planning - Output 1.1.2 ($ 40,000)	210,000				210,000				Department of Environment

Contractual Services – Company	• Technical studies office for the realization of the Marrakech City Sustainable Mobility Plan - Output 2.1.1 ($ 280,000; representing 50% of the cost of the PMD and 50% supported by the city of Marrakech) • Technical studies office for carrying out environmental and social impact studies relating to the scaling up of the BRT system - Output 2.1.1 ($ 222,500; representing 50% of the cost of the ESIA and 50% covered by the SDL City Bus Moutajadida) • Company in charge of the supply, installation and commissioning of solar charging stations for motorcycles and electric vehicles - Output 2.1.2 ($ 90,000; 30 stations at $ 30.00 / terminal) • Company in charge of the creation of dedicated two-wheeled routes on certain arteries of the city - Output 2.1.2 ($ 600,000; 10 linear km on a 1.5 m strip based on a unit cost of $ 40 / m2) • Company responsible for the supply, installation and commissioning of energy efficient equipment in public buildings - Output 2.1.3 ($ 500,000; a 25% contribution to the investment costs for 10 public buildings) • Company responsible for the supply, installation and commissioning of energy efficient equipment in hotels - Output 2.1.3 ($ 333,333; a contribution of 10% to the investment costs for 50 hotels) • Company in charge of the supply, installation and commissioning of an efficient and intelligent public lighting system (1,100 light points), deployment of an intelligent network for the production of electricity from solar PV in roof (2,650 kWp) with a smart grid in the industrial eco-district Sidi Ghanem - Output 2.1.3 ($ 839,905; contributions of 30%, 5% and 50% respectively to the investment costs relating to the light points of public lighting, solar PV solar and smart solar PV grid) • Company in charge of the supply, installation and commissioning of an intelligent sprinkler system in 330 Ha of green spaces - Output 2.1.5 ($436,852; representing 65% of the total cost and 35% support by the city of Marrakech) • Company in charge of the restoration and development of 330 Ha of green spaces – Output 2.1.5 ($ 1,171,083; representing 65% of the total cost and 35% supported by the city of Marrakech)• Company planned to supply to EMOB 30% of the first 320 electric scooters of the sharing system - Product		6,242,311			6,242,311				Department of Environment

	2.1.2 ($ 214,176; unit cost of a scooter estimated at $ 2,231) • Company in charge of the construction and equipment of the City's of Marrakech treatment platform construction and demolition waste equivalent to 25% of the total cost - Product 2.1.4 ($ 769,462) • Company in charge of the construction and equipment of a waste treatment and recovery unit at to be managed by the professional association of the Sidi Ghanem industrial eco-district - Product 2.1.4 ($ 400,000) • Company in charge of the development of a GIS M&E system of the Palm Grove including acquisition and assessment of satellite and drone images - Output 2.1.5 ($ 185,000); • Company in charge of the technical assistance and training of local farmers of the GUINDO Co-op at the Palm groove to ensure their organic transition and certification - Output 2.1.5 ($ 100,000); • Company in charge of the classification process of the marsh site at the Palm grove including public consultations - Output 2.1.5 ($ 100,000).									

Contractual Services – Company	• Financial consulting firm to analyze the feasibility of innovative financing mechanisms for the city of Marrakech - Output 3.1.3 ($ 100,000) • Financial consulting firm to design innovative mechanisms adapted to the city of Marrakech - Output 3.1.3 ($ 100,000) • Financial consulting firm to support and accompany the implementation of the financial mechanisms developed - Output 3.1.3 ($ 100,000)			300,000		300,000				Department of Environment
Contractual Services – Company	• Communication agency to develop awareness-raising materials specific to the different target actors identified and covering the different themes of sustainability (energy, transport, waste, water resources, biodiversity, ...) - Output 4.1.1 ($ 50,000) • Communication agency to implement the awareness plan through the organization of awareness campaigns and events targeting key actors (national and local) Output 4.1.1 ($ 50,000)				100,000	100,000				Department of Environment
Contractual Services – Company	Mobile phone call charges - ($ 3,000; $ 50 / month for 3 mobile phones for 60 months)					-		3,000		Department of Environment

International Consultants	International Consultants – $302,500 International expert to design dedicated two-wheel tracks on certain city streets - Output 2.1.2 ($600 daily rate x 50 days = $ 30,000)• International expert to design the Pilot Low Emission Zone (LEZ) near the tourist area of Jamaa Lafna Square - Output 2.1.2 ($650 daily rate x 76,9 days = $ 50,000) • International expert to design a network of solar charging stations for motorcycles and electric vehicles - Output 2.1.2 ($650 daily rate x 76,9 days = $ 50,000) • International expert for the development of at least one non-household waste management sector (non-hazardous and / or hazardous) with a treatment and recovery center at the level of the Industrial Zone of Sidi Ghanem - Output 2.1.4 ($500 daily rate x 100 days = $ 50,000) • International Expert for the Development of a Standardization System for Construction and Demolition Waste Treatment and Recovery Products - Output 2.1.4 ($500 daily rate x 50 days = $ 25,000) • International experts to reassess the financial, legal and technical assessments to define the level of concessionality of activities under Component 2 - Output 2.1.2, 2.1.3; 2.1.4; 2.1.5 ($650 daily rate x 150 days = $ 97,500)		302,500			302,500				Department of Environment

International Consultants	• International expert to carry out an international benchmark on the upgrade of legal frameworks associated with business models and innovative financing mechanisms for cities - Output 3.1.1 ($500 daily rate x 80 days = $ 40,000) • International expert to support the upgrade of the legal framework associated with business models and innovative financing mechanisms for the city of Marrakech - Output 3.1.1 ($600 daily rate x 100 days =$ 60,000) • International expert to carry out an international benchmark relating to the modalities of private sector involvement in the financing of the assets and services of local authorities - Output 3.1.2 ($500 daily rate x 80 days =$ 40,000) • International expert to design and implement trainings for national and local actors on innovative and new business, income and procurement models at city level - Output 3.1.2 ($500 daily rate x 100 days = $ 50,000) • International expert to design innovative business, revenue and procurement models to engage the private sector - Output 3.1.2 ($600 daily rate x 100 days = $ 60,000)			250,000		250,000				Department of Environment
International Consultants	•International experts to carry out the mid-term evaluation and the final evaluation - Output 4.1.3 ($ 120,000); mid-term evaluation ($625 daily ate x 80 days = $ 50,000) and final evaluation ($625 daily rate x 112 days = $ 70,000)					-	120,000			Department of Environment
Local Consultants	• National expert for carrying out a diagnosis of the framework conditions relating to territorial urban planning (institutional framework, legal framework, procedures, documents, tools, etc.) - Output 1.1.1 ($400 daily rate x 75 days = $ 30,000) • National expert to support the territorial dialogue to ensure the alignment of the objectives and priorities of the strategic documents and the identification of integrated and sustainable orientations for the city - Output 1.1.2 ($400 daily rate x 125 days= $ 50,000)	80,000				80,000				Department of Environment

Local Consultants	• National experts for the development of new business plans to promote sustainable solutions concerning waste management (hazardous and non-hazardous waste), biodiversity and water resources - Output 2.1.1 ($400 daily rate x 250 days= $ 100,000) • National expert for the development of a smartphone application to promote the use of public transport available to the City of Marrakech - Output 2.1.2 ($400 daily rate x 125 days= $ 50,000) • National experts for carrying out energy audits (public buildings and hotels) and design studies for energy installations in the Sidi Ghanem industrial eco-district - Output 2.1.3 ($ 200,000; 100% audit cost coverage for 20 public buildings and 20% for 50 hotels) ($400 daily rate x 500 days= $ 200,000) • National expert to develop a vulnerability study, supported by the Biodiversity index for the city of Marrakech, and proposal for a plant charter to be adopted at the city level - Output 2.1.5 ($400 daily rate x 150 days= $ 60,000) • National expert to prepare plans for the restoration and development of green spaces – Output 2.1.5 ($400 daily rate x 125 days= $ 50,000)		460,000			460,000				Department of Environment
Local Consultants	• National expert to assess the financial planning modalities and processes applied in Marrakech - Output 3.1.1 ($400 daily rate x 100 days = $ 40,000) • National expert to support the improvement and strengthening of planning and financial solvency - Output 3.1.1 ($500 daily rate x 100 days = $ 50,000) • National expert to support the design and implementation of training for national and local actors on innovative and new business, income and supply models at city level - Output 3.1.2 ($300 daily rate x 100 days = $ 30,000) • National expert to support the design of innovative business, revenue and procurement models to engage the private sector - Output 3.1.2 ($300 daily rate x 100 days = $ 30,000)			150,000		150,000				Department of Environment

Local Consultants	• National experts to contribute to mid-term and final evaluation - Output 4.1.3 ($ 40,000); mid-term evaluation ($400 daily rate x 50 days= $ 20,000) and final evaluation ($400 daily rate x 50 days= $ 20,000) • Monitoring and evaluation specialist to coordinate and conduct project monitoring and evaluation activities in accordance with government, UNDP country office and UNDP-GEF requirements, including updating indicators in the project results framework and GEF 7 core indicators and other necessary monitoring tools (UNDP scoring dashboard) annually, mid-term and at the end of the project - Output 4.1.3 ($400 daily rate x 125 days=$ 50,000) • Environmental and Social Safeguards Specialist - Output 4.1.3 ($400 daily rate x 100 days= $ 40,000) • Gender Specialization and Stakeholder Engagement - Output 4.1.3 ($400 daily rate x 75 days= $ 30,000)					-	160,000			Department of Environment
Local Consultants	• National expert to map the actors to be sensitized on urban sustainability at national and local level (decision-makers, institutions, civil society, companies, young people….) - Output 4.1.1 ($400 daily rate x 25 days = $ 10,000) • National expert to develop an awareness plan on urban sustainability combining standard (workshops, press, etc.) and digital (social networks, web ...) - Output 4.1.1 ($375 daily rate x 40 days = $ 15,000) • National expert to design and implement a national and local capacity building plan in advocacy to promote urban sustainability (civil society, press, young people, etc.) - Output 4.1.1 ($375 daily rate x 40 days = 15,000) • Environmental and Social Safeguards Specialist - Output 4.1.3 ($400 daily rate x 150 days= $ 60,000)				100,000	100,000				Department of Environment

Trainings, Workshops, Meetings	• National Stakeholder Consultation Meetings - Output 1.1.1 ($ 10,000) • Territorial Stakeholder Consultation Meetings - Output 1.1.2 ($ 5,000) • Capacity building of the multisectoral data management unit of Marrakech city - Output 1.1.2 ($ 5,000)	20,000				20,000				Department of Environment
Trainings, Workshops, Meetings	• Territorial Stakeholder Consultation Meetings - Output 2.1.1 ($ 5,000) • Territorial Stakeholder Consultation Meetings - Output 2.1.2 ($ 5,000) • Territorial Stakeholder Consultation Meetings - Output 2.1.3 ($ 5,000) • Territorial Stakeholder Consultation Meetings - Output 2.1.4 ($ 5,000) • Territorial Stakeholder Consultation Meetings - Output 2.1.5 ($ 20,000)		40,000			40,000				Department of Environment
Trainings, Workshops, Meetings	• Territorial Stakeholder Consultation Meetings - Output 3.1.1 ($ 5,000) • Territorial level stakeholder consultation meetings - Output 3.1.2 ($ 5,000) • Territorial level stakeholder consultation meetings - Output 3.1.3 ($5,000) • Training workshops for national and local actors on innovative and new business, income and procurement models at city level - Output 3.1.2 ($ 5,000) • Training workshops for national and local actors on innovative financial mechanisms for cities - Output 3.1.3 ($ 5,000)			25,000		25,000				Department of Environment
Trainings, Workshops, Meetings	• Starter Workshop - Output 4.1.3 ($ 5,000)					-	5,000			Department of Environment
Trainings, Workshops, Meetings	• Mid-term review workshop - Output 4.1.3 ($ 2,500) • Final Assessment Workshop - Output 4.1.3 ($ 2,500) • PMU and institutional partners training workshops on environmental and social safeguards - Ouput 4.1.3 ($ 5,000) • Workshops to ensure stakeholder engagement - Output 4.1.3 ($ 2,500) • Training workshops on gender mainstreaming and associated indicators - Output 4.1.3 ($ 7,500)				20,000	20,000				

Travel	Travel expenses for PMU team and national consultants for component 1	20,000				20,000				Department of Environment
Travel	• Working Travel Expenses of the PMU team and consultants (national and international) under component 2		15,000			15,000				Department of Environment
Travel	• Travel costs of the PMU team and consultants (national and international) under component 3			25,000		25,000				Department of Environment
Travel	• Travel expenses to participate in SCIP Global Program events - Output 4.1.2 ($ 250,000; $ 50,000 / year) • Travel expenses for the mid-term evaluation - Output 4.1.3 ($ 5,000; year 3) • Travel expenses for final evaluation - Output 4.1.3 ($ 6,000; year 5) • Travel expenses for follow-up activities. Output 4.1.3 ($5,000; $1,000/year)				266,000	266,000				Department of Environment
Office Supplies	• Office and IT Supplies and Consumables- ($ 15,000; $ 3,000 / year)					-		15,000		Department of Environment
Other Operating Costs	• Costs of audiovisual production and printing of awareness materials - Output 4.1.1 ($ 10,000)				10,000	10,000				Department of Environment
Other Operating Costs	Translation firm to translate the mid-term evaluation report and the final evaluation report from French to English - Output 4.1.3 ($ 4,000)					-		4,000		Department of Environment
Other Operating Costs	Financial audits as per UNDP and GEF requirements (USD 2,000/year)					-		10,000		Department of Environment
Grand Total		350,000	7,109,811	750,000	496,000	8,705,811	285,000	425,356	9,416,167	

Annex 2: Terms of Reference of the Project Management Unit (PMU)

The Project Management Unit is responsible for day-to-day management of the project under the supervision of the Project Director and for monitoring the implementation of the various activities. It will serve as a guidance body in terms of technical and financial management, quality control of interventions.

The PMU technical work will rely on the following Technical Committees:

- Urban Planning & Policy Reform;
- Sustainable Urban Mobility;
- Sustainable Waste Management;
- EE & RE;
- Sustainable Land Management;
- Innovative Financing;
- Outreach, Advocacy & Capacity Building

The PMU will manage the activities of these Technical Committees, from the organisation of meetings, site visits, ToRs drafting, tendering evaluation to the validation of deliverables. To ensure a strong ownership and that project activities are aligned with the city level needs, technical representatives from both urban communes will be involved always involved, amongst other stakeholders depending on the needs and thematic coverd.

The PMU will also be responsible for producing the expected results of the project, according to the required quality standards, and taking into account the specificities and constraints of time and costs allocated, for the management of any risks associated with the development of the project. as well as the management of resources and purchases. It therefore constitutes a focal point for coordinating the implementation of the project with the various partners, including NGOs and the private sector.
The PMU has the following staff:
- National coordinator;
- Junior technical expert;
- Administrative assistant.

The table below provides the roles / responsibilities / qualifications and skills required of each PMU member.

Staff / Consultant	Role / responsibilities / qualifications and skills required
National Project Coordinator	**Roles and responsibilities** The national project coordinator is responsible for coordinating and managing all aspects of project implementation. This is the backbone of all actions to be carried out for the implementation of the activities planned under this project. He must work in close collaboration with the national director of the project and the various partners, ensuring communication between the various entities linked to the project for the proper execution of its various components. Therefore, the national project coordinator is responsible for: ▪ the timely implementation of the work plan as validated by the Steering Committee; ▪ general and financial management;

Staff / Consultant	Role / responsibilities / qualifications and skills required
	▪ the planning of the work schedule as well as the production of reports on the progress of the project; ▪ ensure that monitoring and evaluation activities are included in the planning of the project; ▪ the development of the terms of reference of the project consultants; ▪ the preparation of calls for tenders to be launched within the framework of the project; ▪ ensure communication between the different entities of the project structure, in particular the Steering Committee and stakeholders; ▪ supervision, monitoring and quality control of activities implemented under the project; ▪ the quality control of the deliverables prepared within the framework of the project; ▪ Etc. **Qualifications and experience required** The project coordinator must provide proof of the following profile and skills: ▪ Minimum a bachelor degree in graduate studies in the fields of environmental management, energy, urban planning, or other relevant field for the project; ▪ Professional experience of at least 10 years; ▪ Significant experience in the development and implementation and / or planning of cooperation projects with international donors; ▪ Confirmed technical skills in the fields of climate change, biodiversity and urban management ; ▪ Proven skills in planning, organizing and implementing activities; ▪ Team coordination skills, including in complex, multi-actor and multi-donor environments; ▪ Skills in the development and implementation of participatory processes in facilitating dialogue between different stakeholders; ▪ Excellent written and verbal communication skills; ▪ Good command of languages (French, Arabic and English).
Junior technical expert	**Roles and responsibilities** Under the direct supervision of the national coordinator, the Junior Technical Expert will have the main task of: ▪ Monitor and contribute to the implementation of the project work plan ▪ Support the execution of technical and specific tasks relating to the project ▪ Support the coordination of project activities ▪ Provide advice on the technical aspect of the project to ensure effective implementation in order to achieve the expected results ▪ Support the organization and logistics of events ▪ Provide assistance in the execution of technical and specific tasks relating to the project **Qualifications and required experience** ▪ Minimum a bachelor diploma in engineering, environment, sustainable development or equivalent; ▪ First professional experience in a similar position of at least 2 years; ▪ Have a sense of responsibility, initiative, anticipation and autonomy; ▪ Very good command of languages (French, Arabic and English). ▪

Staff / Consultant	Role / responsibilities / qualifications and skills required
Administrative assistant	**Roles and responsibilities** The administrative assistant will provide support to the project coordinator in the management and administration of the project. The project administrator will be responsible for the administrative and financial management of the project. In addition, he or she will provide support to ensure the delivery of the technical components of the project on time. He or she will work under the supervision of the project coordinator and coordinate with the UNDP and the main national institution (Department of Environment) to ensure the proper management of the project. The tasks of the Project Administrative Assistant are as follow: ▪ Assist the project coordinator in the day-to-day management and supervision of project activities ▪ Assist the project coordinator in aspects related to M&E and knowledge resource management ▪ Assist in the preparation of progress reports ▪ Organize workshops and meetings such as the inception workshop, project committee meetings, technical committee meetings, trainings, etc. in coordination with the project technical team ▪ Support the project coordinator in administrative and operational aspects for a satisfactory implementation of the programmed activities on the basis of the results framework and the annual work plan ▪ Participate in the preparation of annual work plans ▪ Ensure the management of administrative files ▪ Support in logistics management linked to the PMU. **Qualifications and required experience** ▪ A university degree or equivalent qualification in administration or management ▪ At least 3 years of experience in administrative project management ▪ Good command of office tools (Excel, Word, Power Point, Outlook, etc.) ▪ Knowledge of UNDP procedures is highly desirable ▪ Initiative, responsibility and flexibility ▪ Ability to work in team ▪ Excellent language skills in Arabic, English and French (written, spoken and read) and local languages. ▪ .

Annex 3: Project map and Geospatial Coordinates of project sites

Map of Morocco

Project area: City of Marrakech (Urban municipalities of Marrakech and Mechouar kasbah) -
Geospatial coordinates of project sites: Latitude 31 ° 37 '48 "N, Longitude 8 ° 0' 32" W

Annex 4: Multi Year Work Plan

Component	Outcomes	Outputs	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1 Evidence-based sustainable and integrated urban planning & policy reform	1.1. Local and national governments have strengthened institutions, processes, and capacities to undertake evidence-based sustainable integrated planning and policy reform	1.1.1. Enabling framing conditions to support vertical integration are improved at the national level. This will be in line with the tools developed by the Sustainable Cities Impact Program Global Platform (SCIP GP)																				
		1.1.2. Evidence-based sustainable integrated planning and processes are improved and implemented at the City of Marrakech																				

Component	Outcomes	Outputs	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 2 Sustainable integrated low carbon, resilient, conservation and land restoration investments	2.1. Local and national governments have undertaken sustainable integrated low carbon, resilient, conservation and land restoration investments	2.1.1. Business plans of low carbon, resilient and integrated investments are available for the City of Marrakech.																				
		2.1.2. Low carbon investments are performed in urban mobility. This includes BRT system, electrical motorcycles and bicycles																				
		2.1.3. Energy efficiency and renewable energies Investments are performed in public and residential buildings. This includes street lighting, buildings and hotels.																				

Component	Outcomes	Outputs	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		2.1.4. New investments are leveraged to improve the efficient use of resources in urban and peri-urban areas. This includes energy efficiency and water efficiency																				
		2.1.5. Resilient investments are performed in the Palm grove and urban and peri-urban gardens to ensure biodiversity restoration, conservation and sustainable land management. This will include a vulnerability analysis and restoration of critical areas.																				
Component 3: Innovative financing and scaling-up	3.1. Local and national governments launch innovative financing and business models to	3.1.1. Support to the city of Marrakech to improve its creditworthiness for scaling-up sustainable																				

Component	Outcomes	Outputs	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	develop sustainable urban solutions	investments, including reviews of existing legal frameworks, revenue collection and management, and capital planning																				
		3.1.2. Innovative and new business, revenue and procurement models to engaging private sector are specified and designed for the City of Marrakech																				
		3.1.3. Innovative financial mechanisms are designed and tested at the City of Marrakech. May include, but not limited to, green bonds, infrastructure asset-recycling, and value capture investments.																				
Component 4 Advocacy, knowledge	4.1. Policy making, and action are influenced at local, regional and	4.1.1. Specific and differentiated outreach and awareness																				

Component	Outcomes	Outputs	Year 1				Year 2				Year 3				Year 4				Year 5			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
exchange, capacity building and partnerships	national levels to advance the urban sustainability agenda	campaigns targeting urban practitioners, general public are carried out																				
		4.1.2. In close partnership with the SCIP GP, key experiences and lessons learned are compiled and widely disseminated for replication through a range of communication tools, including the project website, project stories,issue papers, and scaling up of project results supported .																				
		4.1.3. Project gender mainstreaming plan, stakeholder engagement plan, and a Monitoring and Evaluation (M&E) plan implemented.																				

Annex 5: Monitoring Plan

This Monitoring Plan and the M&E Plan and Budget in Section VI of this project document will both guide monitoring and evaluation at the project level for the duration of project implementation.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[46]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
Project objective from the results framework: To foster integration and innovative urban planning and financing for Marrakech's sustainable development	***Indicator 1*** Number of direct project beneficiaries disaggregated by sex (individuals)	***Mid-term*** 464,425 Of which Female*: 50%* Male : 50% ***End of the project*** 928,850 Of which Female : 50% Male : 50%	This indicator allows for monitoring the direct beneficiaries, i.e., individuals who have benefited from the implementation of the project, or who use the resources and assets that the project would improve.	Reports of activities carried out under the project Attendance list of events organized within the framework of the project Surveys carried out within the framework of the project Data collection from operators (EMOB, SDL, etc.) and other stakeholders	Annual	Consultants recruited for the implementation of the various project activities PMU	Reports produced by the consultants following the implementation of project activities Updated Gender Action Plan	**Risks** Delay in the implementation of project activities due to the COVID-19 pandemic Project activities do not necessarily target the intended beneficiaries **Assumptions** Strong willingness of stakeholders to implement the project despite current circumstances The project activities are carefully planned, specifying the stakeholders to be involved and targeted as beneficiaries
	Indicator 2 Area of land rehabilitated (hectares - ha)	***Mid-term*** 132 ha of green spaces rehabilitated and / or created and whose resilience is strengthened ***End of the project***	Measure the transformation and requalification of inert spaces into irrigated and functional green spaces Indicator relating to the monitoring of biodiversity to easily communicate	The Green Plan for the agglomeration of Marrakech Geospatial analysis Green space rehabilitation activity reports	At start-up, mid-term and at the end of the project	Consultant - Consultant - Expert in biodiversity Companies in charge of the green areas rehabilitation	Difference between baseline and end of project. Record of restoration activities carried out.	**Risks** Non-compliance with the conditions of use of areas rehabilitated by the population **Assumptions** Awareness campaigns also incorporate this issue and increase awareness

[46] Data collection methods should outline specific tools used to collect data and additional information as necessary to support monitoring. The PIR cannot be used as a source of verification.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[46]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
		330.5 ha of green spaces rehabilitated and / or created and whose resilience is strengthened	trends and progress over time					
	Indicator 3 Mitigated greenhouse gas emissions (metric tons of CO2e)	**Mid-term** 25% of direct project mitigation potential **End of the project** 108,428 tCO2e	Key indicator of the climate change mitigation impact, in tonnes of CO2 equivalent avoided directly by project activities r	Activity monitoring report The methods that will be used for estimating the reductions will be based on the same methodologies and tools followed in Annex 14	Annual	Consultants PMU	Mitigated GHG emissions calculation reports	**Risks** Delay in the implementation of certain activities **Assumptions** Strong stakeholder engagement and available funding
Project Component 1 **Evidence-based sustainable and integrated urban planning & policy reform**	**Indicator 4** Number of instruments (legal, institutional, technical) available promoting the integration of sustainability into urban planning at the national level	***Mid-term*** 1 **End of the project** 2 (road map, draft decree t…)	Two new instruments developed to integrate sustainability into urban planning	Stakeholder consultations Contributions from technical coordination groups	*Mid-term* End of the project	Ministry of urban planning	Approval by relevant ministries Publication at the official bulletin level	**Risks** Slowness of legal procedures Multitude of actors involved in the validation process, including legal instruments **Assumptions** Establishment of a dedicated committee
	Indicator 5 Number of action plans integrating urban sustainability informed by reliable data	***Mid-term*** 1 ***End of the project*** 3 (a new sustainable PAC for the 2 municipalities Marrakech and Mechouar Kasbah and SNDD action plan for the	This indicator is proposed to monitor new documents developed integrating urban sustainability. The objective for Marrakech is to have 3 new documents at the end of the project	Consultations with stakeholders directly involved in the development of targeted documents	Mid-term End of the project	PMU Project evaluation experts	Products developed (action plans)	**Risks** This type of document involves several actors which can generate delays during approval / validation. **Assumptions** It is advisable to have a consultative process with

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[46]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
		Marrakech-Safi Region)						deadlines. This process would limit possible delays Stakeholders are aware of the importance of developing and implementing new action plans integrating urban sustainability. This would promote an inclusive and efficient consultation process.
Project Component 2 **Sustainable integrated low carbon, resilient, conservation and land restoration investments**	***Indicator 6*** Public and private investments (USD) mobilized to support the multi-dimensional sustainability of the city of Marrakech, measured through: 1) Financing of energy efficiency (public lighting, building, industry) 2) Financing of solid waste management 3) Financing the efficiency of water resources 4) Financing of sustainable transport 5) Financing of biodiversity conservation and green spaces.	***Mid-term*** Figures to be expressed as a % increase over the baseline (: *1) xx%* *2) xx%* *3) xx%* *4) xx%* *5) xx%* ***End of the project*** Figures to be expressed as a% increase over the baseline (so as not to fix figures) *1) yy%* *2) yy%* *3) yy%* *4) yy%* *5) yy%*	This involves monitoring the public and private investments mobilized following the implementation of the project. Apart from the contribution of the GEF, the project aims a significant co-financing from several actors. The investments to follow concern 5 categories.	Consultations with parties concerned by the implementation of investment activities (Ministerial departments, local agencies, municipality, tourism industry, SDL, private sector)	Annual	Department of the Environment	Budgets of key ministries and agencies. Private sector surveys.	**Risks** If the economic crisis associated with COVID-19 is extended, future investments may be reduced to deal with more urgent impacts, in terms of health and socio-economic balance. **Assumptions** Most co-financing and investments are already planned and Government is developing measures to sustain investments intended to address other issues.

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[46]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	Indicator 7 State of urban biodiversity and urban green spaces, measured through the City Biodiversity Index (CBI): indigenous biodiversity, Ecosystem services and governance	**Mid-term:** To be defined project start **End of the project** To be defined at project start	Three groups of indicators are used: native biodiversity; ecosystem services; and governance	The vulnerability analysis of the city's biodiversity and green spaces will be generated by quantifying each of the three groups of indicators.	At start-up, mid-term and at the end of the project	PMU, support from the University of Marrakech	Scores of the three groups of indicators and analysis of requalified and developed spaces	**Risks** Constraints related to the calculation of the CBI **Assumptions** Support provided by University of Marrakech and capacity building of stakeholders for a better understanding of CBI indicators
Project Component 3 **Innovative financing and scaling-up**	**Indicator 8** Number of designed innovative and relevant business models involving the private sector	Mid-term : 1 End of the project : 3	3 new innovative business models involving the private sector will be added to the 2 existing ones (SDL and delegated management). The choice will be made according to the result of the benchmark and the feasibility assessment (ESCO, PPP, ecosystem services, etc.). The set objectives take into account the design and implementation deadlines.	Stakeholder consultations Activity reports	Annual	Project Management Unit	Approval by relevant ministries Publication at the level of the official bulletin. Legal contracts governing business models Registration register	**Risks** - Slowness of legal procedures - Multitude of actors involved - Slowness of the deployment process - Attractiveness to the private sector **Assumptions** - Establishment of a monitoring committee - Awareness and promotion actions - Stakeholder training
	Indicator 9 Number of designed innovative and relevant financial mechanisms designed	Mid-term : 1 End of the project : 3	3 innovative financial mechanisms will be implemented and chosen from a selection of mechanisms identified based on an international	Stakeholder consultations Budgets and financial reports	Annual	Project Management Unit	Approval by the relevant ministries (Interior and Finance)	**Risks** - Slowness of legal procedures - Multitude of actors involved - Slowness of the deployment process

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[46]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
			benchmark. A feasibility analysis is planned in the Project to choose the most relevant mechanisms (international climate finance, crowdfuning platform, green bonds, green sponsorship, etc.). The set objectives take into account the design and implementation deadlines.				Publication at the official bulletin level Legal contracts governing financial mechanisms Registration register	- Low mobilization of funding **Assumptions** - Establishment of a monitoring committee - Awareness and promotion actions - Stakeholder training - Improvement of the city's creditworthiness and its ability to raise funds.
Project Component 4 **Advocacy, knowledge exchange, capacity building and partnerships**	**Indicator 10** Number of people outreached on urban sustainability	***Mid-term*** 250 ***End of the project*** 500	Monitoring of the number of people who have been outreached by awareness-raising activities organized under the project on urban sustainability	Monitoring of the awareness plan implementation Specific surveys	Mid-term and end of the project	Project communication / knowledge management expert Expert in project monitoring and evaluation	Reports on events organised Survey results	**Risks** Some of the stakeholders outreached do not adopt the lessons learned from the project **Assumptions** Adaptation of the awareness tools s according to the target groups

Monitoring	Indicators	Targets	Description of indicators and targets	Data source/Collection Methods[46]	Frequency	Responsible for data collection	Means of verification	Risks/Assumptions
	Indicator 11 Number of experiences and lessons learned disseminated through communication tools	***Mid-term*** 2 ***End of the project*** 4	Experiences and lessons shared to maximize knowledge: videos, webinars, conferences, press articles, ...	Organized events Publications	Mid-term and end of the project	Project communication / knowledge management expert Expert in project monitoring and evaluation	Tools developed for knowledge sharing GSPC Platform	**Risks** Low level of audience and participation in events sharing experiences and lessons learned. **Assumptions** Partnership with GSPC will ensure strong participation and wide dissemination

Annex 6: UNDP Social and Environmental Screening Procedure (SESP)

Project Information

Project Information	
1. Project Title	Strengthening Marrakech's sustainable development through innovative planning and financing
2. Project Number (i.e. Atlas project ID, PIMS+)	Atlas Project/Output ID: 10486, UNDP-GEF PIMS ID number: 6411
3. Location (Global/Region/Country)	Morocco
4. Project stage (Design or Implementation)	Design
5. Date	02/03/2021

Part A. Integrating Programming Principles to Strengthen Social and Environmental Sustainability

QUESTION 1: How Does the Project Integrate the Programming Principles in Order to Strengthen Social and Environmental Sustainability?
Briefly describe in the space below how the project mainstreams the human rights-based approach
The examination of project scope highlights the intentions regarding the general principles, including in particular: (i) the integration of human rights, and (iii) gender equality, empowerment of women. Thus, the project, as identified and designed, would contribute significantly to closing gaps with respect to these principles. The provisions of the Moroccan Constitution of 2011 constitute a facilitating environment for the implementation of the project, including, the decentralized territorial organization, advanced regionalization, and the legal basis of individual rights. The project will strengthen, at the level of the City of Marrakech, the municipal stakeholders in the establishment of an appropriate socio-economic framework, for the development of citizens and for the involvement of all in an integrated, inclusive sustainable urban planning, , and ensuring the sustainability of available resources. The project will also improve sustainable mobility and energy access services for potentially marginalized individuals and groups, and thus increase their inclusion in decision-making processes (in accordance with the principle of non-discrimination and equality of human rights). The upgrading of urban planning in the City of Marrakech will also meet the needs of the growing local population and the increase in the number of tourist visitors. This upgrade will have several advantages for the local population since, for example, the coverage of public transport in peri-urban areas (which are the areas hosting most of the city's population, often represented by low-income families) will be improved. Indeed, an improved urban transport system, with a wide geographical coverage and less dependent on fossil fuels, will help reduce the social exclusion of populations living in these peri-urban areas and improve air quality. In addition, better accessibility to adequate transport will improve access to employment opportunities and other essential social components such as health and education facilities. Actions in the field of energy efficiency and renewable energies will create green jobs and reduce social exclusion. The

conservation of biodiversity in urban and peri-urban gardens will create favorable conditions for improving air quality, tourist attractiveness, human well-being, and health.

Briefly describe in the space below how the project is likely to improve gender equality and women's empowerment.

Project preparation was guided by the SES principle on gender equality and the empowerment of women. The Gender Action Plan proposed under the project (presented in Annex 11) provides a series of gender-sensitive measures to promote gender equality and empower women. This action plan is made up of two parts: (i) an Action Plan linked to gender by component and by activity, and (ii) a detailed Gender Action Plan relating to activity 4.1.3.1.

In order to fully integrate this aspect, the project offers several interventions, including:

- ✓ Improve knowledge and gender-specific data specific to the City of Marrakech in the different areas of the project: transport and mobility, energy, water, green spaces, solid waste, biodiversity, etc. Make this gender-sensitive data available by developing communication tools (e.g. website).
- ✓ Ensure equal and effective participation of women and men and involve women in all project activities. Consider women as active agents of development and avoid sexist and exclusive practices in all actions and activities of the project.
- ✓ Support the active inclusion and representation of women in all consultation, information and decision-making processes.
- ✓ Support the development and implementation of the Communal Action Plan using a gender-sensitive participatory approach.
- ✓ Support the establishment of violence prevention and reception services for victims of violence in transport stations. These services could play a dissuasive role against crime in transport, in particular against gender-based violence, while providing people who are victims of violence with multifaceted assistance (medical, psychological, administrative, legal, etc.).

By implementing these actions (among others), the project will create jobs for women, which will contribute to the economic empowerment of women as well as to the evolution of mentalities on the social roles of women. The collection of sex-disaggregated data will support the development of a better understanding of the gender gap and inequalities, in order to tailor the project accordingly, ensure greater gender equality and guide future interventions for a better consideration of this aspect.

Briefly describe in the space below how the project mainstreams sustainability and resilience

The project aims to make Marrakech a sustainable city through the implementation of several activities. In this sense, the project foresees several interventions aimed at reducing GHG emissions from the most emitting sectors at city level. These include transport, energy consumption and waste. The proposed activities aim to introduce new technologies to reduce the emissions of the associated sectors, as described in annex 14. It should also be noted that the project aims to rehabilitate certain public gardens and create new ones which would increase the potential of carbon sequestration.

In terms of resilience, the project aims first to improve knowledge about vulnerability in the city of Marrakech, and propose a plant charter at the city level. In addition, it also aims to ensure efficient use of resources, including water, through the implementation of a smart irrigation system. The project also targets the restoration and development of certain green spaces and the improvement of the city's biodiversity index (CBI).

Given its interventions, the project is associated with several sustainable development objectives, in particular objectives 3- Good Health and Well-Being, 5- Gender Equality, 7 – Affordable and Clean energy, 9-Industry, Innovation and Infrastructure, 10 - Reduced inequalities, 11 - Sustainable cities and communities, 13 – Climate Action, 15 - Life on land .

Apart from the components strictly related to the reduction of GHG emissions and the strengthening of resilience, the project fully integrates the social component and aims to promote gender equality and improve the well-being of citizens.

Briefly describe in the space below how the project strengthens accountability to stakeholders
Project design was carried out based on a participatory approach involving various stakeholders who will have a role, directly or indirectly, in the implementation of the project. As a result, the activities proposed under the project were identified in a collegial manner. Thematic focus groups (e.g., transport, waste management, energy, financing, biodiversity, and green spaces) were organized to discuss in depth the sectoral gaps and propose solutions that are both innovative and adapted to the national and local context. Policy dialogues (national and territorial) are planned to engage key stakeholders based on clear assessment data and results to improve urban planning procedures. The planned dialogues will promote a multi-sectoral approach by considering complementarity between sectors at several scales. The project also aims to involve other stakeholders, such as the private sector, which will be strongly involved in component 2, to put in place investments capable of leading the city towards a new era of sustainability. The private sector will also be involved in component 3, to strengthen financing and business models at the city level. The project considers also the participation of civil society and population, because of their central role in integrating sustainability into daily life and practices. Thus, these stakeholders are targeted by awareness and communication workshops and tools, to ensure a multiplier effect of expected results.

Part B. Identifying and Managing Social and Environmental Risks

QUESTION 2: What are the Potential Social and Environmental Risks? *Note: Complete SESP Attachment 1 before responding to Question 2.*	**QUESTION 3: What is the level of significance of the potential social and environmental risks?** *Note: Respond to Questions 4 and 5below before proceeding to Question 5*			**QUESTION 6: Describe the assessment and management measures for each risk rated Moderate, Substantial or High**
Risk Description (broken down by event, cause, impact)	***Impact & Likelihood (1-5)***	***Significance***	***Comments (optional)***	***Description of assessment and management measures for risks rated as Moderate, Substantial or High***
Risk 1. Generating batteries as waste that can have a severe impact on the environment. Associated Output 2.1.2 SES: 8	I = 4 L = 5	**High**	In addition to this local risk, if a global environmental approach is adopted as encouraged by the GEF, these batteries can generate pollution and environmental footprint.	As the project is categorized as High risk, an Environmental and Social Management Framework (ESMF) is being prepared to ensure that the necessary assessments and management plans are prepared during implementation, prior to the commencement of the relevant activities. The ESMF covers this risk and all currently identified risks. Specific measures include but are not limited to: • Integrating the recovery of used batteries into the local waste sector of electrical and electronic equipment

				• Apply the principle of ERP instrument (Extended Producer Responsibility) which has paid off for conventional batteries. • Establish an ESIA and an ESMP and apply all the measures that will be defined in the ESMP in the operating phase
Risk 2. Work on the establishment of a Low Emission Zone (LEZ) near the tourist area Jamaa Lafna Square, two-wheeled routes on some of the city's arterial roads and the network of solar charging stations for motorcycles and electric vehicles This would cause health, safety, environmental (pollution) and traffic disruption risks Associated output: 2.1.2 SES: 3;4;7;8	I = 3 L= 5	**Substantial**	Environmental nuisances, health and safety risks and disruption of access during construction are a risk to be managed, although they are temporary. In its innovative approach, the Project will have to give the example in terms of clean and secure developments.	• Establish an ESIA and an ESMP and apply all the measures that will be defined in the ESMP in the installation phase • Provide workers with adequate PPE and training. • Make sure to mark the construction sites with signs. Choose work periods with the least nuisance. • Provide outreach to coastal residents and road users. • Respect sites with cultural and heritage value
Risk 3. The establishment of the LEZ, new routes and network of bollards could either displace people or economic activities on a temporary or permanent basis Associated output: 2.1.2. SES: 5	I = 5 L= 2	**Substantial**	The establishment of the LEZ, new routes and network of bollards could either displace people or economic activities on a temporary or permanent basis	• Track existing routes and take into account the routes chosen by the Urban plan (PDU) • If unavoidable displacement, trigger SES No. 5 and the expropriation procedure in accordance with national Law 7-81 relating to expropriation for public utility and temporary occupation, (B.O. 15 June 1983)
Risk 4. The work of transforming the Sidi Ghanem industrial zone into an	I = 4 L = 3	**Substantial**	Environmental nuisances, health and safety risks and disruption of access during	• Establish an ESIA and an ESMP and apply all the measures that will be defined in the ESMP in the installation phase

ECOPARC (lighting, roofing photovoltaic, etc.) and installing RE/EE equipment would create risks for workers and could lead to pollution from residual waste) Associated output: 2.1.3 SES: 3;7;8			construction are a risk to be managed, although they are temporary.	• Provide workers with adequate PPE and training. • Make sure to mark the construction sites with signs. • Choose work periods with the least nuisance
Risk 5. Risk of work-related accidents on buildings and roofs at the time of installation of photovoltaics Associated output: 2.1.3 SES: 3,7	I = 4 L= 3	**Substantial**	Access to the roof is sometimes acrobatic and the dangers are eminently present. Once on the roof, the space reserved for the maintenance and maintenance of the facilities may be limited.	• Establish an ESIA and an ESMP and apply all the measures that will be defined in the ESMP in the installation phase • Provide maintenance-enhancing space and protective guards at roof edges to avoid potential falls • Provide workers with adequate PPE and training.
Risk 6. The development/construction of the non-hazardous and/or hazardous waste treatment and recovery center at the Sidi Ghanem Industrial District would generates impacts on the health, and safety of workers and people living beside this zone (during the construction phase and in the operation phase) Associated output: 2.1.4 SES: 1;3;4;7;8	I = 5 L= 3	**Substantial**	This type of installation generates several environmental and health and safety impacts, especially in industrial areas.	• Develop an ESIA and an ESMP and apply all the measures that will be defined in the ESMP in the installation phase • Establish environmental and social monitoring (health/safety) with a management protocol • Provide workers with adequate PPE and training. • Make sure to mark the construction sites with signs. • Choose periods of work with the least nuisance and disruption of the neighborhood and economic activities on the waterfront • Develop a cultural and heritage protection plan

Risk 7. The development/construction of the municipal platform for sorting and recycling construction and demolition waste would generate environmental impacts and, on the health, and safety of workers and people living along the platform (during the construction phase and in the operating phase) Associated output: 2.1.4 SES: 3; 4, 7;8	I = 4 L= 2	**Moderate**	Environmental nuisances, health and safety risks and disruption of access during construction are a risk to be managed, although they are temporary. Also, sorting/recycling operations are associated with environmental and health and safety risks	• Update the EIA study already conducted by the City of Marrakech to meet UNDP environmental and social safeguards • Establish environmental and social monitoring (health/safety) with a management protocol • Provide workers with adequate PPE and training. • Make sure to mark the construction sites with signs. • Choose periods of work with the least nuisance and disruption of the neighborhood and economic activities on the waterfront • Respect sites with cultural and heritage value
Risk 8. Although the City of Marrakech secured the land where the construction and demolition waste will be treated, there is still the risk that social and economic activities could be displaced (temporarily or permanently). Associated output: 2.1.4 SES: 5	I = 4 L= 2	**Moderate**	The implementation of this platform could either move people or economic activities temporarily or permanently	If unavoidable displacement, trigger SES No. 5 and the expropriation procedure in accordance with Law 7-81 relating to expropriation for public utility and temporary occupation, (B.O. 15 June 1983)
Risk 9. The installation of technological equipment in Marrakech's green spaces for water-efficient use in irrigation could generate health and safety impacts during the construction phase and the generation of piping waste at the end of the life cycle Associated output: 2.1.5 SES: 3; 7; 8	I = 4 L= 2	**Moderate**	Installing drip surface irrigation or subsurface irrigation with automatic sprinkler trigger requires the installation of equipment that would create risks for operators and disrupt visitor access	• Develop an environmental impact study (ESIA) and an ESMP to be applied • Establish environmental and social monitoring (health/safety) with a protocol for managing identified anomalies • Provide workers with adequate PPE and provide training. • Make sure to mark the construction sites with adequate signaling. • Choose periods of work with the least nuisance and disruption of the neighborhood and socio-economic activities

Risk 10. The restoration and development of green spaces (historic gardens, public gardens) and schoolyard green gardens, including the creation of 2 agroecological gardens, would generate impacts during the construction phase and generate green waste, and these green spaces would also be vulnerable to climate change if the selected plant species are not resilient. Associated output: 2.1.5 SES: 2; 3; 4; 7; 8	I = 4 L= 2	**Moderate**	This type of development would result in a generation of green waste and environmental impacts in the construction phase	• Develop an environmental impact study (ESIA) and an ESMP to be applied • Establish environmental and social monitoring (health/safety) with a management protocol • Provide workers with adequate PPE and training. • Make sure to mark the construction sites with adequate signaling. • Choose periods of work with the least nuisance and disruption of the neighborhood and economic activities • Ensure that the used plant species are drought-resilient and most adapted to local climate conditions and avoiding introduction of invasive species • Respect sites with cultural and heritage value
Risk 11. The development of new gardens could potentially involve physical and economic displacement Associated output: 2.1.5 SES: 5	I = 5 L= 2	**Substantial**	The development of new green spaces or resilient public gardens would require displacement of persons and/or their socio-economic activities	If unavoidable displacement, trigger SES No. 5 and the expropriation procedure in accordance with Law 7-81 relating to expropriation for public utility and temporary occupation, (B.O. 15 June 1983); this risk will be further assessed during the ESIA(s) and covered by the ESMP(s), with the preparation of Resettlement and/or Livelihood Action Plan(s), as noted in the forthcoming ESMF.
Risk 12. Project activities and outcomes will be vulnerable to the potential impacts of climate change. SES: 2	I = 4 L = 2	**Moderate**	Marrakech city and its surrounding natural resources are susceptible to climate change, and changes in temperature and precipitation may occur. In particular, the alternation of drought events and more frequent and intense rainfall may affect degraded areas and project activities.	The restoration of degraded lands will contribute to reducing the risk of flooding and flash floods of rivers. As part of the management of this risk the project will coordinate actions with the monitoring committee for the implementation of the measures envisaged under the existing territorial Climate Plan of the prefecture of Marrakech. The project will also improve ecosystem connectivity between city gardens; this will be achieved by strengthening interurban biological corridors to consolidate spatial planning green public spaces, historical gardens, improving the resilience of urban

				biodiversity through increasing species' mobility and providing refuge against climate variability. The implementation of the City Biodiversity Index[47] for the City of Marrakech will provide support to better identify climate-related risks, in particular through its two indicators: Indicator 11: regulation of quantity of water and Indicator 12: climate regulation: carbon storage and cooling effect of vegetation. In addition, sustainable mobility plans to support alternative modes of urban transportation will reduce GHG emissions and build resiliency to climate change in the City.
Risk 13. Indigenous peoples, if their existence is proven in the geographical area of the project, could be excluded from beneficial activities and opportunities of the project (access to transport, access to new developed green spaces, access to energy services, participation in decision-making, etc.). SES: 6 Associated outputs: all outputs	I = 4 L = 2	**Moderate**	This risk is triggered in relation with the implementation of on-the-ground activities but also to policy-related and capacity building activities generating potential indirect impacts on population located in the city of Marrakech. This risk is not systematically considered in Morocco particularly in the urban influence area of the project because there are no indigenous peoples. In this context, local populations are rather considered. But if certain activities of the project are scaled up at subnational and national levels covering	In line with the precautionary principle recommended by UNDP SES, a re-assessment of this risk will take place at the start stage of the project's implementation, as part of the ESIA(s) and/or SESA(s), per the ESMF. In the event that indigenous peoples are identified, an inclusion and integration plan will be prepared and implemented in a manner compliant with Standard 6, with FPIC applied if required.

[47] The City Biodiversity Index (CBI) was proposed as part of the Convention on Biological Diversity (CBD) in the ninth Conference of the Parties (COP9, 2008) and applied internationally to enable municipalities and cities to manage biodiversity and ecosystem services in a sustainable manner

			rural, oasian and mountain areas, this risk needs to be taken into account. This is in line with the "indigenous" broad definition under the SES which includes tribes, ethnic groups, professional and geographical groups related such as hunter-gatherers, nomads, peasants, mountain people.	
Risk 14. The project through its technical, regulatory, policy and capacity-building activities could generate potential impacts on people who do not have the capacity to assert their rights. Programming Principle 2 Associated outputs: all outputs	I = 4 L = 2	**Moderate**	It is recognized that project activities can generate potential indirect impacts on people (exclusion, lack of equity, accessibility to common services and goods, etc.) who do not have the capacity to assert their rights.	Although this risk is considered moderate in the context of this project, it will have to be assessed at the start of the implementation of the project and taken into account in the process of information on the claims and grievance procedures, as described in the forthcoming ESMF. A Stakeholder Engagement Plan has been prepared and a project-level Grievance Redress Mechanism will be established. The UNDP Universal Human Rights Index notes concerns about the capacities of groups related to rights holders
Risk 15. The project could have a negative impact on the enjoyment of human rights (civil, political, economic, social or cultural) by marginalized groups, including vulnerable populations in urban or peri-urban poor neighborhoods.	I = 4 L = 2	**Moderate**	This potential risk lies in the fact that project activities are likely to exclude or deprive the rights of marginalized or vulnerable population groups.	Although this risk is considered moderate in the context of this project, it will have to be assessed at the start of the implementation of the activities and taken into account in the process of information on the claims and grievance procedures, as described in the forthcoming ESMF.

Programming Principle 2 Associated outputs: all outputs				A Stakeholder Engagement Plan has been prepared and a project-level Grievance Redress Mechanism will be established.
Risk 16. Limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services. Programming Principle 3 Associated outputs: all outputs	I = 4 L = 3	**Substantial**	These are, for example, activities that could lead to the degradation or depletion of natural resources (fuelwood, water, etc.) in communities that depend on these resources for their livelihoods and well-being. This risk is relevant for the project activities supporting the following components: conservation and bio-diversity, pollution reduction and improvements of the living environment.	Measures were established through the gender analysis and the action plan established during the PPG phase, to manage and reduce the risks identified on women.
Risk 17. Activities under components 1 and 3 (policy-level activities related to territorial planning and innovative financing) can generate indirect impacts on certain population groups or institutional stakeholders. Programming Principles 1,2,3,4,5 Associated outputs: outputs of components 1 and 3	I = 4 L = 2	**Moderate**	The indirect impacts associated with this risk are: (i) the exclusion of certain population groups or institutions from the decision-making sphere; (ii) non-inclusive urban planning, (iii) regulation to the disadvantage of marginalized populations; (iv) financial instruments or taxes creating social disparities;	Conduct a strategic environmental and social assessment (SESA) to identify major negative and positive environmental and social impacts and formulate mitigation/enhancement measures.
	QUESTION 4: What is the overall project risk categorization?			

	Low Risk	☐			
	Moderate Risk	☐			
	Substantial Risk	☐	.		
	High Risk	**X**	17 potential risks were identified and assessed: • 1 high risk • 7 substantial risks • 9 moderate risks As part of the assessment and management procedures recommended by UNDP, the management of risks related to certain activities will require investigations well beyond the scope of the ESMF. It is considered that: Although the project foresees urban greening and sustainable financing, the project is in **the category HIGH RISK**.		
	QUESTION 5: Based on the identified risks and risk categorization, what requirements of the SES are triggered? (check all that apply)				
	Question only required for Moderate, Substantial and High-Risk projects				
	Is assessment required? (check if "yes")	**X**			***Status? (completed, planned)***
	if yes, indicate overall type and status		**X**	Targeted assessment	Completed during PPG: stakeholder analysis, gender analysis
			X	ESIA	Planned
			X	SESA	Planned
	Are management plans required? (check if "yes)	**X**			
	If yes, indicate overall type		**X**	Targeted management plan (for example Gender Action Plan, Emergency Action Plan,	Completed during PPG: Gender Action Plan, Stakeholder Engagement Plan

				Waste Management Plan....)	
			X	ESMP (may include a set of specific plans)	Planned
			X	ESMF	Completed during PPG
	Based on identified <u>risks</u>, which Principles/Project-level Standards triggered?		**Comments (not required)**		
	Overarching Principle: Leave No One Behind	**X**			
	Human Rights	**X**			
	Gender Equality and Women's Empowerment	**X**			
	Accountability	**X**			
	1. Biodiversity Conservation and Sustainable Natural Resource Management	**X**			
	2. Climate Change and Disaster Risks	**X**			
	3. Community Health, Safety and Security	**X**			
	4. Cultural Heritage	**X**			
	5. Displacement and Resettlement	**X**			
	6. Indigenous Peoples	**X**			
	7. Labour and Working Conditions	**X**			
	8. Pollution Prevention and Resource Efficiency	**X**			

Final Sign Off

Final Screening at the design-stage is not complete until the following signatures are included

Signature	***Date***	***Description***

QA Assessor		UNDP staff member responsible for the project, typically a UNDP Programme Officer. Final signature confirms they have "checked" to ensure that the SESP is adequately conducted.
QA Approver		UNDP senior manager, typically the UNDP Deputy Country Director (DCD), Country Director (CD), Deputy Resident Representative (DRR), or Resident Representative (RR). The QA Approver cannot also be the QA Assessor. Final signature confirms they have "cleared" the SESP prior to submittal to the PAC.
PAC Chair		UNDP chair of the PAC. In some cases PAC Chair may also be the QA Approver. Final signature confirms that the SESP was considered as part of the project appraisal and considered in recommendations of the PAC.

SESP Attachment 1. Social and Environmental Risk Screening Checklist

Checklist Potential Social and Environmental Risks		
INSTRUCTIONS: The risk screening checklist will assist in answering Questions 2-6 of the Screening Template. Answers to the checklist questions help to (1) identify potential risks, (2) determine the overall risk categorization of the project, and (3) determine required level of assessment and management measures. Refer to the SES toolkit for further guidance on addressing screening questions.		
Overarching Principle: Leave No One Behind **Human Rights**		**Answer (Yes/No)**
P.1	Have local communities or individuals raised human rights concerns regarding the project (e.g. during the stakeholder engagement process, grievance processes, public statements)?	*No*
P.2	Is there a risk that duty-bearers (e.g. government agencies) do not have the capacity to meet their obligations in the project?	*No*
P.3	Is there a risk that rights-holders (e.g. project-affected persons) do not have the capacity to claim their rights?	*Yes*
Would the project potentially involve or lead to:		
P.4	adverse impacts on enjoyment of the human rights (civil, political, economic, social or cultural) of the affected population and particularly of marginalized groups?	Yes
P.5	inequitable or discriminatory impacts on affected populations, particularly people living in poverty or marginalized or excluded individuals or groups, including persons with disabilities? [48]	No
P.6	restrictions in availability, quality of and/or access to resources or basic services, in particular to marginalized individuals or groups, including persons with disabilities?	Yes
P.7	exacerbation of conflicts among and/or the risk of violence to project-affected communities and individuals?	No
Gender Equality and Women's Empowerment		
P.8	Have women's groups/leaders raised gender equality concerns regarding the project, (e.g. during the stakeholder engagement process, grievance processes, public statements)?	No
Would the project potentially involve or lead to:		
P.9	adverse impacts on gender equality and/or the situation of women and girls?	No
P.10	reproducing discriminations against women based on gender, especially regarding participation in design and implementation or access to opportunities and benefits?	No
P.11	limitations on women's ability to use, develop and protect natural resources, taking into account different roles and positions of women and men in accessing environmental goods and services? *For example, activities that could lead to natural resources degradation or depletion in communities who depend on these resources for their livelihoods and well being*	Yes
P.12	exacerbation of risks of gender-based violence?	No

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

	For example, through the influx of workers to a community, changes in community and household power dynamics, increased exposure to unsafe public places and/or transport, etc.	
Sustainability and Resilience: Screening questions regarding risks associated with sustainability and resilience are encompassed by the Standard-specific questions below		
Accountability		
Would the project potentially involve or lead to:		
P.13	exclusion of any potentially affected stakeholders, in particular marginalized groups and excluded individuals (including persons with disabilities), from fully participating in decisions that may affect them?	No
P.14	grievances or objections from potentially affected stakeholders?	Yes
P.15	risks of retaliation or reprisals against stakeholders who express concerns or grievances, or who seek to participate in or to obtain information on the project?	No
Project-Level Standards		
Standard 1: Biodiversity Conservation and Sustainable Natural Resource Management		
Would the project potentially involve or lead to:		
1.1	adverse impacts to habitats (e.g. modified, natural, and critical habitats) and/or ecosystems and ecosystem services? *For example, through habitat loss, conversion or degradation, fragmentation, hydrological changes*	No
1.2	activities within or adjacent to critical habitats and/or environmentally sensitive areas, including (but not limited to) legally protected areas (e.g. nature reserve, national park), areas proposed for protection, or recognized as such by authoritative sources and/or indigenous peoples or local communities?	No
1.3	changes to the use of lands and resources that may have adverse impacts on habitats, ecosystems, and/or livelihoods? (Note: if restrictions and/or limitations of access to lands would apply, refer to Standard 5)	No
1.4	risks to endangered species (e.g. reduction, encroachment on habitat)?	No
1.5	exacerbation of illegal wildlife trade?	No
1.6	introduction of invasive alien species?	Yes
1.7	adverse impacts on soils?	Yes
1.8	harvesting of natural forests, plantation development, or reforestation?	No
1. 9	significant agricultural production?	No
1. 10	animal husbandry or harvesting of fish populations or other aquatic species?	No
1.11	significant extraction, diversion or containment of surface or ground water? *For example, construction of dams, reservoirs, river basin developments, groundwater extraction*	No
1.12	handling or utilization of genetically modified organisms/living modified organisms?[49]	No
1.13	utilization of genetic resources? (e.g. collection and/or harvesting, commercial development)[50]	No
1.14	adverse transboundary or global environmental concerns?	No
Standard 2: Climate Change and Disaster Risks		

[49] See the Convention on Biological Diversity and its Cartagena Protocol on Biosafety.
[50] See the Convention on Biological Diversity and its Nagoya Protocol on access and benefit sharing from use of genetic resources.

Would the potentially involve or lead to:		
2.1	areas subject to hazards such as earthquakes, floods, landslides, severe winds, storm surges, tsunami or volcanic eruptions?	Yes
2.2	outputs and outcomes sensitive or vulnerable to potential impacts of climate change? *For example, through increased precipitation, drought, temperature, salinity, extreme events*	Yes
2.3	direct or indirect increases in vulnerability to climate change impacts or disasters now or in the future (also known as maladaptive practices)? *For example, changes to land use planning may encourage further development of floodplains, potentially increasing the population's vulnerability to climate change, specifically flooding*	No
2.4	increases of greenhouse gas emissions, black carbon emissions or other drivers of climate change?	No
Standard 3: Community Health, Safety and Security		
Would the potentially involve or lead to:		
3.1	construction and/or infrastructure development (e.g. roads, buildings, dams)? (Note: the GEF does not finance projects that would involve the construction or rehabilitation of large or complex dams)	Yes
3.2	air pollution, noise, vibration, traffic, injuries, physical hazards, poor surface water quality due to runoff, erosion, sanitation?	Yes
3.3	harm or losses due to failure of structural elements of the project (e.g. collapse of buildings or infrastructure)?	No
3.4	risks of water-borne or other vector-borne diseases (e.g. temporary breeding habitats), communicable and noncommunicable diseases, nutritional disorders, mental health?	No
3.5	transport, storage, and use and/or disposal of hazardous or dangerous materials (e.g. explosives, fuel and other chemicals during construction and operation)?	Yes
3.6	adverse impacts on ecosystems and ecosystem services relevant to communities' health (e.g. food, surface water purification, natural buffers from flooding)?	No
3.7	influx of project workers to project areas?	No
3.8	engagement of security personnel to protect facilities and property or to support project activities?	Yes
Standard 4: Cultural Heritage		
Would the project potentially involve or lead to:		
4.1	activities adjacent to or within a Cultural Heritage site?	Yes
4.2	significant excavations, demolitions, movement of earth, flooding or other environmental changes?	Yes
4.3	adverse impacts to sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture (e.g. knowledge, innovations, practices)? (Note: projects intended to protect and conserve Cultural Heritage may also have inadvertent adverse impacts)	No
4.4	alterations to landscapes and natural features with cultural significance?	No
4.5	utilization of tangible and/or intangible forms (e.g. practices, traditional knowledge) of Cultural Heritage for commercial or other purposes?	No
Standard 5: Displacement and Resettlement		
Would the project potentially involve or lead to:		

5.1	temporary or permanent and full or partial physical displacement (including people without legally recognizable claims to land)?	Yes
5.2	economic displacement (e.g. loss of assets or access to resources due to land acquisition or access restrictions – even in the absence of physical relocation)?	Yes
5.3	risk of forced evictions?[51]	No
5.4	impacts on or changes to land tenure arrangements and/or community-based property rights/customary rights to land, territories and/or resources?	No
Standard 6: Indigenous Peoples		
Would the project potentially involve or lead to:		
6.1	areas where indigenous peoples are present (including project area of influence)?	Yes
6.2	activities located on lands and territories claimed by indigenous peoples?	No
6.3	impacts (positive or negative) to the human rights, lands, natural resources, territories, and traditional livelihoods of indigenous peoples (regardless of whether indigenous peoples possess the legal titles to such areas, whether the project is located within or outside of the lands and territories inhabited by the affected peoples, or whether the indigenous peoples are recognized as indigenous peoples by the country in question)? *If the answer to screening question 6.3 is "yes", then the potential risk impacts are considered significant and the project would be categorized as either Substantial Risk or High Risk*	Yes
6.4	the absence of culturally appropriate consultations carried out with the objective of achieving FPIC on matters that may affect the rights and interests, lands, resources, territories and traditional livelihoods of the indigenous peoples concerned?	No
6.5	the utilization and/or commercial development of natural resources on lands and territories claimed by indigenous peoples?	No
6.6	forced eviction or the whole or partial physical or economic displacement of indigenous peoples, including through access restrictions to lands, territories, and resources? *Consider, and where appropriate ensure, consistency with the answers under Standard 5 above*	No
6.7	adverse impacts on the development priorities of indigenous peoples as defined by them?	No
6.8	risks to the physical and cultural survival of indigenous peoples?	No
6.9	impacts on the Cultural Heritage of indigenous peoples, including through the commercialization or use of their traditional knowledge and practices? *Consider, and where appropriate ensure, consistency with the answers under Standard 4 above.*	No
Standard 7: Labour and Working Conditions		
Would the project potentially involve or lead to: (note: applies to project and contractor workers)		
7.1	working conditions that do not meet national labour laws and international commitments?	No
7.2	working conditions that may deny freedom of association and collective bargaining?	No
7.3	use of child labour?	No
7.4	use of forced labour?	No

[51] Forced eviction is defined here as the permanent or temporary removal against their will of individuals, families or communities from the homes and/or land which they occupy, without the provision of, and access to, appropriate forms of legal or other protection. Forced evictions constitute gross violations of a range of internationally recognized human rights.

7.5	discriminatory working conditions and/or lack of equal opportunity?	No
7.6	occupational health and safety risks due to physical, chemical, biological and psychosocial hazards (including violence and harassment) throughout the project life-cycle?	Yes
Standard 8: Pollution Prevention and Resource Efficiency		
Would the project potentially involve or lead to:		
8.1	the release of pollutants to the environment due to routine or non-routine circumstances with the potential for adverse local, regional, and/or transboundary impacts?	Yes
8.2	the generation of waste (both hazardous and non-hazardous)?	Yes
8.3	the manufacture, trade, release, and/or use of hazardous materials and/or chemicals?	No
8.4	the use of chemicals or materials subject to international bans or phase-outs? *For example, DDT, PCBs and other chemicals listed in international conventions such as the Montreal Protocol, Minamata Convention, Basel Convention, Rotterdam Convention, Stockholm Convention*	No
8.5	the application of pesticides that may have a negative effect on the environment or human health?	No
8.6	significant consumption of raw materials, energy, and/or water?	No

Annex 7: UNDP Risk Register

#	Description	Risk category	Impact & Likelihood	Risk treatment / Management measures	Risk owner
1	Insufficient institutional commitment	Institutional	This risk may delay the consideration of sustainability in some sectors. I =2 L = 2 Risk level = Low	• Coherent leadership from the Department of Environment to seek political support from the highest level of the government, • Involve all stakeholders through an inclusive consultative approach and in decision making. • Ensure proactive communication. • Ensure that multisectoral policy dialogue is organized in a way that facilitates exchange and consultation, in a language that is adapted, better shared, and accepted. • To ensure that stakeholders benefit from the project's awareness and capacity-building activities.	PMU
2	Difficulties in accessing and improving data quality	Institutional	Stakeholders may be reluctant to share their data, especially if they are behind in the implementing of their strategic documents integrating sustainability. I =3 L = 3 Risk = Moderate	• Involvement of key institutions and departments. • Clarification of roles and missions when defining institutional arrangements to ensure smooth data exchange. • Have an accurate and easy-to-use information system to facilitate access to external actors	PMU Multi-sectoral data management unit
3	Delay in the adoption of the legal instrument translating and obliging the implementation of the roadmap	Regulatory	The slowness of legal procedures in Morocco may delay the adoption of the legal instrument that will support the effective implementation of the roadmap for the establishment of framework conditions for integrating sustainability into urban planning. I = 4 L = 3 Risk = Substantial	• Opt for a legal instrument that does not require a long approval process. • Ensure a planning of project activities favoring the support of this activity. • Start the process of developing the draft legal instrument early enough to get it through the approval process quickly	City of Marrakech PMU Urban Agency of Marrakech
4	Act of vandalism	Operational	The sharing system will make motorcycles available to citizens in different areas of Marrakech. The motorcycles can be subject to acts of vandalism (theft, degradation, destruction...) I = 3 L = 3 Risk = Moderate	• Provide a reinforced security system for the parking areas dedicated to the sharing system. • Provide an anti-theft system for motorcycles. • Provide strict rules of use. • Plan a partnership with the police of Marrakech and to ensure its involvement in the different districts of Marrakech. • Rely on the experience of Medina Bike in this context	City of Marrakech Wilaya EMOB
5	COVID-19	Strategic	The COVID-19 pandemic had a significant impact on	• Involve key players in the outreach process.	Tourism industry

#	Description	Risk category	Impact & Likelihood	Risk treatment / Management measures	Risk owner
			the tourism industry in Marrakech, due to the resulting travel restrictions as well as the decline in domestic and international demand. Financial pressure on operators is expected to continue for some facilities, particularly owner-operated hotels, which will impact their willingness to undertake EE/RE investments. I = 3 L = 3 Risk = Moderate	• Presenting available financing solutions such as Morseff and Green Growth Tatwir, and facilitating contact between operators and financing solution providers	
6	Low involvement of the private sector	Financial	The financing of Territorial Collectivities (TCs) in Morocco is based on a system that combines local taxation, state endowments and loans. Strengthening the financial resources of TCs will undoubtedly require the involvement of other potential actors, particularly the private sector (commercial banks, investors, etc.). However, the commitment of these actors supposes the improvement of the TCs financial creditworthiness and attractive conditions. I = 3 L = 2 Risk = Moderate	• Plan consultation phases according to the needs of the targeted stakeholders • Provide proposals for innovative mechanisms adapted to the local context and to the interests of the targeted stakeholders	City of Marrakech
7	Unsustainability risk of EE/RE activities in Public Buildings (PB) and hotels. Lack of financial mechanisms to support RE / EE investments in hotels.	Financial	Low financial resources still hamper EE/RE investments in PBs and hotels. This risk may continue if no financial mechanism is provided. I = 3 L = 3 Risk = Moderate	• Involve key players in the outreach process. • Present other financial solutions: e.g., Morseff, SIE as a Super ESCO. and facilitate the contact between the operators and the suppliers of the financing solutions	City of Marrakech and public institutions in the city Tourism industry
8	The financial situation of the CIty of Marrakech, further impacted by the Covid-19 crisis, risks	Financial	The finances of the Marrakech city are limited and depend on transfers from the State, which tend	To mitigate this risk, the Project includes activities to assess planning arrangements and to assist the City in improving its creditworthiness prior to fundraising.	City of Marrakech PMU

#	Description	Risk category	Impact & Likelihood	Risk treatment / Management measures	Risk owner
	limiting access to new funding.		to be reduced due to the pandemic. The City will have to seek new sources of financing, particularly from private investors who are very concerned about the financial solvency of the entities to be financed. A lack of solvency risks may discredit the City on the financial market. I = 3 L = 3 Risk = Moderate		
9	The delay in upgrading the legal framework associated with new business models and financial mechanisms may hamper the deployment of these mechanisms.	Financial Regulatory Policy	The project includes an analysis of the current legal framework governing local finance in Morocco and proposals for upgrading it, following an international benchmark, to encourage private sector involvement and the use of innovative financing. Given the delays in approving and implementing the necessary amendments, the implementation of certain financial mechanisms may be delayed. I = 3 L = 4 Risk = Moderate	To mitigate this risk, the legal workstream will be launched at the start of the Project to anticipate the timeframe of the regulatory process. Also, it will be conducted in a participatory manner in order to properly prepare the introduction of the draft texts into the regulatory process and to ensure coordination before the execution of the proposed projects. On the other hand, priority goes to business models and financial mechanisms that do not require legal upgrading. Their design and implementation can be launched as a priority.	PMU City of Marrakech
10	The innovative character of the business models and financial mechanisms to be developed by the City risks hindering their approval and assimilation by the various local and national actors involved in the implementation process.	Financial Organizational Operational	The City of Marrakech will be a pioneer at the national level in the deployment of certain innovative mechanisms. A low level of awareness among local and national actors as to the benefits of these new mechanisms and a lack of capacity and skills for the deployment and management of these mechanisms may call into question their feasibility. I = 2 L = 2 Risk = Low	The project will provide training activities for local and national actors on the functioning of new business models and financial mechanisms and their impact on the financing of sustainable investments in the city.	PMU

#	Description	Risk category	Impact & Likelihood	Risk treatment / Management measures	Risk owner
11	**Environmental**: Generation of "battery" waste In addition to this local risk, if a global environmental approach is taken as promoted by the GEF, these batteries can generate a pollution and environmental footprint.	PPG	I = 4 L = 4 Risk: Substantial	• Integrate the recovery of used batteries into the local Waste Electrical & Electronic Equipment (WEEE) stream. • Apply the principle of EPR (Extended Producer Responsibility) which has been successful for conventional batteries.	PMU Producers
12	**Environmental and social**: The implementation of a Low Emission Pilot Zone (LEPZ) near the tourist area of Jamaa Lafna Square, the routes for two-wheelers on certain arteries in the city and the network of solar charging stations for motorcycles and electric vehicles would cause health, safety, environmental (pollution) and traffic disruption risks. Environmental nuisances, health and safety risks and disruption of access during the construction phase are a risk to be managed, even though they are temporary. In its innovative approach, the Project will have to set an example in terms of clean and safe developments.	PPG	I = 3 L= 5 Risk = Substantial	• Establish an Environmental Social Impact Assessment - ESIA and Environmental and Social Management Plan - ESMP and implement all measures that will be defined in the ESMP in the installation phase. • Equip agents with adequate Personal Protective Equipment (PPE) and provide them with training. • Mark work sites with signs. Choose work periods with the least nuisance. • Plan awareness-raising campaigns for local populations and road users. • Respect cultural and heritage sites.	PMU
13	**Social and Economic**: The implementation of the Low Emissions Zones, new routes and terminals network could either temporarily or permanently displace people or economic activities	PPG	I = 5 L= 2 Risk = Substantial	If displacement is unavoidable, trigger NES N°5 and the expropriation procedure in accordance with Law n° 7-81 on expropriation for public utility and temporary occupation, (B.O. June 15, 1983) of integration and economic and sanitary securing of informal reclaimers that could be duplicated in other cities	PMU City of Marrakech
14	**Environmental and social**: The transformation of the Industrial Zone into an ECOPARC (lighting, PV on the roof, etc.) and the installation of RE/EE equipment would cause risks for workers and could generate pollution by residual waste). Environmental nuisance, health and safety risks, and	PPG	I = 4 L = 3 Risk = Substantial	• Establish an Environmental (and Health and Security) Notice in accordance with the new law on impact studies. • Provide agents with adequate PPE and training. • Mark work sites with signs. Choose work periods with the least nuisance. • Apply all the measures that will be defined in the Environmental Notice	PMU

#	Description	Risk category	Impact & Likelihood	Risk treatment / Management measures	Risk owner
	disruption of access during the construction phase present a risk that must be managed even though they are temporary.				
15	**Social / health - security**: Risk of accidents related to work on buildings and roofs during the installation of PV. Access to the roof is sometimes acrobatic and the dangers are very present. Once on the roof, the space reserved for the maintenance of the installations can be limited	PPG	I = 4 L = 3 Risk = Substantial	Provide space for easy maintenance and protective guards at the roof edges to prevent potential falls	PMU
16	**Environmental and social**: The development and construction work of the treatment and recovery center for non-household waste (non-hazardous and/or hazardous) in the Sidi Ghanem industrial district will generate environmental impacts, and on the health and security of workers and populations (during the work phase and the operating phase) This type of installation generates several environmental, health, and safety impacts, particularly in industrial areas.	PPG	I = 5 L = 3 Risk = Substantial	• Develop an ESIA and ESMP to be applied. • Establish an environmental and social (+ health/safety) monitoring with a management protocol. • Provide agents with adequate PPE and training. • Mark the work sites with signs. • Choose work periods with the least nuisance and disruption to the neighborhood and local economic activities. • Respect cultural and heritage sites.	PMU
17	**Environmental and social**: The development/construction work of the municipal platform for the sorting and recovery of construction and demolition waste would generate environmental impacts, and on the health and safety of workers and neighboring populations (during the construction phase and the operating phase).	PPG	I = 4 L = 2 Risk = Moderate	• Develop an environmental impact assessment and an ESMP to be applied. • Establish an environmental and social (+ health/safety) monitoring with a management protocol. • Provide agents with adequate PPE and training. • Mark the work sites with signs. • Choose work periods with the least nuisance and disruption to the neighborhood and local economic activities. • Respect cultural and heritage sites.	PMU
18	**Social and economic**: The project could potentially involve physical and	PPG	I = 4 L = 2	If displacement is unavoidable, trigger NES N°5 and the expropriation procedure in accordance with Law n° 7-81 on expropriation for public utility	PMU City of Marrakech

#	Description	Risk category	Impact & Likelihood	Risk treatment / Management measures	Risk owner
	economic displacements in the case of the implementation the municipal platform for sorting and recovery Construction and Demolition Waste.		Risk = Moderate	and temporary occupation, (B.O. June 15, 1983) of integration and economic and sanitary securing of informal reclaimers that could be duplicated in other cities.	
19	**Environmental and social**: The installation of technological equipment in the green spaces of Marrakech for water-saving irrigation could generate health and safety impacts during the construction phase and the generation of piping waste at the end of the life cycle. Also, disruptions to visitor access are considered.	PPG	I = 4 L = 2 Risk = Moderate	• Establish an Environmental (and Health and Safety) Notice in accordance with the new law on impact studies. • Establish an environmental and social (+ health/safety) monitoring with a protocol for managing the anomalies observed. • Equip the agents with adequate PPE and provide them with training. • Mark the work sites with signs. • Choose work periods with the least nuisance and disruption to the neighborhood and local economic activities.	PMU
20	**Environmental and social:** The restoration and development of green spaces (historic garden, public gardens) and the greening of schoolyards, including the creation of 2 agro-ecological gardens, would cause impacts during the construction phase and would generate green waste, and these green spaces would also be vulnerable to climate change if the plant species chosen are not resilient. This type of development would result in the generation of green waste and environmental impacts during the construction phase.	PPG	Risk = Moderate I = 4 L = 2	• Develop an environmental impact assessment and an ESMP to be applied. • Establish an environmental and social (+ health/safety) monitoring with a management protocol. • Equip agents with adequate PPE and training. • Mark the work sites with signs. • Choose work periods with the least nuisance and disruption to the neighborhood and local economic activities. • Ensure that the plant species used are drought resistant and most adapted to local climatic conditions. • Respect cultural and heritage sites	PMU City of Marrakech
21	**Social and economic**: The development of new gardens could potentially involve physical and economic displacement.	PPG	I = 5 L = 2 Risk = Substantial	If displacement is unavoidable, trigger NES No. 5 and the expropriation procedure in accordance with Law No. 7-81 on expropriation for public utility and temporary occupation, (B.O. June 15, 1983). A Land Acquisition Plan (LAP) would also be required.	PMU City of Marrakech
22	**Climate change**: Project activities and outcomes will be vulnerable to the potential impacts of climate change. SES: 2	PPG	I = 4 L = 2 Risk = Moderate	The restoration of degraded will contribute to reducing the risk of flooding and flash floods of rivers. As part of the management of this risk the project will coordinate actions with the monitoring committee for the implementation of the measures envisaged under the existing Territorial Climate Plan of the prefecture of Marrakech.	PMU City of Marrakech

#	Description	Risk category	Impact & Likelihood	Risk treatment / Management measures	Risk owner
				The project will also improve ecosystem connectivity between city gardens; this will be achieved by strengthening interurban biological corridors to consolidate spatial planning green public spaces, historical gardens, improving the resilience of urban biodiversity through increasing species' mobility and providing refuge against climate variability. The implementation of the City Biodiversity Index[52] for the City of Marrakech will provide support to better identify climate-related risks, in particular through its two indicators: Indicator 11: regulation of quantity of water and Indicator 12: climate regulation: carbon storage and cooling effect of vegetation. In addition, sustainable mobility plans to support alternative modes of urban transportation will reduce GHG emissions and build resiliency to climate change in the City.	

[52] The City Biodiversity Index (CBI) was proposed as part of the Convention on Biological Diversity (CBD) in the ninth Conference of the Parties (COP9, 2008) and applied internationally to enable municipalities and cities to manage biodiversity and ecosystem services in a sustainable manner

Annex 8: Overview of Project Staff and Technical Consultancies

Consultant	Time Input	Tasks, Inputs and Outputs
For Project Management / M&E		
Local / National contracting		
Project Coordinator Rate: 3333$/month	60 months / for 5 years	The project coordinator will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision of project staff, consultants and subcontractors. (See the full ToR in Appendix 2 for more details)
Junior Technical Expert Rate: 1 500$ / month	60 months / for 5 years	Under the close supervision of the project coordinator, the junior technical expert will be in charge of monitoring the implementation of the project, planing project activities and tracking progress against the approved work plan. He will monitor the surveillance plan, the financial resources and the accounting to ensure the accuracy and reliability of financial reporting.
Administrative Assistant Rate: 1 500$/month	60 months / for 5 years	Under the close supervision of the project coordinator, the full-time assistant will be responsible for the overall administrative management of the project, including the preparation of administrative and contractual documents and the archiving of all technical documents produced by the project.
For Technical Assistance		
Outcome 1		
Local / National contracting		
Urban Planning Expert Rate: 400$/day	75 days / for 30 months	**For the output 1.1.1**: - Carries out the diagnosis of the framework conditions related to territorial urban planning (institutional framework, legal framework, procedures, documents, tools, etc.); - Identifies gaps in framework conditions related to urban territorial planning; - Provides recommendations to improve these framework conditions.
Expert in political dialogue Rate: 400$/day	125 days / for 33 months	**For the output 1.1.2:** - Organizes and facilitates the multi-sector policy dialogue on integrating sustainability into urban planning and sectoral strategic planning documents; - Presents the main results of the political dialogue conducted.
For Technical Assistance		
Outcome 2.1		
Local / National contracting		
Expert in Business Rate: 400$/day	250 days / for 2 years	**For the output 2.1.1:** In collaboration with other experts and public authorities, the business expert will be responsible for conceptualizing and implementing of low-carbon and resilient investment business plans, for the two urban municipalities targeted by the project,

Consultant	Time Input	Tasks, Inputs and Outputs
		including waste management (dangerous and non-dangerous waste), biodiversity and water resources, while ensuring their effectiveness in tackling climate change impacts as well as their profitability and added value.
Expert in web development and programming Rate: 400$/day	125 days / 18 months	**For the output 2.1.2:** - Development of a mobile application that aims to promote and improve the use of public transport available in the project's urban municipalities, to reduce the pollution generated by the transport sector.
Expert in Energy Efficiency and Renewable Energies Rate: 400$/day	500 days / 5 years	**For the output 2.1.3:** - Energy audits for public buildings and hotels; - Development of energy facility design studies for the Sidi Ghanem Industrial Eco-District; - Technical assistance and expertise required to implement planned activities and ensure compliance with required standards.
Expert in Natural Resources and Biodiversity Rate: 400$/day	150 days / 5 years	**For the output 2.1.5:** - Development of a vulnerability study for the city of Marrakech that includes the analysis and calculation of the Biodiversity Index (CBI); - Proposal of a plant charter or palette to be adopted in the project zone; - Technical guidance for the rehabilitation of urban green spaces (resilient species, density, geographical location, maintenance, etc.).
Landscape Architect Rate: 400$/day	125 days / 2 years	**For the output 2.1.5:** - Support PMU in the selection process of urban green spaces to be rehabilitated; - Design restoration and development plans for the urban green spaces targeted by the project; - Provides the necessary technical guidance for all aspects of the urban aesthetic framework of the rehabilitated green spaces (lighting, decorative constructions, ornamental plants, fences, etc.).
International / Regional and global contracting		
Expert in Civil Engineering and Urban Planning Rate: 600$/day	50 days / 2 years	- **For the output 2.1.1:** supports and guides the elaboration of investment strategies and ensure their alignment with the urban framework of the municipalities targeted by the project; - **For the output 2.1.2**: designs the tracks dedicated to the two wheeled vehicles on certain arteries of the city; - **For the output 2.1.3 to 2.1.5:** analyses the actions planned in the context of low-carbon investments, whether for the transport sector, the building sector or green spaces with regard to their technical feasibility and practicability within the urban perimeter of the project.

Consultant	Time Input	Tasks, Inputs and Outputs
Expert in Urban Sustainable Mobility Rate: 650 $/day	76,9 days/ 3 years	**For the output 2.1.2:** - Provides the necessary technical guidance for the implementation of the planned activities in the urban transport sector, including the establishment of a Low Emission Pilot Zone (LEZ) near the tourist area of Place Jamaa Lafna; - Collaborates with other experts and local authorities in the transport sector to monitor and evaluates sustainable urban mobility activities; - Ensures compliance with standards and proper implementation of the activities.
Energy Expert Rate: 650 $/day	76,9 days/ 3 years	**For the output 2.1.2:** - Develops a network of solar charging stations for electric motorcycles and vehicles that will produce renewable green energy dedicated to power the electric mobility sector.
Expert in Waste Treatment and Recovery (Food waste especially used oils) Rate: 500$/day	100 days / 3 years	**For the output 2.1.4:** - Provides the necessary guidance for the development of at least one non-domestic (non-dangerous and/or dangerous) waste management system, in particular waste oil from hotels, with a processing and upgrading unit at the Sidi Ghanem Industrial District; - Ensures proper implementation of planned activities and adherence to the rules and standards applied.
Expert in Construction and Demolition Waste Treatment and Recovery Rate: 500$/day	50 days / 18 months	**For the output 2.1.4:** - Develops a system for normalization of construction and demolition waste treatment and recovery products.
Finance and legal experts to reassess the financial and technical assessments to define the level of concessionality of activities under Component 2 Rate: 650$/day	150 days / 18months	**For output 2.1.2; 2.1.3; 2.1.4; 2.1.5** - Support PMU in the selection process of hotels - Conduct financial and technical assessments to define the level of concessionality regarding the project financial support towards the selected hotels and the Sidi Ghanem Industrial Eco-District; - Conduct financial and technical assessments to define the level of concessionality regarding the project financial support for the rehabilitation of selected urban green spaces - Conduct financial and technical assessments to define the level of concessionality regarding the project financial support for EMOB regarding electric motorcycles

Consultant	Time Input	Tasks, Inputs and Outputs
		- Conduct financial and technical assessments to define the level of concessionality regarding the project financial support regarding the set-up of the waste processing and upgrading unit at the Sidi Ghanem Industrial District - Conduct financial and technical assessments to define the level of concessionality regarding the project financial support to the City of Marrakech regarding the set-up of a platform for the treatment of construction and demolition waste
For Technical Assistance		
Outcome 3.1		
Local / National contracting		
Local Finance Expert Rate: 400$/day	100 days / for 3 years	**For the output 3.1.1:** - Carries out the evaluation study of the financial planning modalities and processes of the city of Marrakech and the formulation of recommendations; - Assists the city of Marrakech in the implementation of an action plan considering the recommendations made in the evaluation study.
Financial Planning Expert Rate: 500$/day	100 days / for 3 years	**For the output 3.1.1:** - Supports the city's financial department in implementing the action plan for improving financial planning and strengthening its financial creditworthiness; - Assists the city in the financial rating process with an international rating agency.
Expert in climate change and sustainable development Rate: 300 $/day	100 days / for 5 years	**For the output 3.1.2 and 3.1.3:** - Facilitates, in collaboration with the international consultant, training sessions on the operating modalities of business models and innovative financial mechanisms selected for the benefit of local and national actors.
Expert in climate finance Rate: 300 $/day	100 days / for 5 years	**For the output 3.1.1:** - Supports the legal expert in the formulation of proposals to upgrade the legal framework associated with the innovative financial mechanisms to be implemented. **For the output 3.1.2 and 3.1.3:** - Provides strategic and technical guidance to other experts in the design and the conception of business models adapted to the environmental and climate features of the investments to be financed; - Conducts the feasibility study of innovative financing mechanisms for the city of Marrakech and identify the most relevant mechanisms to be implemented; - Works on the design of the financial mechanisms selected after consultation with the various stakeholders and in coordination with the consultants in charge of component 2, the city officials and the local finance expert.

Consultant	Time Input	Tasks, Inputs and Outputs
International / Regional and global contracting		
Government Legal Expert Rate: 500 $/day	80 days / for 3 years	**For the output 3.1.1:** - Establishes an international benchmark on the upgrading of legal frameworks associated with business models and innovative financing mechanisms in cities in consultation with experts in climate finance and business models.
Business Law Legal Expert Rate: 600 $/day	100 days / for 3 years	**For the output 3.1.1:** - Analyses the legal framework of local authorities and make recommendations for its upgrade taking into account the results of the international benchmark; - Supports the city of Marrakech in its advocacy to upgrade the legal framework associated with innovative business models and financial mechanisms.
Private Finance Expert Rate: 500 $/day	80 days / for 5 years	**For the output 3.1.2:** - Carries out the international benchmark study on the modalities of involvement of the private sector in the financing of the assets and services of local authorities; - Identifies the most relevant business models to be implemented.
Business Model Trainer Expert Rate: 500 $/day	100 days / for 5 years	**For the output 3.1.2:** - Design and implement training sessions for national and local actors on new and innovative business, revenue and supply models at city level.
Expert in the development of business models adapted to territorial governing bodies Rate: 600 $/day	100 days / for 5 years	**For the output 3.1.2:** - Design and conception of the selected business models after consultation with the various stakeholders and in coordination with the consultants in charge of component 2, the city's financial managers and the local finance expert.
For Technical Assistance		
Outcome 4.1		
Local / National contracting		
Expert in sustainable planning	25 days/ for 4 years	**For the output 4.1.1:** - Carries out a mapping of the actors targeted by the awareness raising activities on urban sustainability;

Consultant	Time Input	Tasks, Inputs and Outputs
Rate: 400 $/day		- Proposes a list of stakeholders to be involved and justifies its selection; - Develops a sustainability questionnaire to assess urban sustainability knowledge; - Proposes awareness-raising themes for each target group.
Awareness and Communication Expert Rate: 375 $/ day	40 days / for 4 years	**For the output 4.1.1:** - Proposes an awareness plan, specifying the tools and the strategic areas of awareness according to the targets defined and actors previously mapped.
Expert in advocacy work Rate: 375 $/ day	40 days/ for 4 years	**For the output 4.1.1:** - Mapping potential actors who will play an important role in advocacy (civil society, press, students, etc.) - Designs a capacity building program; - Develops training modules adapted to each target audience; - Facilitates training sessions; - Provides a range of basic tools for participants to improve their advocacy efforts.
Sustainability Expert – Evaluator 1 Rate: 400 $/ day	50 days / for 5 years	**For the output 4.1.3:** In close collaboration with the international expert, the national expert will: - Review the outcomes achieved and those not achieved; - Review the adopted approach; - Update targets achieved based on the indicators of the project outcome framework, the GEF 7 baseline indicators and other monitoring tools required; - Provide guidance and recommendations for the achievement of the remaining objectives and the removal of persistent barriers.
Sustainability Expert – Evaluator 2 Rate: 400 $/ day	50 days / for 5 years	**For the output 4.1.3:** - Review outcomes achieved and those not achieved; - Review the adopted approach for the implementation of the project; - Updates targets achieved based on the indicators of the project outcome framework, the GEF 7 baseline indicators and others necessary monitoring tools; - Provides recommendations for future interventions in the project's zone.
Monitoring and Evaluation Specialist Rate: 400 $/ day	125 days / for 5 years	**For the output 4.1.3:** - Coordinates and conduct project monitoring and evaluation activities in accordance with the requirements of the government, UNDP Country Office and UNDP-GEF;

Consultant	Time Input	Tasks, Inputs and Outputs
		- Updates the project outcome framework indicators and GEF 7 core indicators and other necessary monitoring tools (UNDP scoreboard) annually, mid-term and at the end of the project
Specialist in environmental and social safeguards Rate: 400 $/ day	250 days/ for 5 years	**For the output 4.1.3:** - Monitors the implementation of the environmental and social management plan; - Monitors the surveillance plan based on the indicators related to the "M&E" component.
Gender and Stakeholder Engagement Specialist Rate: 400 $/ day	75 days/ for 5 years	**For the output 4.1.3:** - Ensures gender integration or mainstreaming into the project components; - Monitors the implementation of the gender plan; - Monitors the implementation of the stakeholder's engagement plan**.**
International / Regional and global contracting		
International Monitoring and Evaluation Expert Rate: 625 $/ day	80 days/ for 5 years	**For the output 4.1.3:** Conducts a mid-term evaluation of the project by: - Examining outcomes achieved and those not achieved; - Reviewing the adopted approach; - Updating the targets achieved based on the indicators of the project outcome framework, the GEF 7 baseline indicators and other necessary monitoring tools; - Providing guidance and recommendations for the achievement of the remaining objectives and for the removal of persistent barriers.
International Monitoring and Evaluation Expert Rate: 625 $/ day	112 days/ for 5 years	**For the output 4.1.3:** Conducts a final evaluation of the project by: - Examining outcomes achieved and those not achieved; - Reviewing the approach adopted for the implementation of the project; - Updating the targets achieved based on the indicators of the project outcome framework, the GEF 7 baseline indicators and other necessary monitoring tools; - Providing conclusions and summarizing lessons learned from the project implementation; - Providing recommendations for future interventions in the project's zone.

Annex 9: Stakeholders Consulted during project development and Stakeholder Engagement Plan (SEP)

1. Objectives

The objectives of initiating the participation and engagement of stakeholders during the PPG phase are as follows:

I. Remind the fundamentals and motivation of the project;
II. Prepare a matrix of activities for each of project component to co-construct the PRODOC;
III. Define the roles and responsibilities of stakeholders and their respective contributions (managerial and financial);
IV. Share the matrix of activities to select and assess potential risks associated with their implementation;
V. Provide information on the procedures for establishing and updating the SEP at the start and during the implementation of the project and on other instruments (ESIA, ESMP, etc.).

2. Stakeholders

The stakeholder analysis helped identify and mobilize 30 key stakeholders in the project, classified below in two broad categories: institutional partners at central and territorial levels and public and private operators and agencies. This comprehensive stakeholder's participation plan was implemented according to the parameters established in UNDP SESPs. This first plan aims to frame and target project activities by involving stakeholders in order to anticipate their commitment during implementation.

Institutional partners

1) Department of Environment at central level
2) Ministry of Urban Planning, Habitat and City Policy
3) Regional Directorate of the Environment in Marrakech
4) Wilaya of the Marrakech-Safi Region
5) Marrakech-Safi Region Council
6) Urban municipality of Marrakech (representing the populations)
7) Urban municipality of Méchouar Kasbah (representing the populations)
8) Mohammed VI Foundation for Environmental Protection
9) Tensift Hydraulic Basin Agency (ABHT)
10) Regional inspectorate of land use planning and urban planning
11) Regional Directorate of Tourism
12) Regional Directorate of Trade and Industry
13) Marrakech Urban Agency
14) Regional Academy of Education and Training
15) ONSSA Marrakech Safi
16) Regional Investment Center
17) Regional Directorate of Forestry
18) University of Cadi Ayyad of Marrakech
19) Marrakech Palm Grove Observatory
20) 4C Morocco

Operators, managers, and private sector

21) Municipal Equipment Fund (FEC)

22) *Marrakech Autonomous Water and Electricity Distribution Authority (RADEEMA)*
23) *ONEE-Electricity Branch*
24) *SDL Transport (SDL Bus Moutajadida)*
25) *SDL - Public Lighting (Hadirat al anwar)*
26) *Medina Bike Company*
27) *EMOB Company*
28) *ARMA Company*
29) *MECOMAR Company*
30) *Holding Impérieum*
31) *Energy Investment Company (SIE)*
32) *Professional Association of the Sidi Ghanem Industrial District*

3. Process and approach to participation

During the Prodoc preparation process, a series of workshops and meetings were organized in order to provide stakeholders with information on the scope of the project and to finalize the activity matrices for each of project components through a screening grid according to the following criteria:

- ✓ Relevance of the activity (alignment with the objectives of the project and with the priorities of the city).
- ✓ Compliance with the innovative approach of the project based on resource efficiency, reduction of GHG emissions, sustainability of investments and social inclusion. This is in fact a compliance with the ESS and the principles of sustainable development advocated by UNDP / GEF.
- ✓ Capitalization on existing initiatives.
- ✓ Rational and coordinated planning rather than ad hoc

Meetings were of five types:

- Internal meetings of experts
- Meetings of experts with UNDP representatives
- Thematic meetings between key experts and Department of Environment and DRE
- Thematic meetings with all stakeholders
- FOCUS-GROUPS with key stakeholders

The following table details the objective/theme, date and involved participants for each meeting or workshop. All meetings were organized remotely in accordance with the sanitary distancing measures put in place by the Government of Morocco and UNDP during the COVID-19 pandemic.

Objective/Theme	Date	Participants
Presentation of the methodological approach to UNDP in order to make the necessary adjustments	July 06, 2020	• UNDP - Regional Representative • UNDP - country office representatives • Team of consultants in charge of the Prodoc
Coordination with the Global SCIP project	July 24, 2020	• UNDP - Regional Representative • UNDP - country office representatives • C40 • UNEP • Head of the consulting team in charge of the Prodoc

Objective/Theme	Date	Participants
Presentation of the project scope, methodological approach, data requirements and planning.	July 28, 2020	• UNDP - Regional Representative • UNDP - country office representatives • National GEF Focal Point • Representatives of the Environment Department • Representatives of the Environment Regional Direction in Marrakech. • Representatives of the territorial stakeholders: Urban municipality of Marrakech Urban municipality of Méchouar Kasbah Autonomous Water and Electricity Distribution Company of Marrakech (RADEEMA) SDL Transport (SDL Bus Moutajadida) SDL - Public Lighting (Hadirat al anwar) Wilaya of the Marrakech-Safi Region Tensift Hydraulic Basin Agency (ABHT) Team of consultants in charge of the Prodoc
Coordination meeting between experts in charge of Prodoc	August 31, 2020	Team of consultants in charge of the Prodoc
Coordination of work progress between the team of experts in charge of the Prodoc and C40 in charge of the global project	October 09, 2020	• UNDP - Regional Representative • UNDP - country office representatives • C40 • Head of the consulting team in charge of the Prodoc
Review and validation of the Phase 1 deliverable "Situation Analysis, Project Strategy and Strategic Results Framework. Meeting Agenda: Part 1 of the meeting: Presentation of the deliverable 1- Analysis of the situation 10:00 am: Opening of the DE-UNDP meeting; 10:15 a.m.: Roundtable; 10:20-11:00: Presentation of the situation analysis report by ECI; 11:00-11:45: Discussion of stakeholder comments; 11:45-12:00: Next steps to move forward in the development of Prodoc 2nd part of the meeting: Presentation of the Global Program led by UNEP	November 11, 2020	UNDP - Regional Representative UNDP - country office representatives National GEF Focal Point • Representatives of the Environment Department • Representatives of the Environment Regional Direction in Marrakech ; • Representatives of the territorial actors: • Urban municipality of Marrakech • Urban municipality of Méchouar Kasbah • Autonomous Water and Electricity Distribution Company of Marrakech (RADEEMA) • SDL Transport (SDL Bus Moutajadida) • SDL - Public Lighting (Hadirat al anwar) • Wilaya of the Marrakech-Safi Region

Objective/Theme	Date	Participants
12:00-12:30: Presentation of the overall program components by C40 12h30-13h00 : Questions & Answers.		• Tensift Hydraulic Basin Agency (ABHT) • Team of consultants in charge of the Prodoc
Focus group on transport to define activities related to Outputs 2.1.1 and 2.1.2 of Component 2.	December 15, 2020	• Environment Department • Regional Environmental Directorate • The Wilaya of the Marrakech-Safi Region • Urban Municipality of Marrakech • Urban Municipality of Méchouar Kasbah • SDL City Bus Motajadida • Medina Bike Company • Company EMOB • Team of consultants in charge of the Prodoc
Focus group on energy efficiency and renewable energy to define the activities relating to Outputs 2.1.1 and 2.1.3 of Component 2.	December 16, 2020	• Department of the Environment • Regional Department of the Environment • The Wilaya of the Marrakech Safi Region • Urban municipality of Marrakech • Méchouar Kasbah urban municipality • RADEEMA • SDL - Public Lighting (Hadirat al anwar) • ONEE-Electricity Branch • Regional Directorate of Tourism • Regional Department of Trade and Industry • Team of consultants in charge of Prodoc
Focus group on biodiversity & green space to define activities related to outputs 2.1.1 and 2.1.5 of Component 2.	December 17, 2020	• Department of the Environment • Regional Environmental Directorate • The Wilaya of the Region Marrakech Safi • Urban Municipality of Marrakech • Urban Municipality of Mechouar Kasbah • Regional Directorate of Water and Forests • Marrakech Urban Agency • ABHT • Regional Academy of Education and Training • ONSSA Marrakech Safi

Objective/Theme	Date	Participants
		• RADEEMA • Cadi Ayyad University • Team of consultants in charge of the Prodoc
Focus group on financing to define activities related to component 3.	December 22, 2020	• Department of the Environment • Regional Environmental Directorate • The Wilaya of the Region Marrakech Safi • Urban Municipality of Marrakech • Urban Municipality Mechouar Kasbah • SDL (City Bus Motajadida, Hadirat Al Anwar) • The Regional Investment Center • Energy Investment Company • The Municipal Equipment Fund • Team of consultants in charge of the Prodoc
Coordination between experts in charge of the Prodoc to asses and summarize Focus-Groups findings	January 08, 2021	• Team of consultants in charge of the Prodoc
Update on work progress and Thematic Focus-Groups findings on Components 1 and 2: choice of indicators, activities and budgets	January 15, 2021	• UNDP • Department of the Environment • Regional Environmental Directorate • Team of consultants in charge of the Prodoc
Update on work progress and Thematic Focus-Groups findings on Component 3: choice of indicators, activities and budgets	January 18, 2021	• UNDP • Department of the Environment • Regional Environmental Directorate • Team of consultants in charge of the Prodoc
Review of indicators, activities and budgets of Component 3 with the Urban Municipality of Marrakech	January 22, 2021	• Department of the Environment • Regional Environmental Directorate • Urban Municipality of Marrakech: Head of the financial division • Team of consultants in charge of the Prodoc
Review of indicators, activities and budgets related to Output 2.1.2 (sustainable transport)	February 01, 2021	• UNDP • Department of the Environment • Regional Environmental Directorate • Team of consultants in charge of the Prodoc
Review of indicators, activities and budgets related to output 2.1.5 (biodiversity and green spaces)	February 03, 2021	• UNDP • Department of the Environment • Regional Environmental Directorate • Team of consultants in charge of the Prodoc
Review of indicators, activities and budgets of Outputs 2.1.3 (energy efficiency and renewable energy) and 2.1.4 (waste management)	February 05, 2021	• UNDP • Department of the Environment • Regional Environmental Directorate • Team of consultants in charge of the Prodoc

Objective/Theme	Date	Participants
Review of indicators, activities and budgets of Component 3 (Innovative Financing)	February 11, 2021	• UNDP • Department of the Environment • Regional Environmental Directorate • Team of consultants in charge of the Prodoc
Review of activities and budgets related to Output 2.1.3 (Waste management)	February 15, 2021	• UNDP • Department of the Environment • Regional Environmental Directorate • Team of consultants in charge of the Prodoc
Examination and validation of Prodoc: Part 1: project activities, results framework, governance and institutional arrangements, budgets and work plan; Part 2: ESMF and Gender Action Plan.	22 March, 2021	• All stakeholders
Presentation of key results of the "Safeguard and Development of the Marrakech Palm Grove programme. Identification of project activities at the Palm grove.	23 Septembre, 2021	• Mohammed VI Foundation for Environmental Protection • Regional Directorate of Environment • Department of Environment • Marrakech Palm Grove Observatory

Through this process, the Urban Commune of Marrakech expressed its full support and engagement in the project as indicated in the attached letter signed by its Mayor.

Support Letter from the Marrakech Urban Commune

جماعة مراكش
COMMUNE DE MARRAKECH

Marrakech, 13 avril 2021

Monsieur Mohamed Larbi Belcaïd
Président de la Commune de Marrakech

A
Dr Edward A Christow
Représentant Résident au Maroc du Programme des
Nations Unies pour le Développement

Objet: Soutien au projet de FEM "renforcer le développement durable de Marrakech par une planification et un financements innovants"

Tout d'abord, je tiens à vous remercier pour le choix de la ville de Marrakech en tant que site pour le projet du Fonds pour l'Environnement Mondial (FEM) "Renforcer le développement durable de Marrakech par une planification et un financement innovants" qui sera mis en œuvre par le département du Programme des Nations Unies pour le développement (PNUD)

Au nom de la Commune de Marrakech, je suis heureux d'exprimer mon adhésion et mon soutien au projet en particulier la composante 2 «investissements durables intégrés à faible émission de carbone, résilients, de conservation et de restauration des terres», et déclare que mes services ne ménageront aucun effort afin de soutenir les actions visant la mise en place de:

- La convention d'irrigation de la palmeraie à l'aide d'eaux usées épurées.
- La gestion multisectorielle des données et le suivi d'une unité d'évaluation (déchets, transport, éclairage).
- La plateforme des déchets de construction et de démolition.
- L'investissement planifié (2021-2026) relatif à la gestion des déchets ménagers et assimilés au niveau urbain objet de gestion déléguée aux sociétés de gestion déléguée (ARMA et MECOMAR)
- L'accord pour l'arrosage des espaces verts avec les eaux usées.
- Système d'achat d'eaux usées de RADEEMA pour l'arrosage des espaces verts.
- Projet de réhabilitation du jardin historique d'Agdal Ba-HMAD.
- actions d'entretien des espaces verts.

Par ailleurs la Commune de Marrakech déclare son engagement à promouvoir un développement bas carbone dans la ville de Marrakech.

Dans cette attente, je vous prie de croire Monsieur le Représentant Résidant, à l'expression de mes salutations les meilleures.

Mohamed Larbi Belcaïd
Président du conseil
Commune de Marrakech

Commune de Marrakech Avenue Mohamed V Tel 0524351312 fax 05 35 70 00 00

Translation of the Letter issued by the Urban Commune of Marrakech:

Letter N°: 5052
DATE: 13/04/2021

From Mohamed Larbi Belcaid
President of the Marrakech Commune

TO

Dr. Edward A. Christow,
UNDP- Resident Representative
United Nations Development Program

Subject: Support to the GEF project "Strengthening Marrakech's sustainable development through innovative planning and financing"

First of all, I would like to thank you for choosing the City of Marrakech as the site for the Global Environment Facility (GEF) funded project "Strengthening Marrakech's sustainable development through innovative planning and financing" to be implemented by UNDP.

On behalf of the Municipality of Marrakech, I am happy to express my adhesion and my support for the project, in particular component 2 " Sustainable integrated low carbon, resilient, conservation and land restoration investments", and declare that my services will spare no effort to support actions aimed at the implementation of the following:

- Palm grove irrigation convention using purified wastewater.
- Management of multisectoral data and monitoring unit (waste, transport, lighting).
- Set up of construction and demolition waste platform.
- Planned investments (2021-2026) relating to the management of household and similar waste at urban level under delegated management companies (ARMA and MECOMAR).
- Agreement for watering green spaces with wastewater.
- Purchase system from RADEEMA for watering green spaces.
- Rehabilitation of the Agdal Ba-HMAD historic garden.
- Green spaces maintenance actions.

In addition, the municipality of Marrakech declares its commitment to promote low carbon development in the city of Marrakech.

In the meantime, please believe Mr. Resident Representative, in the expression of my best regards.

4. Interest of stakeholders and their effective commitments

This process of consultation and intensive mobilization of all stakeholders clearly demonstrates their interest in the project. Indeed, the planning process was not *ad-hoc* but it was participatory, which made it possible to better target actions and anticipate ownership. The criteria of feasibility, sustainability and alignment of the project objectives to the context of the city were strongly taken into account.

As the Department of Environment and its Regional Directorate (DRE) are the implementing partner, the guarantee of the application of environmental and social safeguard policies is ensured. This finding is supported by the following facts:

- The Department of Environment (DE) is the national CBD and UNFCCC focal points for;
- The DE establishes environmental legislation, including in particular environmental impact studies and their environmental and social management plans (ESMP); it is the government authority responsible for the environment;
- At the regional level, the Wilaya is both a strong institution in local governance and has environmental responsibilities; the Regional Investment Center is under the tutorship of the Wilaya;
- The DRE is the regional directorate of the Department of Environment, it is a key institution in the implementation of this project related to environmental, social and climate change issues.

All the other stakeholders involved at the level of the City of Marrakech in fields such as water, waste, transport, RE/EE and transport have declared their interests in this project which tackles in an integrated manner various levers of sustainability, greening and innovative financing methods.

The municipalities concerned have confirmed the great added value of the project, as an accelerator or project - catalyst for the efficient and sustainable management of their territories.

The key stakeholder engagement indicators during the PPG are manifested through the will to strengthen and consolidate started initiatives and programs in line with project component and co-financing commitments, such as:

- Restructuring program for the industrial district of Sidi Ghanem;
- Extension of the self-service bicycle network to 10 other new stations ("Medina BIKE" project);
- Financing of works and equipment related to the implementation of action plans through the SIE (Energy Engineering Company) as intermediary;
- Funding of an agreement on water savings in public buildings set within the framework of the Haouz Mejjate water basin agreement between different institutions.

During consultations, another relevant indicator emerged ensuring stakeholder engagement in this project which is the City's firm commitment to implement national and subnational strategies, plans and programs, such as:

- The SNDD with multiple objectives affecting all the components of the project;
- The Regional Development Program of the Marrakech-Safi subregion, where priority areas are perfectly inline with the areas of intervention of the project;
- The National Waste Management Plan inline with actions related to waste management (Component 2);
- The National Program of Mutualized Liquid Sanitation and Reuse of Treated Wastewater (PNAM) inline with the efficiency of water use and in particular the reuse of treated wastewater;

- The 2030 Agenda and SDGs pertinent to sustainable cities;
- The importance of the touristic for the city in relation with the development of low carbon mobility, green spaces, liquid and solid waste management, in general, and RE / EE in touristic establishment in particular;
- The local climate change plan.

5. Methods of implementing the SEP and monitoring / reporting

Implementation

The SEP's updating and implementation will proceed as follows:

- Validation and updating at project inception with all key stakeholders;
- Organization of consultations with all stakeholder groups on a quarterly basis;
- Organization of capacity building activities as part of thematic workshops (biodiversity, RE / EE, transport, gender, resource efficiency, etc.) every semester;
- Semi-annual report on progress made on the overall stakeholder participation plan;
- Revision of the SEP after 18 months of implementation.

Monitoring and reporting

The various activities related to the engagement of stakeholders will be integrated into the overall project monitoring plan, which will be under the responsibility of an M&E specialist, who in turn will coordinate with the PMU. The progress made in terms of the overall participation of the stakeholders will be reported in the official monitoring and evaluation reports of the project.

The project parties (including beneficiaries lead and potentially affected people) will be involved in participatory monitoring and evaluation processes. The project coordinator and the governance and conflict resolution specialist will receive feedback on the progress of the parties' overall plan. The results of the plan activities will be shared between the parties through informative notes that will be posted on the project website, as well as through the City's web site.

Communication

The project will develop a communication strategy as part of this overall stakeholder engagement plan. This strategy will be adapted to the implementation needs of the project and will take into account stakeholder comments and the grievance mechanism. Taking into account the diversity of project stakeholders, due to its multiple objectives, the communication strategy will use information formats adapted to each case or to each group. The objective of the diversification and segmentation of strategies is to contribute to the understanding and optimal appropriation of project objectives by all stakeholders.

Communication must therefore pay particular attention to the messages intended to identified stakeholders that could have positive or negative effects on the development of the project.

Communication with stakeholders took place from the PPG, mainly through workshops, presentations and diagnostics, which opened spaces for coordination.

Communication channels initiated during the PPG, as outlined above, should be used to ensure continuity, as well as to facilitate and accelerate information exchange during and after implementation.

6. Grievance redress mechanism (GRM)

Mandate

The mandate of the GRM will be to:

- Receive and deal with any concerns, complaints, notices of emerging conflicts or grievances (alleging actual or potential harm to the affected person (s) (the "claimant or complainant") arising from the project.
- Help resolve grievances between and among project stakeholders; as well as the various government institutions, agencies and commissions, NGOs, municipalities, etc., in the context of the project;
- Conduct yourself at all times in a flexible, collaborative and transparent manner with the aim of solving problems and reaching consensus.

Functions

The functions of the GRM will be as follows:

- Receive, record and monitor all grievances received;
- Provide regular updates on complaints to claimants, members of the Project Steering Committee or PMU and other relevant stakeholders, as appropriate;
- Involve PMU members, government institutions and other relevant stakeholders in resolving grievances;
- Deal with and propose solutions and means of advancing specific grievances within a period not exceeding sixty (60) days from receipt of the grievance;
- Identify growing trends in complaints and recommend possible measures to avoid them;
- Receive and process requests for mediation or facilitation and suggest their use;
- Prepare semi-annual reports, make these reports accessible to the public and, more generally, work to maximize the disclosure of reports, conclusions and results;
- Ensure increased awareness, accessibility, predictability, transparency, legitimacy and credibility of the GRM process;
- Collaborate with partner institutions and other NGOs and other entities to conduct stakeholder awareness initiatives on the existence of the GRM and how to access its services;
- Provide ongoing training for PMU members and their respective institutions on relevant laws and policies of which they should be aware in order to participate in the development of effective resolutions to complaints that may be submitted to the GRM;
- Monitor the follow-up to grievance resolutions, if applicable.

Composition

The GRM will be composed of the Project Management Unit, and a permanent GRM sub-committee which will include representatives of the Wilaya, the Regional Council, and the two municipalities; and preferably representative NGOs active in project intervention sites. The PMU acts as the GRM Secretariat in order to: (i) publicize the existence of the GRM and the procedure for using it; (ii) receive via the municipalities and register requests for the settlement of disputes; (iii) acknowledge receipt to the requester; (iv) determine eligibility; (v) transfer eligible requests to the DRE, with a copy to the Wilaya, for examination and action; and (vi) monitor and document grievance / dispute resolution efforts and their results.

The GRM Sub-Committee will perform the following essential functions: (i) take direct action to resolve the grievance / dispute (for example, bring together the concerned parties to discuss and resolve the issue themselves under the supervision of the PMU); (ii) request further information to clarify the matter and share this information with all concerned parties, or ensure that a government agency represented at the PMU has taken the appropriate administrative steps to deal with a complaint; (iii) refer the grievance / dispute to independent mediation, while maintaining oversight or specify that the request was outside the scope and mandate of the PMU and refer it elsewhere (for example to Justice or the courts).

Complaints procedures

a/ Communication of complaints

The PMU will provide several access points to the GRM to allow project stakeholders to raise their concerns. These access points will be announced, and include: a PMU / DRE complaints box, mail, telephone, email and online access via a website.

A grievance can be sent by any individual or group of individuals who believe they have been or will be harmed by the project. If a grievance needs to be filed by a different person or organization on behalf of those who are supposed to be affected, the claimant must identify the individual and / or persons on whose behalf the grievance is submitted and provide written confirmation by the individual and / or people asserted that they give the claimant the authority to present the grievance on their behalf. The GRM will take reasonable steps to verify this authority

The DRE under the supervision the Environment Department will keep a journal of problems brought directly to their attention orally or in writing by stakeholders, and will disseminate these concerns in writing to other members of the PMU and the Standing Sub-Committee.

b/Monitoring, investigation and resolution of complaints

The GRM registry will track the date when the complaint was received, the date of response, the type of response and whether the complaint was resolved to the satisfaction of the requester.

The GRM Focal Point at DRE level will deal with complaints by performing the following tasks:

- Inform the complainant if the complaint is accepted or rejected within one week of receiving the complaint; if necessary, the response will require the contribution of UNDP technical experts;

- If the claim is accepted, send to the claimant an officially stamped examination card indicating: (i) name of claimant or legal representative; (ii) address of the applicant; (iii) title of the complaint; (iv) date of review; and (v) list of annexes submitted with the complaint;

- Work with UNDP technical experts, DRE and contractors to resolve complaint within 60 days of submission

UNDP will include the complaints register as part of its quarterly project reports.

c / Gender sensitivity

UNDP will make the GRM gender sensitive by recruiting female staff to: (i) inform women about the project and its potential benefits to women, in a culturally sensitive manner; (ii) inform the women of the GRM about the project

and its procedures; (ii) receive complaints from women related to the project.

d / Activation of the GRM mechanism

UNDP and the Department of Environment will include information on the project's GRM procedures as part of the project inception workshop.

UNDP Accountability Mechanism

The UNDP Accountability Mechanism (Stakeholder Response Mechanism, and Social and Environmental Compliance Unit, SECU) provides an additional and accessible way for individuals and communities to complain directly to UNDP if they believe that a UNDP funded project has had or is likely to have negative effects on them or their community

In sum, it can be said that the scope of the complaint's mechanism covers all issues and concerns of stakeholders regarding project activities. All claims of affected parties should be accepted and no judgment made before an investigation, even if the complaints are minor. It is also necessary to disclose all handling complaint's procedures.

7. Resources and Responsibilities

The PMU within the DRE will be responsible for monitoring the implementation of the global stakeholder plan and the achievement of the plan's objectives, in coordination with the project activity's execution teams, lead conflict resolution mechanisms, monitor progress, prevent and manage possible risks to the success of the goals.

The budget of overall stakeholder engagement plan including technical assistance, capacity building, information management, communication activities and reporting are part of the budget of Component 4.

Annex 10: Environmental Social Management Framework (ESMF) and other SES frameworks/plans if required

Document provided separately

Annex 11: Gender Analysis and Gender Action Plan

Summary:

11.1. Introduction

The objective of a Gender Action Plan is to establish the considerations necessary to integrate the gender dimension into the development of projects. These considerations are based on an analysis of the context, which includes the regulatory framework and the characteristics of the situation of women in the territory considered. The gender analysis provides the necessary elements to develop a Gender Action Plan with specific indicators on how the project contributes to equity and the empowerment of women.

Thus, in this annex, we first deal with the gender analysis framework, in particular the gender dimension at UNDP as well as in GEF projects and programs.

Then, we situate the institutional framework of gender equality in Morocco and more precisely in the sector of sustainable development and considering the regional dimension.

The gender analysis will then be presented by identifying the gaps between women and men according to three classifications: (i) access and control of natural resources, (ii) participation of women in decision-making, and (iii) socio-economic benefits and services. These differences are stated for the Marrakech region whenever data is available.

We then present the main recommendations and measures which result from this analysis and which could be carried out within the framework of the project of "Strengthening the sustainable development of the city of Marrakech through innovative planning and financing" in order to promote gender equality and women's empowerment in this project.

Finally, we present the gender action plan by component (Table 11.1) as well as the specific action plan (Table 11.2) of the activity "4.1.3.1.: Implementation of the Gender Action Plan". These two plans will be presented in tabular form specifying the main gender-related activities, performance indicators, target, baseline, time planning as well as budgets for carrying out these activities and responsibilities.

11.2. Gender analysis framework

UNDP and gender

The UNDP Gender Equality Strategy[53] emphasizes the critical importance of gender equality and the empowerment of women and reaffirms that sustainable human development will only be fully achieved if women and girls are able to contribute on an equal footing with men and boys to their society.

GEF and gender

Equality for women and girls is a strategic and operational imperative for the GEF[54]. Men and women use natural resources differently and, therefore, are affected differently by changes to these resources. Gender inequality and social exclusion increase the negative effects of environmental degradation on women and girls. Despite recent promising policy and legal reforms in a large number of countries, persistent discriminatory gender social and cultural norms, unequal access to land, water and productive assets, and unequal decision-making continue to prevail and prevent women and men from participating, contributing and benefiting equally from environmental projects and programs.

The recognition that efforts to tackle environmental degradation and those to tackle gender inequality can be mutually supportive is also reflected in the 2030 Agenda for Sustainable Development which recognizes equality gender and women's empowerment as a fully-fledged Sustainable Development Goal (SDG), as well as a catalyst for achieving other goals.

The GEF adopted a new gender equality policy at the end of 2017. This policy marks the increased ambition of the GEF to ensure gender equality and promote the empowerment of women in all of its operations. More specifically, this policy aims to ensure equal opportunities for women and men to participate in, contribute to and benefit from GEF-funded activities, all in support of efforts for a better environment at the global level.

Gender gaps for projects and programs

Through their different roles and responsibilities and their varying priorities and needs, women and men shape the drivers and pressures on environmental resources and systems. Women and men use natural resources in different ways. As such, women are essential in addressing environmental challenges. Nevertheless, inequalities and gender gaps persist. The GEF Gender Implementation Strategy identifies three gender gaps that are most relevant to GEF projects and programs[55], these gaps are:

(i) Unequal access and control of natural resources.
(ii) Imbalanced participation and decision-making in environmental planning and governance at all levels.
(iii) Unequal access to socio-economic benefits and services.

It is this classification that we use to expose the differences between women and men in **section 11.4**.

11.3. Institutional framework for gender equality in Morocco

Morocco has implemented major gender equality reforms over the past two decades. Actions confirming the desire to root egalitarian values between the sexes in institutions and within Moroccan society have multiplied and accelerated, while being part of a coherent and converging framework.

The main institutional advances relating to the implementation of gender-sensitive public policies, particularly in the sustainable development sector and considering the regional dimension were:

[53] Guide to Gender Mainstreaming in UNDP Supported GEF Financed Projects, October 2016
[54] Policy on GE, GEF, Nov. 2017
[55] Guidance to Advance Gender Equality in GEF projects and programs, December 2018

1. The adoption in 2006 of the National Strategy for Gender Equality and Equity by integrating the gender approach into development policies and programs. A circular from the Prime Minister, dated March 8[56], 2007, confirms the legitimacy of this national strategy by asking the ministries, Walis and governors to proceed with the integration of gender in all policies and in sectoral and regional development programs. Several ministries have embarked on a process of institutionalizing the integration of gender equality in their respective sectors through the development, adoption and implementation of medium-term programs for the institutionalization of gender equality.

2. The implementation of the Gender Equality Strategy in all national policies was boosted by the adoption of the 2011 Constitution. This Constitution reaffirms Morocco's commitment to human rights as they stand, are universally recognized, thus paving the way for broadening the normative frame of reference in matters of equality and law. It guarantees gender equality and extends it to the economic, social, cultural and environmental fields[57].

3. The ministerial department responsible for sustainable development presented its Strategy for institutionalizing the integration of gender equality in 2018[58]. This strategy offers an appropriate operational framework for setting up projects aiming at equitable access to the right to a healthy environment, while respecting the provisions of the Finance Law in terms of the application of an efficient approach sensitive to gender[59].

4. This strategy (2018-2021) is structured around two axes: (i) Creation and development of a lasting institutional capacity to ensure the anchoring of gender equality in the sustainable development sector, and (ii) Integration of the gender approach in the planning, implementation and monitoring of programs and projects in the sustainable development sector. This second axis is broken down into three projects, one of which consists of "the development and implementation of a methodological guide and a training program for executives of the Department of Sustainable Development in gender analysis and its use in the design, planning and implementation of environmental protection projects". To date, this project has not yet been implemented, besides generally speaking, the projects of this strategy when they are implemented, they are implemented at the central level while they remain little known at regional level.

5. The Advanced Regionalization project[60] has pronounced itself in a precise and relevant manner on the issue of gender equality, from its "General conception", through its "Gender Equity" section through an "*affirmative action in favor of a greater participation of women in the management of regional and local affairs*". "*The gender approach will be systematically integrated into the design, implementation, monitoring and evaluation of policies, strategies and governance at the regional level*", and "*gender-sensitive budgeting, currently being tested at the national level and municipal, will be introduced at regional, prefectural and provincial level*".
6. The 2009 Municipal Charter[61] also saw the introduction of new provisions such as: (i) the establishment in each municipality of consultative committees for parity and equal opportunities, and (ii) the need to develop the communal development plan (PDC) according to a gender-sensitive participatory approach.

7. In addition, it should be noted that the High Commission for Water and Forests and the Fight against Desertification (HCEFLCD) has set up, since 2006, a national strategy for the development and management of urban and peri-urban forests[62]. This strategy is based on the preservation and sustainable enhancement of the

[56] The date of the circular's issue coincided with International Women's Day
[57] Previously, the constitutional principle of equality was limited to the political domain
[58] Étude de la stratégie d'institutionnalisation de l'intégration du genre dans le secteur du Développement Durable, Ministère chargé du développement durable - ONU Femmes, 2018
[59] Rapport sur le budget axé sur les résultats tenant compte de l'aspect genre, Projet de Loi de Finances pour l'année budgétaire 2019
[60] Rapport sur la régionalisation avancée soumis à Sa Majesté le Roi Mohammed VI, Commission consultative de la régionalisation, Mars 2011
[61] La charte communale, Ministère de l'Intérieur, Direction Générale des Collectivités locales, 2009
[62] Programme à moyen terme (2014 – 2016) pour l'institutionnalisation de l'égalité de genre dans le Haut-Commissariat aux Eaux et Forêts et à la Lutte Contre la Désertification, HCEFLCD – GIZ, Décembre 2013

precious role that these spaces play for the well-being of city dwellers and for the enhancement of the landscapes of our cities. In fact, urban women are also involved in planning the development of urban and peri-urban forests, knowing that these natural spaces are places of visit and leisure for families in all its components (women, men and children).

11.4. Gender gap analysis

In this section we present the gender analysis by identifying the gaps between women and men according to the classification recommended in the GEF implementation strategy on gender in its projects and programs:

(i) Access and control of natural resources;
(ii) The participation of women in decision-making; and
(iii) Socio-economic benefits and services.

These differences will be stated for the Marrakech region to the extent that data is available.

In each category, we base ourselves on indicators relating to the objectives of sustainable development and according to the data available in particular in: (i) the SDG platform posted on the institutional site of the High Commission for Planning[63], containing the quantified indicators of these goals as well as a regional database, as in (ii) the 2020 national report of the voluntary review of the implementation of the SDGs[64].

11.4.1. Access and control of natural resources

Three indicators relating to this category have been identified: (i) women's access to ownership and control of agricultural land, (ii) access to drinking water, and (iii) access to energy services.

Women's access to ownership and control of agricultural land:

In terms of access to property, Moroccan land law applies to women and men without discrimination. In general, discrimination against women is due to the rules of inheritance law and customs, as was the case for Soulaliyate lands where women were deprived of the right to use. To correct this situation, in 2019 Morocco adopted laws relating to collective land, establishing the right of Soulaliyate women to exploit this agricultural land[65].

In the Marrakech region, the Mohammed VI Foundation for the Protection of the Environment has developed a program for the safeguard and development of the palm grove, notably including a "Sustainable development of agricultural activities" project[66]. This project, which began in April 2015, aimed to strengthen the resilience of populations by improving their agricultural income through agro-ecology and the structuring of sectors. This project has enabled 49 family farms (110 men and women) to become part of a professionalization process for sustainable activities. However, this project has benefited very little directly to women, apart from a few literacy courses (23 women out of 40 beneficiaries) [67].

Access to drinking water:

Water is a scarce and vulnerable resource essential to support life, development and the environment[68]. Indeed, women and men have different roles and responsibilities in the management of natural resources in general and

[63] http://plateforme-odd.hcp.ma/ODD_HCP/fr/
[64] Examen national volontaire de la mise en œuvre des objectifs du développement durable, Rapport national 2020
[65] In particular, Law No. 62.17 relating to administrative supervision over Soulaliyate communities and the management of their property, allowing women to enjoy their right of access to this type of land
[66] Rapport final, Projet de renforcement et de développement durables des activités agricoles, mars 208
[67] https://www.fm6e.org/fr/palmeraie-de-marrakech/realisations.html
[68] Le rôle des femmes dans la gestion des ressources en eau en général et de l'eau agricole en particulier, Expérience de l'Algérie, du Maroc et de la Tunisie. Projet AQUASTAT, FAO, 2014

water resources in particular. In Morocco, women play an essential role in the provision, management and safeguarding of water. Hence the importance of the availability of this resource.

The development of water mobilization, production and distribution infrastructure has made it possible to secure the supply of drinking water. In fact, widespread in urban areas, access to drinking water in rural areas reached over 97% in 2019[69]. These figures are important and make life easier for the Moroccan woman, who has always been responsible for supplying her household with water.

To meet the increased demand for water, Morocco has initiated projects aimed at mobilizing unconventional water, notably the desalination of seawater and the reuse of wastewater. The reuse of purified wastewater plays an important role in saving water and preserving the natural environment, and provides a new, sustainable and constant resource[70], especially in the city of Marrakech where the tourism sector is a large consumer of this resource (hotels, swimming pools, golf courses, etc.).

Access to energy services:

Energy is a key sector in reducing poverty and achieving the SDGs[71]. Access to better energy services can also improve the socioeconomic status of women, reducing the time and effort spent on household chores, giving them time to avail themselves of other social services (for example, education or participation in the life of the community), improving their health conditions and participating in the economy. The introduction of cleaner, more efficient and renewable sources of energy can also bring new training, employment and business opportunities for women and men.

Thanks to the electrification programs and initiatives launched in the mid-1990s, Morocco has been able to guarantee access to electricity for almost all of its population. The proportion of the Moroccan population with access to electricity increased from 97.8% in 2016 to 98.1% in 2018[72].

The Marrakech-Safi region has an access rate to electricity below the national average (91.6% in 2014). On the other hand, considering only the urban environment, the rate of access to electricity in the city of Marrakech is higher than the national average.

11.4.2. Participation of women in decision-making

Four indicators relating to this category have been identified, they are: (i) the participation of women in political decision-making processes, (ii) the place of women in public administration, (iii) female entrepreneurship, and (iv) female shareholders.

Participation of women in political decision-making processes:

Female representativeness in the chamber of representatives increased from 16.7% in 2011 to 20.5% in 2016. Their weight in the chamber of councilors reached 11.67% in 2015 against 2.2% in 2009. However, the number remains below the minimum quota of one third set by the United Nations.

At the level of regional councils and other territorial councils, the presence of elected women is growing steadily. Between 2009 and 2015, their proportion in these councils increased from 12.38% to 21.18% at the municipal level

[69] According to data from the Department of Water
[70] According to data from the Ministry of the Interior, the proportion of treated wastewater in urban areas reached 55% in 2019 against 7% in 2006
[71] Rapport genre et énergie, Cluster énergie, GIZ-Maroc, Juillet 2017
[72] HCP, enquête nationale sur l'emploi, 2018

and from 2% to 4% at the provincial level. As for the regional councils, the number of women experienced, during the same period, an increase from 27 to 255 elected, bringing their weight for the year 2015 to 37.6%. It should be noted that two women currently chair two regions in Morocco (out of a total of 12 regions) and that the first woman mayor was elected in Marrakech[73].

Place of women in public administration:

The rate of feminization of the public service reached 40% in 2019[74] and that of access of women to positions of responsibility (services and divisions) and higher jobs increased from 22.2% in 2016 to 23.5% in 2019.

To facilitate the reconciliation between private and professional life, two legal texts were adopted, relating, respectively, to granting women one hour per day of sick leave for breastfeeding for 18 months and to place of childcare facilities in the administration. These measures should have the effect of not hampering the development of women in their careers and therefore their access to positions of responsibility.

In addition, a gender observatory in the public service was established in 2014 to ensure continuous monitoring of the implementation of the principle of gender equality in the public service.

Female entrepreneurship:

According to HCP statistics from the end of 2011, women have a lower probability of having autonomous professional status than men in the formal business venture and a higher probability of working in the informal sector.

According to the Association of Women Entrepreneurs of Morocco (AFEM) which has representation in Marrakech, the number of women entrepreneurs owning or running a business is estimated at 100,000. That is 0.5% of female employment in the formal sector and about 10% of the total number of enterprises. In fact, these percentages obscure a female entrepreneurial dynamic that remains confined to the informal sector. These companies are mainly SMEs / SMIs covering the service sector (37%), trade (21%) and industry (21%), mainly textiles.

In a more recent study[75], Moroccan women entrepreneurs represent 10 to 12% of the total number of entrepreneurs at the national level. This study notes that Moroccan women entrepreneurs are mainly concentrated on the Rabat - Casablanca axis, with a turnover that generally remains below 20 million Moroccan dirhams (2.2 million USD), or even 5 million Moroccan dirhams (0,55 million USD) for a large proportion of them.

Female entrepreneurship in Morocco is often a de facto entrepreneurship materialized by the integration of the parental business after graduation, co-management with a close relative (father, brother, husband) or following an inheritance.

Regarding the profile of women entrepreneurs in Morocco: (i) they have a high level of education, 2 out of 3 women have a university level (bac + 4 or more), and (ii) have previous experience in private company where they held managerial or managerial positions. These women quickly realized the importance of role models and joined various associations and networks to encourage women to become entrepreneurs (AFEM, ESPOD, Réseau de femmes pour le Mentoring). Some of them have also entered the political and business scene[76] and are lobbying for a more adequate business environment and more ambitious support programs for female entrepreneurship. This profile of

[73] This is Fatima-Zahra Mansouri elected in 2009 and stepped down in 2015
[74] Apart from officials of the General Directorate of National Security, auxiliary forces, Court of Auditors and Civil Protection
[75] Study carried out between 2014 and 2015, as part of the "Jeunes au travail" project carried out by the International Labor Office (ILO) in partnership with the Ministry of Employment and Social Affairs and with the financial support of Global Affairs Canada
[76] The first two AFEM presidents were elected to parliament. The former President of the Moroccan Patronage is a woman, serving two terms between 2012 and 2020.

Moroccan women entrepreneurs represents an opportunity because they are younger, better trained and have more experience in their sector than men.

Female shareholders:

As for female shareholders in Morocco, it is often passive (annuity) without any intervention in the management of the company. According to a 2010 study[77], very few Moroccan women have their own assets that could be used in times of financial need. Just over one in ten (11%) currently or formerly married women say they have financial savings, and less than 9% say they own a piece of land or an apartment or a titled house in their name, and only 7% say they own property with high-value items such as a car or jewelry.

In addition, Morocco has only 15% of women directors of listed companies, a showcase of the national economy, up sharply compared to 2012, when they were barely 7% to appear. This rate places Morocco in 11th place in Africa[78]. However, diversity and parity are levers in the service of performance and competitiveness. A stronger presence of women is above all a question of general interest and economic performance.

11.4.3. Socio-economic benefits and services

Eight indicators relating to this category have been identified, they are: (i) poverty reduction, (ii) access to social protection mechanisms, (iii) maternal health, (iv) the fight against violence in towards women and girls, (v) girls' education, (vi) education and disability, (vii) women in transport, and (viii) use of information technology and communication (ICT) as a means of strengthening the empowerment of women.

Poverty reduction:

At the national level, the female economic activity rate (22.1% against 70.5% for men) and the unemployment rate (15.3% against 8.5% for men) show that poverty in Morocco is still "with a female face"[79].

These rates are even less reassuring for women in the city of Marrakech: Activity rate of only 17.6% and unemployment rate of 20%.

However, between 2014 and 2018, the monetary poverty rate fell from 4.8% to 2.9% at the national level. This rate was marked by a downward trend, while remaining relatively high in rural areas (9.5%), among women (3.9%) and in certain regions[80].

The analysis, by sources, of poverty, shows that the educational deficiencies of adults and children contribute with more than half, the deprivation of access to basic infrastructure with 20%, the conditions of housing with 14% and health services with 11%.

In the Marrakech region, although the monetary poverty rate was slightly higher than the national average (rate measured in 2014 was 5.4%), the effects of the Covid-19 pandemic and its corollaries (sanitary confinement and curfew) have negative repercussions on the economic and social life in this tourist city largely impacted by the absence of tourists and this since March 2020.

Access to social protection mechanisms:

Significant improvements have been recorded by the national social protection system, in its two components: “Social insurance” and “Social assistance”. The rate of medical coverage reached almost 68.8% in 2019 instead of

[77] The Status of Women in the Middle East and North Africa (SWMENA) Project: Paid Work and Control of Earnings and Assets, IFES
[78] AfDB study, 2015
[79] Principaux indicateurs du marché de travail relatifs à l'activité, à l'emploi et au chômage, 4ème trimestre 2019, HCP
[80] La femme marocaine en chiffres, Evolution des caractéristiques démographiques et socio-professionnelles, HCP, 2019

52% in 2015, thanks to the expansion of the medical assistance scheme (RAMED), the establishment of compulsory health insurance (AMO) and social security schemes for the self-employed. Women have benefited less than men from this social protection system; they remain relatively less covered[81].

Maternal health:

The maternal mortality rate fell from 112 deaths per 100,000 live births in 2010 to 72.6 in 2018. The progress was more marked in urban areas than in rural areas, since this rate was established in 2018, respectively, at 44.5 and 111.1 deaths per 100,000 live births.

This decline is due to the development of health services offered to women, in particular the generalization of free access to all services related to childbirth at the level of public hospitals. Thus, the proportion of births assisted by qualified health personnel increased between 2011 and 2018 from 73.6% to 86.6% at the national level (i.e. from 92.1% to 96.6% in urban areas and from 55% to 74.2% in rural areas).

Fighting violence against women and girls:

Morocco adopted a law[82] in 2018 that guarantees legal protection as well as the institutional mechanisms for supporting women victims of violence. National, regional and local commissions, as well as support units for women victims of violence have been set up in addition to a National Observatory of Violence against Women and a National Observatory for the image of Women in the Media put in place since 2014.

In this sense, the General Directorate of National Security (DGSN) has set up support units for women victims of violence and reception officers in 440 police districts to ensure the reception of these victims under optimal conditions, in addition to institutional units set up at the level of the Royal Gendarmerie, hospitals and courts.

All these measures have just been reinforced by the launch of a program to set up 65 Multifunctional Spaces for Women (EMF) at regional and local level for the care of women victims of violence (reception, listening, temporary accommodation, referral to specialist workers, medico-psychosocial support) and a 2020-2030 national strategy to combat violence against women.

Between 2009 and 2019, the proportion of women and girls aged 15 to 74 who were victims of sexual violence inflicted in the previous 12 months by someone other than their intimate partner increased by 4 points (4.3% against 8.5%). Among all incidents of sexual violence (which are mainly due to acts of sexual harassment) suffered by women during the last 12 months, 50% took place in public spaces (57% in urban areas and 34% In a rural area).

Girls' education:

Considerable progress has been made in the education of girls, which remains an essential factor for their integration into the labor market and into society. Nevertheless, 41.9% of women were still illiterate (compared to 22.1% of men), this rate reaching 60.4% in rural areas[83].

The specific preschool rate for children aged 4 to 5 has improved significantly to reach 57.8% in 2018-2019. In addition, and in order to further improve this rate, the Ministry has launched a national program for the development of preschool spread over 10 years (2018-2028) which aims to generalize preschool by 2027-2028.

For the *primary education cycle*, enrollments are constantly increasing, representing a specific enrollment rate for the 6-11 age group, of 99.8%. During 2014, nearly 89.1% of female students succeeded in completing primary education, compared to 74.3% in 2004. This development reflects a significant drop in discrimination against girls'

[81] La protection sociale au Maroc : Revue, bilan et renforcement des systèmes de sécurité et d'assistance sociales, CESE, 2018
[82] Law No. 103.13 on violence against women
[83] Data from 2014

enrollment in primary education. Regionally, girls' progress in primary education varies from region to region. Thus, in the Marrakech-Safi region, this rate is 88.9%.

Likewise, for *college secondary* education, the specific enrollment rate for the 12-14 age group reached 91.8% in 2018-2019 with a gender parity index (G/B) of 0.91. In terms of completion of college secondary, the Marrakech-Safi region posted slightly lower performance (67.7%) than that recorded at the national level (82% in 2014) [84].

For qualifying *secondary education*, considerable progress has been recorded in recent years, resulting in a specific enrollment rate for the 15-17 age group of 66.9% in 2018-2019 with a parity index between the sexes (G/B) of 1.08.

At the *higher education level*, continuous efforts have been made to expand access, promote equality and equity, improve quality, enhance employability, and develop scientific research. In fact, the total number of students increased by 28.5% between 2015 and 2019, and the enrollment rate for the 18-24 age group improved by 10 points, from 28.8%. at 38.4%. The percentage of female students increased from 48% to 49.4%. In terms of positive discrimination, 62% of the accommodation capacity of university halls is reserved for girls.

In terms of *vocational training*, major efforts have been made to strengthen the employability of young people and the socio-professional promotion of employees. The number of interns is constantly increasing (increase of 3.4%, between 2016 and 2018). Girls represent 38% of vocational training trainees.

Education and disability:

Morocco implemented a national program for the education of children with disabilities in 2019. When the program was launched, 80,000 students with disabilities were continuing their studies in regular classes and 8,000 students, 37% of whom were girls in integrated classes. The results of the first year of implementation of this program include a number of qualitative advances, namely the institutionalization of the function of educating children with disabilities and the creation of administrative structures that will support the program at all central, regional and provincial levels (divisions and services).

Any action should take into account this category of the population, which has specific needs in terms of education, health, work environments, access to various buildings, etc.

Women and transport:

For a city that wants to be economically efficient, socially cohesive and ecologically viable, the development of urban public transport represents a major societal issue. It is a fundamental lever in the service of development and town planning policies, which is strongly linked to several interdependent considerations (economic growth, social equity, urban quality of life, spatial coherence, environmental preservation and enhancement, etc.) [85].

Due to family responsibilities and work activities, women tend to make a large number of short trips to dispersed destinations and at varying times. Therefore, when establishing safe public transport systems for women, these realities must be taken into account.

In the city of Marrakech, one of the specificities is the number of two wheels (bikes and motorcycles), used mainly by women and which represents more than 25 per 100 inhabitants.

Measures to promote women's safety in public transport should therefore not be limited to improving motorized forms of transport. The landscaped paths, pedestrian streets, sidewalks, cycle paths, etc. are part of the response to building safer cities for women.

[84] With a projection of 100% in 2020

[85] Réussir la transition vers des villes durables, Rapport du Conseil Economique Social et Environnemental, 2017

Several strategies for developing safe and gender-sensitive public transport networks have been developed around the world and have been shown to be effective, for example, we can cite:

- ✓ "Stop on demand" programs allowing women and men to be dropped off closer to their destinations late at night and early in the morning;
- ✓ Violence prevention and reception services for victims of violence at transport stations;
- ✓ Cycle paths offering women and men the choice of alternative means of transport;
- ✓ Public transport lines serving outlying areas to get to the city for work, study and more.

Use of Information and Communication Technologies (ICT): means of strengthening the empowerment of women:

Morocco is committed to the digitalization process through, among other things, the implementation of the Morocco Digital 2020 Strategy to promote sustainable and inclusive development. In terms of mobile phone equipment, 95% of the population aged 12-65 had a mobile phone in 2016.

By sex, this proportion reached 93.4% for women and 96.4% for men. Between 2017 and 2018, women equipped themselves more than men with mobile phones, since their rate of equipment, after being the same (91.5%), rose to 92.5% and 92.3%, respectively.

Beyond economic interest, the social and political contribution of ICTs is decisive, particularly for women. Indeed, ICTs today make it possible to facilitate the work of women in various fields, through easy access to information and an increased capacity to acquire knowledge and skills. For example:

- ✓ In agriculture, women can increase their productivity through better access to information about markets and new production techniques;
- ✓ Politically and socially, women can use a new approach to knowledge to strengthen their political participation and fight for the promotion of their rights;
- ✓ In public transport, the use of smartphones can be effective tools to ensure the safety of women and men against criminal acts such as violence, harassment, etc.

11.5. Recommendations for the promotion of gender equality

We present, in this section, the main recommendations and measures that result from this gender analysis and that could be carried out within the framework of the project of "Strengthening the sustainable development of the city of Marrakech through innovative planning and financing" in order to promote gender equality and empower women in this project.

The main recommendations proposed are:

1. Given the weakness of gender-specific data relating to the city of Marrakech, a study could be launched to remedy this state of affairs. The data sought would relate to gender indicators in the various areas of the project: transport and mobility, energy, water, green spaces, solid waste, biodiversity, etc. This gender-specific data will help to better identify the challenges in how women interact with public spaces or access water/energy/green spaces, etc.

2. Involvement of women (through women's associations and/or nature protection associations) in the planning of the development of green spaces and urban and semi-urban parks.

3. Association of the staff of the Regional Directorate of the Environment (DRE) of the Marrakech region in the implementation of the projects of the Institutionalization Strategy for the integration of gender equality in the sustainable development sector. In particular, the project relating to the training program for officials

of the Department of Sustainable Development in gender analysis and its use in the design, planning and implementation of environmental protection projects.

4. Greater participation of women as beneficiaries of the Marrakech palm grove safeguard and development program.

5. Support for the preparation and implementation of Communal Development Plans (PDC) using a gender-sensitive participatory approach following the directives relating to the Parity and Equal Opportunities Committee of the communal charter.

In the field of transport, several actions could be carried out:

6. Participation of public transport users, men and women of all ages, in the design, implementation, monitoring and evaluation of public transport and mobility projects. Consideration of gender-specific transport needs and constraints (women, youth, elderly, disabled and other vulnerable groups) as part of the design, implementation and evaluation processes of these projects.

7. Sensitization and training of public transport staff on gender issues.

8. Establishment of public transport lines serving the peripheral areas to get to the city of Marrakech for work, studies and others. These lines, at moderate cost, would have a double advantage: to serve the destitute population in peripheral areas and to reduce urban pollution, especially if the means of transport are electric.

9. Implementation of measures relating to on-demand bus stops allowing women and men to be dropped off closer to their destinations late in the evening and early in the morning. This measure, tested in several cities around the world, has helped reduce crime and ensure the safety of public transport users. This effective measure requires a very low financial cost.

10. Establishment of violence prevention and reception services for victims of violence in the main transport stations. These services could play a dissuasive role against crime in transport, in particular against gender-based violence, while providing people who are victims of violence with multifaceted assistance (medical, psychological, administrative, legal, etc.).

11.6. Gender action plan

In this section, we present the gender action plan (**Table 11.1**) in tabular form, specifying for each component the gender-related activities, the corresponding indicators, the target, the baseline, the budget, the implementation period. as well as responsibilities.

For the specific activity (Activity 4.1.3.1.: Implementation of the Gender Action Plan), we detail in **table 11.2** the gender action plan, specifying the corresponding sub-activities, performance indicators, target, baseline, time planning as well as budgets for carrying out these activities and responsibilities

Table 11.1: Gender action plan by component

Gender-related activity	Indicator	Target	Baseline	Budget	Timeline	Responsibility
Component 1: Evidence-based sustainable and integrated urban planning & policy reform						
Activity 1.1.1.1.: Integration of the gender dimension in the diagnosis of the framework conditions relating to territorial urban planning (institutional framework, legal framework, procedures, documents, tools, etc.)	Number of gender variables analyzed	At least 5 gender variables	0	Included as part of the project component	Year 1	Gender consultant Project coordinator
Activity 1.1.1.2.: Organization of a multisector policy dialogue on the integration of sustainability in urban planning and in sectoral strategic planning documents with a gender perspective	Number of consultation workshops with women's associations	3 consultation workshops	0	Included as part of the project component	Year 1	Gender consultant Project coordinator
Activity 1.1.1.3.: Development of a national roadmap relating to the establishment of the framework conditions relating to the integration of sustainability into urban planning, including a gender perspective	Number of consultation workshops with women's associations Level of integration of the women's associations opinions and perspectives in the national roadmap	At least 1 consultation workshop per municipality	0	Included as part of the project component	Year 1	Gender consultant Project coordinator
Activity 1.1.2.1.: Develop an action plan to reflect the commitment of the Marrakech-Safi Region within the framework of the implementation of the SNDD with a gender perspective	Percentage of municipalities committed to the gender perspective	At least 50% of municipalities at mid-term 100% at the end of the project	0	Included as part of the project component	Years 2 and 3	Gender consultant Project coordinator
Activity 1.1.2.2.: Territorial dialogue to ensure the alignment of the objectives and priorities of strategic documents and the identification of integrated and sustainable orientations for the city with a gender perspective	Number of consultation workshops with women's associations	3 consultation workshops	0	Included as part of the project component	Years 2 and 3	Gender consultant Project coordinator
Activity 1.1.2.3.: Upgrading of the Communal Action Plan (PAC) and other strategic documents of the city of Marrakech for the integration of sustainability with a gender perspective	Percentage of strategic documents integrating the gender dimension	At least 50% of documents at mid-term 100% at the end of the project	0	Included as part of the project component	Years 2 and 3	Gender consultant Project coordinator

Gender-related activity	Indicator	Target	Baseline	Budget	Timeline	Responsibility
	Level of integration of the women's associations opinions and perspectives in the communal action plan					
Component 2: Sustainable integrated low-Carbon, resilient, conservation and land restoration investments						
Activity 2.1.1.1.: Development of the Sustainable Urban Mobility Plan (PMUD) integrating the gender dimension	Degree of gender mainstreaming in PMUD	Half of PMUD's actions integrating gender	None	Included as part of the project component	Year 1	Gender consultant Project coordinator
Activity 2.1.1.2.: Carrying out environmental and social impact studies relating to the scaling up of the Bus rapid transit (BRT) system integrating the gender dimension	Percentage of impact studies integrating the gender dimension	50% of mid-term impact studies 100% at the end of the project t	0	Included as part of the project component	Years 1, 2, 3, 4 and 5	Gender consultant Project coordinator
Activity 2.1.1.3.: Development of new business plans to promote sustainable solutions concerning waste management (hazardous and non-hazardous waste), biodiversity and water resources with a gender perspective	Percentage of business plans developed with a gender perspective	50% mid-term business plans 100% at the end of the project	0	Included as part of the project component	Years 1, 2, 3, 4 and 5	Gender consultant Project coordinator
Activity 2.1.5.1.: Develop a vulnerability study, supported by the Biodiversity index for the city of Marrakech, and proposal for a plant charter to be adopted at the city level with a gender perspective	Degree of integration of the gender dimension in the vulnerability study and the plant charter	20% of the provisions of the charter relate to the gender dimension	None	Included as part of the project component	Year 2	Gender consultant Project coordinator
Activity 2.1.5.3.: Restoration and development of certain green spaces (historic garden, public gardens) and greening of schoolyards, including the creation of 2 agro ecological gardens, all with a gender perspective	Percentage of green spaces developed incorporating a gender perspective (including women and vulnerable population in the planning of green spaces)	50% of green spaces at mid-term 100% at the end of the project	0	Included as part of the project component	Years 1, 2, 3, 4 and 5	Gender consultant Project coordinator

Gender-related activity	Indicator	Target	Baseline	Budget	Timeline	Responsibility
Component 3: Innovative financing and scaling-up						
Activity 3.1.1.2.: Support for improving financial planning to strengthen financial solvency by integrating gender responsive budgeting (GRB)	Degree of integration of gender responsive budgeting (GRB) in financial planning	50% of mid-term financial planning 100% of financial planning at the end of the project	None	Included as part of the project component	Years 1, 2, 3, 4 and 5	Gender responsive budgeting consultant Project coordinator
Activity 3.1.2.2.: Training of national and local actors on innovative and new business, income and supply models at city level by integrating the gender perspective	Number of actors trained in gender-sensitive budgeting	30 actors trained, 50% of whom are women	0	Included as part of the project component	Years 2 and 3	Gender responsive budgeting consultant Project coordinator
Activity 3.1.2.3.: Design of innovative business, income and supply models to engage the private sector by integrating the gender perspective	Number of innovative models integrating the gender dimension	3 models (business, revenue and procurement)	0	Included as part of the project component	Years 2 and 3	Gender responsive budgeting consultant Project coordinator
Activity 3.1.3.2.: Design of innovative mechanisms adapted to the city of Marrakech and integrating the gender perspective	Number of innovative mechanisms integrating the gender dimension	At least 3	0	Included as part of the project component	Years 2 and 3	Gender responsive budgeting consultant Project coordinator
Activity 3.1.3.3.: Training of national and local actors on innovative financial mechanisms for cities with a gender perspective	Number of actors trained in gender-sensitive budgeting	30 actors trained, 50% of whom are women	0	Included as part of the project component	Years 2 and 3	Gender responsive budgeting consultant Project coordinator

Gender-related activity	Indicator	Target	Baseline	Budget	Timeline	Responsibility
Component 4: Advocacy, knowledge exchange, capacity building and partnerships						
Activity 4.1.1.1.: Mapping of actors to be sensitized on urban sustainability at national and local level (decision-makers, institutions, civil society, companies, young people, etc.) integrating the gender perspective	Number of women among the different categories (decision-makers, institutions, civil society, young people, etc.) listed in the mapping	At least 3 women per category	0	Included as part of the project component	Years 1, 2 and 3	Gender consultant Project coordinator
Activity 4.1.1.2.: Development of an awareness plan on urban sustainability combining standard approaches (workshops, press, etc.) and digital (social networks, web, etc.) and integrating the gender dimension	Number of approaches integrating the gender dimension	3 at mid-term 6 at the end of the project	0	Included as part of the project component	Years 1, 2 and 3	Gender consultant Project coordinator
Activity 4.1.1.3.: Development of awareness-raising materials specific to the various target actors identified, covering the various themes of sustainability (energy, transport, waste, water resources, biodiversity, etc.) and integrating the gender dimension	Percentage of awareness-raising materials integrating the gender dimension	50% at mid-term 100% at the end of the project	0	Included as part of the project component	Years 1, 2 and 3	Gender consultant Project coordinator
Activity 4.1.1.4.: Deployment of the awareness plan through the organization of awareness campaigns and events targeting key actors (national and local) and integrating the gender dimension	Percentage of awareness campaigns and events integrating the gender approach	50% at mid-term 100% at the end of the project	0	Included as part of the project component	Years 1, 2 and 3	Gender consultant Project coordinator
Activity 4.1.1.5.: Strengthening national and local capacities in advocacy to promote urban sustainability (civil society, press, young	Number of women's organizations benefiting from the strengthening	2 organizations at the mid-term of the project 4 at the end of the project	0	Included as part of the project component	Years 1, 2 and 3	Gender consultant Project coordinator

Gender-related activity	Indicator	Target	Baseline	Budget	Timeline	Responsibility
people, etc.) by integrating the gender approach						
Activity 4.1.2.1.: Development of a specific communication plan for the dissemination of project results with gender-specific data	Percentage of results with gender-specific data	50% at mid-term 100% at the end of the project	0	Included as part of the project component	Years 4 and 5	Gender consultant Project coordinator
Activity 4.1.2.2.: Development of communication and knowledge sharing tools (e.g., website, social networks, etc.) with a gender perspective	Percentage of communication tools integrating the gender dimension	50% at mid-term 100% at the end of the project	0	Included as part of the project component	Years 4 and 5	Gender consultant Project coordinator
Activity 4.1.3.1.: Implementation of the Gender Action Plan	**See Table 11.2 of the detailed action plan**	-	-	30 000 US$	Over the 5 years	-
Activity 4.1.3.2.: Implementation of the stakeholder engagement plan integrating the gender dimension	Percentage of stakeholders integrating gender	At least 50% of the parties	0	Included as part of the project component	Over the 5 years	Gender consultant Project coordinator
Activity 4.1.3.3.: Implementation of the environmental social management framework integrating the gender dimension	Percentage of social and environmental variables integrating gender	At least 50% of the variables	0	Included as part of the project component	Over the 5 years	Gender consultant Project coordinator
Activity 4.1.3.4.: Implementation of the monitoring & evaluation plan integrating the gender dimension	Percentage of gender indicators for monitoring and evaluation	At least 50% of the indicators	0	Included as part of the project component	Over the 5 years	Gender consultant Project coordinator

Table 11.2: Detailed gender action plan relating to the activity 4.1.3.1.: Implementation of the Gender Action Plan

Sub-Activity 1: Capacity building of project actors on aspects of the gender dimension						
Related activities	**Indicators**	**Target**	**Baseline**	**Timeline**	**Budget**	**Responsibility**
1.1. Identification of training beneficiaries among the main partners (DRE, Municipalities, Transport, waste, etc.) 1.2. Development of training module supports (generic and specific) 1.3. First training sessions (3 sessions) 1.4. Evaluation of the first 3 training courses 1.5. Improvement of training materials 1.6. Provision of remaining training (3 sessions) 1.7. Finalization of training materials	- Number of specific training sessions provided - Number of actors trained on gender - Quality of actions and training materials	6 training sessions 60 executives from the main project partners including 30 mid-term 3 training materials	0	Years 1 and 2: 3 sessions Years 3 and 4: 3 sessions	10 000.00	Regional Environment Department Municipalities Gender consultant Project coordinator
Sub-activity 2: Support for the establishment of a management, monitoring and evaluation unit for gender equality in the city of Marrakech						
Related activities	**Indicators**	**Target**	**Baseline**	**Timeline**	**Budget**	**Responsibility**
2.1. Identification of the members of the management unit 2.2. Capacity building of the gender equality management, monitoring and evaluation unit 2.3. Support for the development and implementation of annual action plans	- Number of partners who are members of the gender equality management unit - Degree of ownership by the members of the Management Unit of their mandate and responsibilities	10 representatives of the main partners at the end of the project, including 5 mid-term 5 action plans: one per year	0	Years 1, 2, 3, 4 and 5	10 000,00	Regional Environment Department Municipalities Gender consultant Project coordinator

	- Number and quality of annual action plans implemented					
Sub-activity 3: Support for the development and implementation of a gender equality institutionalization program in the city of Marrakech						
Related activities	**Indicators**	**Target**	**Baseline**	**Timeline**	**Budget**	**Responsibility**
3.1. Constitution of a gender-specific database in the areas of the project: transport and mobility, energy, water, green spaces, solid waste, biodiversity, etc. 3.2. Establishment of institutional measures for equal access to positions of responsibility 3.3. Establishment of violence prevention and reception services for victims of violence in transport stations 3.4. Support for the development of a gendered municipal report with gender-sensitive budgets	- Number of variables per project area that include gender-specific data - Number, relevance and scope of institutional measures guaranteeing gender equality in terms of access to positions of responsibility - Number and level of use of violence prevention services - Number and quality of gender-based communal reports	A gender-specific database 4 measures are 2 mid-term measures (% parity M-F positions of responsibility, Service for the prevention of gender-based violence) 2 other measures at the end of the project (gender-sensitive municipal budget, gendered municipal activity report) 1 report per municipality	None 0	Year 1: Activity 3.1 Years 2, 3, 4 and 5: Activities 3.2, 3.3 and 3.4	10 000.00	Regional Directorate of the Environment Communes Wilaya of Marrakech Gender consultants Project coordinator
Total Budget					**30 000,00**	

Annex 12: Procurement Plan - for the first year of project implementation

No	Project Outcome of which the procurement is related to	Type of Supply	Description of goods, services or works	Unit of Measure	Quantity	Estimated Unit Price (USD)	Estimated Total Price (USD)	Available budget (USD)	Estimated date of Completion of Activity	Responsible authorities
1	Component 1: Sustainable and Integrated Urban Planning and Evidence-Based Policy Reform	Local Consultant	Expert in urban planning for the realization of a diagnosis of the framework conditions related to territorial urban planning (institutional framework, legal framework, procedures, documents, tools, etc.)	Month	6	625	3750	3750	12/22	Ministry of Energy, Mines and Environment – Department of Environment
2		Local Consultant	Policy dialogue expert to support the territorial dialogue and ensure the alignment of objectives and priorities of strategic documents and the identification of integrated and sustainable directions for the city	Month	3	2 083,33	6250	6250	12/22	Ministry of Energy, Mines and Environment – Department of Environment
3		Contract services - Companies	Multidisciplinary consulting firm to organize and support a multi-sectoral polical dialogue on the integration of sustainability into urban planning and sectoral strategic planning documents	Month	6	384,615	2307,69	2307,69	12/22	Ministry of Energy, Mines and Environment – Department of Environment
4		Contract services - Companies	Multidisciplinary consultancy firm to develop a national roadmap for the implementation of the framework conditions related to the integration of sustainability into urban planning, to be operationalized through a legal instrument	Month	6	673,077	4038,46	4038,46	12/22	Ministry of Energy, Mines and Environment – Department of Environment
5		Contract services - Companies	Multidisciplinary consulting firm to develop an action plan that translates the commitment of the Marrakech-Safi Region in the implementation of the SNDD	Month	3	769,23	2307,69	2307,69	12/22	Ministry of Energy, Mines and Environment – Department of Environment

No	Project Outcome of which the procurement is related to	Type of Supply	Description of goods, services or works	Unit of Measure	Quantity	Estimated Unit Price (USD)	Estimated Total Price (USD)	Available budget (USD)	Estimated date of Completion of Activity	Responsible authorities
6		Contract services - Companies	Multidisciplinary consulting firm to carry out the upgrade of the Communal Action Plan (PAC) and other strategic documents of the city of Marrakech for the integration of sustainability	Month	3	769,23	2307,69	2307,69	12/22	Ministry of Energy, Mines and Environment – Department of Environment
7		Contract services - Companies	Multidisciplinary consulting firm to support the city of Marrakech in setting up a multi-sectoral data management unit (waste, energy, transport, green spaces, etc.) to scientifically inform the process of integrating sustainability into urban planning	Month	3	1 346,15	4038,46	4038,46	12/22	Ministry of Energy, Mines and Environment – Department of Environment
8		Travel	Travel expenses of PMU team and national consultants	Year	1	5000	5000	5000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
9		Organization of workshops and conferences	Stakeholders' consultation meetings at the national level	Month	6	416,66	2500	2500	12/22	Ministry of Energy, Mines and Environment – Department of Environment
10		Organization of workshops and conferences	Stakeholders' consultation meetings at the territorial level	Month	3	416,66	1250	1250	12/22	Ministry of Energy, Mines and Environment – Department of Environment
11		Organization of workshops and conferences	Capacity building of Marrakech's multi-sector data management unit	Month	3	416,66	1250	1250	12/22	Ministry of Energy, Mines and Environment – Department of Environment

No	Project Outcome of which the procurement is related to	Type of Supply	Description of goods, services or works	Unit of Measure	Quantity	Estimated Unit Price (USD)	Estimated Total Price (USD)	Available budget (USD)	Estimated date of Completion of Activity	Responsible authorities
Sub-Total										35 000
1	Component 2: Sustainable, Low-Carbon, Resilient, Land Conservation and Restoration Integrated Investments	International Consultant	International expert to design the tracks dedicated to two-wheeled vehicles on certain streets of the city	Month	3	3 846,15	11538,46	11538,46	12/22	Ministry of Energy, Mines and Environment – Department of Environment
2		International Consultant	International expert to design the Low Emission Zone (LEZ) near the tourist area of Jamaa Lafna Square	Month	3	6 410,25	19230,77	19230,77	12/22	Ministry of Energy, Mines and Environment – Department of Environment
3		International Consultant	International expert to design a network of solar charging stations for motorcycles and electric vehicles	Month	3	6 410,25	19230,77	19230,77	12/22	Ministry of Energy, Mines and Environment – Department of Environment
4		Local Consultant	National expert for the development of new business plans to promote sustainable solutions for waste management (dangerous and non-dangerous waste), biodiversity and water resources	Month	6	3 846,15	23076,92	23076,92	12/22	Ministry of Energy, Mines and Environment – Department of Environment
5		Local Consultant	National expert for the development of a smartphone application to promote the use of the public transport available in the City of Marrakech	Month	3	3 846,15	11538,46	11538,46	12/22	Ministry of Energy, Mines and Environment – Department of Environment
6		Local Consultant	National expert to develop a vulnerability study, supported by the Biodiversity Index for the City of	Month	9	1 538,46	13846,15	13846,15	12/22	Ministry of Energy, Mines and Environment –

No	Project Outcome of which the procurement is related to	Type of Supply	Description of goods, services or works	Unit of Measure	Quantity	Estimated Unit Price (USD)	Estimated Total Price (USD)	Available budget (USD)	Estimated date of Completion of Activity	Responsible authorities
			Marrakech, and a proposal for a plant charter to be adopted at the city level							Department of Environment
7		Local Consultant	National expert to prepare restoration and landscaping plans for green spaces	Month	9	1 282,05	11538,46	11538,46	12/22	Ministry of Energy, Mines and Environment – Department of Environment
8		Contract services - Companies	Technical consulting firm for the implementation of the Sustainable Mobility Plan of the City of Marrakech	Month	6	3 010,04	18060,26	18060,26	12/22	Ministry of Energy, Mines and Environment – Department of Environment
9		Contract services – Companies	Technical consulting firm for the Environmental and Social Impact Assessment of BRT system Scaling	Month	6	2 391,91	14351,46	14351,46	12/22	Ministry of Energy, Mines and Environment – Department of Environment
10		Contract services - Companies	Company in charge of the supply, installation and commissioning of solar charging stations for motorcycles and electric vehicles	Month	3	1 935,03	5805,08	5805,08	12/22	Ministry of Energy, Mines and Environment – Department of Environment
11		Contract services - Companies	Company in charge of the realization of the routes dedicated to the two-wheeled vehicles on some streets of the city vehicles	Month	3	12 900,18	38700,56	38700,56	12/22	Ministry of Energy, Mines and Environment – Department of Environment
12		Contract services - Companies	Company in charge of the supply, installation and commissioning of a smart watering system in 330 Ha of green spaces	Month	9	3 603,40	32430,62	32430,62	12/22	Ministry of Energy, Mines and Environment –

No	Project Outcome of which the procurement is related to	Type of Supply	Description of goods, services or works	Unit of Measure	Quantity	Estimated Unit Price (USD)	Estimated Total Price (USD)	Available budget (USD)	Estimated date of Completion of Activity	Responsible authorities
										Department of Environment
13		Contract services - Companies	Company in charge of the restoration and landscaping of 330 Ha of green spaces	Month	9	10 072,44	90652	90652	12/22	Ministry of Energy, Mines and Environment – Department of Environment
14		Travel	Travel expenses of PMU team and consultants (national and international)	Year	1	3000	3000	3000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
15		Organization of workshops and conferences	Stakeholders consultation meetings at the territorial level	Month	6	277,77	1666,66	1666,66	12/22	Ministry of Energy, Mines and Environment – Department of Environment
16		Organization of workshops and conferences	Stakeholders consultation meetings at the territorial level	Month	3	555,55	1666,66	1666,66	12/22	Ministry of Energy, Mines and Environment – Department of Environment
17		Organization of workshops and conferences	Stakeholders consultation meetings at the territorial level	Month	9	185,18	1666,66	1666,66	12/22	Ministry of Energy, Mines and Environment – Department of Environment
18		Contract services - Companies	Company to supply to EMOB 30% of the first 320 electric scooters fleet of the sharing system	Month	3	66 666,66	200000	200000	12/22	Ministry of Energy, Mines and Environment –

No	Project Outcome of which the procurement is related to	Type of Supply	Description of goods, services or works	Unit of Measure	Quantity	Estimated Unit Price (USD)	Estimated Total Price (USD)	Available budget (USD)	Estimated date of Completion of Activity	Responsible authorities
										Department of Environment
Sub-Total										518 000
1	Component 3: Innovative Financing and Scaling	International Consultant	International expert to achieve an international benchmark on the upgrading of legal frameworks associated with business models and innovative financing mechanisms of cities	Month	12	533,33	6400	6400	12/22	Ministry of Energy, Mines and Environment – Department of Environment
2		International Consultant	International expert to support the upgrade of the legal framework associated with business models and innovative financing mechanisms for the city of Marrakech	Month	12	800	9600	9600	12/22	Ministry of Energy, Mines and Environment – Department of Environment
3		International Consultant	International expert to establish an international benchmark on the modalities of involvement of the private sector in the financing of assets and services of local authorities	Month	12	533,33	6400	6400	12/22	Ministry of Energy, Mines and Environment – Department of Environment
4		International Consultant	International expert to design and implement training sessions for national and local actors on new and innovative business, revenue, and supply models at city level	Month	12	666,66	8000	8000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
5		International Consultant	International expert to design innovative business, revenue, and supply models to engage the private sector	Month	12	800	9600	9600	12/22	Ministry of Energy, Mines and Environment – Department of Environment

No	Project Outcome of which the procurement is related to	Type of Supply	Description of goods, services or works	Unit of Measure	Quantity	Estimated Unit Price (USD)	Estimated Total Price (USD)	Available budget (USD)	Estimated date of Completion of Activity	Responsible authorities
6		Local Consultant	National expert to evaluate the financial planning procedures and processes applied in Marrakech	Month	12	444,44	5333,33	5333,33	12/22	Ministry of Energy, Mines and Environment – Department of Environment
7		Local Consultant	National expert to support the improvement and strengthening of planning and financial solvency	Month	12	555,555	6666,66	6666,66	12/22	Ministry of Energy, Mines and Environment – Department of Environment
8		Local Consultant	National expert to support the conception and implementation of training sessions of national and local actors on new and innovative business, revenue and supply models at city level	Month	12	333,33	4000	4000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
9		Local Consultant	National expert to support the design of innovative business, revenue and supply models to engage the private sector	Month	12	333,33	4000	4000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
10		Contract services - Companies	Finance consulting firm to analyze the feasibility of the innovative financing mechanisms for the city of Marrakech	Month	12	1 388,88	16666,66	16666,66	12/22	Ministry of Energy, Mines and Environment – Department of Environment
11		Contract services - Companies	Financial consulting firm to develop innovative mechanisms adapted to the city of Marrakech	Month	12	1 388,88	16666,66	16666,66	12/22	Ministry of Energy, Mines and Environment – Department of Environment

No	Project Outcome of which the procurement is related to	Type of Supply	Description of goods, services or works	Unit of Measure	Quantity	Estimated Unit Price (USD)	Estimated Total Price (USD)	Available budget (USD)	Estimated date of Completion of Activity	Responsible authorities
12		Contract services - Companies	Finance consultancy firm to design and implement training for national and local actors on innovative financial mechanisms for cities	Month	12	694,44	8333,33	8333,33	12/22	Ministry of Energy, Mines and Environment – Department of Environment
13		Contract services - Companies	Financial consultancy firm to support and assist the implementation of financial mechanisms developed	Month	12	694,44	8333,33	8333,33	12/22	Ministry of Energy, Mines and Environment – Department of Environment
14		Travel	Travel expenses of PMU team and consultants (national and international)	Year	1	5000	5000	5000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
15		Organization of workshops and conferences	Stakeholders' consultation meetings at the territorial level	Month	12	83,33	1000	1000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
16		Organization of workshops and conferences	Stakeholders' consultation meetings at the territorial level	Month	12	83,33	1000	1000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
17		Organization of workshops and conferences	Stakeholders' consultation meetings at the territorial level	Month	12	83,33	1000	1000	12/22	Ministry of Energy, Mines and Environment – Department of Environment

No	Project Outcome of which the procurement is related to	Type of Supply	Description of goods, services or works	Unit of Measure	Quantity	Estimated Unit Price (USD)	Estimated Total Price (USD)	Available budget (USD)	Estimated date of Completion of Activity	Responsible authorities
18		Organization of workshops and conferences	Training workshops for national and local actors on innovative business, revenue and supply models	Month	12	83,33	1000	1000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
19		Organization of workshops and conferences	Training workshops for national and local actors on innovative financial mechanisms for cities	Month	12	83,33	1000	1000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
Sub-Total										120 000
1	Component 4: Advocacy, Knowledge Exchange, Capacity Building and Partnerships	Local Consultant	National expert to map stakeholders to raise their awareness on urban sustainability at the national and local level	Month	3	526,315789	1578,95	1578,95	12/22	Ministry of Energy, Mines and Environment – Department of Environment
2		Local Consultant	National expert to develop an urban sustainability awareness plan combining standard (workshops, press, etc.) and digital (social networks, web, etc.) approaches	Month:	3	789,473684	2368,42	2368,42	12/22	Ministry of Energy, Mines and Environment – Department of Environment
3		Local Consultant	National expert to design and implement a national and local advocacy capacity building plan to promote urban sustainability (civil society, press, youth, etc.)	Month	3	789,473684	2368,42	2368,42	12/22	Ministry of Energy, Mines and Environment – Department of Environment
4		Local Consultant	National experts to contribute to the mid-term and final evaluation	Month	12	526,315789	6315,79	6315,79	12/22	Ministry of Energy, Mines and Environment – Department of Environment

No	Project Outcome of which the procurement is related to	Type of Supply	Description of goods, services or works	Unit of Measure	Quantity	Estimated Unit Price (USD)	Estimated Total Price (USD)	Available budget (USD)	Estimated date of Completion of Activity	Responsible authorities
5		Local Consultant	Monitoring and evaluation specialist to coordinate and conduct project monitoring and evaluation activities in accordance with the requirements of the government, UNDP country office and UNDP-GEF, including the updating of indicators in the project outcome framework and GEF 7 core indicators and other necessary monitoring tools (UNDP scoreboard) annually, mid-term and at the end of the project	Month	12	657,894737	7894,73	7894,73	12/22	Ministry of Energy, Mines and Environment – Department of Environment
6		Local Consultant	Specialist in environmental and social safeguards	Month	12	394,736842	4736,84	4736,84	12/22	Ministry of Energy, Mines and Environment – Department of Environment
7		Local Consultant	Gender and stakeholder engagement specialist	Month	12	394,736842	4736,84	4736,84	12/22	Ministry of Energy, Mines and Environment – Department of Environment
8		Contract services - Companies	Communication agency to develop awareness-raising materials, specific to the different target actors identified, that covers the different themes of sustainability (energy, transport, waste, water resources, biodiversity, etc.)	Month	3	3 333,33	10000	10000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
9		Contract services - Companies	Communication agency to implement the awareness plan through the organization of awareness campaigns and events targeting the key actors (national and local)	Month	3	3 333,33	10000	10000	12/22	Ministry of Energy, Mines and Environment – Department of Environment

No	Project Outcome of which the procurement is related to	Type of Supply	Description of goods, services or works	Unit of Measure	Quantity	Estimated Unit Price (USD)	Estimated Total Price (USD)	Available budget (USD)	Estimated date of Completion of Activity	Responsible authorities
10		Audiovisual production and printing costs	Costs of audiovisual production and printing of awareness materials	Month	3	666,66	2000	2000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
11		Travel	Travel expenses to attend SCIP Global Program events	Month	9	5 325,81	47932,33	47932,33	12/22	Ministry of Energy, Mines and Environment – Department of Environment
12		Travel	Travel costs for mid-term evaluation	Month	12	79,88	958,64	958,64	12/22	Ministry of Energy, Mines and Environment – Department of Environment
13		Travel	Travel costs for final evaluation	Month	12	95,86	1150,37	1150,37	12/22	Ministry of Energy, Mines and Environment – Department of Environment
14		Travel	Travel expenses for monitoring activities	Month	12	79,88	958,64	958,64	12/22	Ministry of Energy, Mines and Environment – Department of Environment
15		Organization of workshops and conferences	Start-up workshop	Month	12	83,33	1000	1000	12/22	Ministry of Energy, Mines and Environment – Department of Environment

No	Project Outcome of which the procurement is related to	Type of Supply	Description of goods, services or works	Unit of Measure	Quantity	Estimated Unit Price (USD)	Estimated Total Price (USD)	Available budget (USD)	Estimated date of Completion of Activity	Responsible authorities
16		Organization of workshops and conferences	Workshop on the mid-term evaluation	Month	12	41,66	500	500	12/22	Ministry of Energy, Mines and Environment – Department of Environment
17		Organization of workshops and conferences	Workshop on the final evaluation	Month	12	41,66	500	500	12/22	Ministry of Energy, Mines and Environment – Department of Environment
18		Organization of workshops and conferences	PMU and institutional partners training workshops on environmental and social safeguards	Month	12	83,33	1000	1000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
19		Organization of workshops and conferences	Workshops to ensure stakeholder engagement	Month	12	41,66	500	500	12/22	Ministry of Energy, Mines and Environment – Department of Environment
20		Organization of workshops and conferences	Training workshops on gender mainstreaming and related indicators	Month	12	125	1500	1500	12/22	Ministry of Energy, Mines and Environment – Department of Environment
Sub-Total										108 000
1	Project Management	Contract services - individual	National Coordinator	Month	12	3 333	40000	40000	12/22	Ministry of Energy, Mines and Environment –

No	Project Outcome of which the procurement is related to	Type of Supply	Description of goods, services or works	Unit of Measure	Quantity	Estimated Unit Price (USD)	Estimated Total Price (USD)	Available budget (USD)	Estimated date of Completion of Activity	Responsible authorities
										Department of Environment
2		Contract services - individual	Junior Technical Expert	Month	12	1 500	18000	18000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
3		Contract services - individual	Administrative Assistant	Month	12	1 500	18000	18000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
4		Equipment and Supplies	Office and computer supplies and consumables	Year	1	3000	3000	3000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
5		Equipment and Supplies	Purchase of office furniture	Year	1	6356	6356	6356	12/22	Ministry of Energy, Mines and Environment – Department of Environment
6		Contract services - Companies	Mobile phone communication fees	Year	1	600	600	600	12/22	Ministry of Energy, Mines and Environment – Department of Environment
7		Computer equipment	Purchase of three computers	Year	1	4500	4500	4500	12/22	Ministry of Energy, Mines and Environment –

No	Project Outcome of which the procurement is related to	Type of Supply	Description of goods, services or works	Unit of Measure	Quantity	Estimated Unit Price (USD)	Estimated Total Price (USD)	Available budget (USD)	Estimated date of Completion of Activity	Responsible authorities
										Department of Environment
8		Computer equipment	Purchase of three printers	Year	1	750	750	750	12/22	Ministry of Energy, Mines and Environment – Department of Environment
9		Computer equipment	Purchase of three mobile phones	Year	1	750	750	750	12/22	Ministry of Energy, Mines and Environment – Department of Environment
10		Computer equipment	Purchase of a video projector	Year	1	500	500	500	12/22	Ministry of Energy, Mines and Environment – Department of Environment
11		Computer equipment	Purchase of a TV for video projection	Year	1	500	500	500	12/22	Ministry of Energy, Mines and Environment – Department of Environment
12		Professsional Services	Financial Audit	Year	1	2,000	2,000	2,000	12/22	Ministry of Energy, Mines and Environment – Department of Environment
Sub-Total										94 956
Total										875 956

Annex 13: GEF focal area specific annexes (e.g. METT, GHG calculations, target landscape profile, feasibility study, other technical reports)

1. Project area description

The subnational region of Marrakech-Safi is located in the South-Center of Morocco, it covers an area of 38,167 km² which represents about 5.36% of the national area[86]. The Prefecture of Marrakech is the head of this subnational region and occupies about 2,625 km² of its area. It is bounded in the North by the province of El Kelaa des Sraghna and the province of Rhamna, in the South by the province of Al Haouz, in the East by the province of Rhamna and in the West by the province of Chichaoua and the province of Safi. According to the 2014 census, the population of the region is estimated at 4,520,569 residents, including 1,330,468 in the Prefecture of Marrakech: 73.69% in the urban area versus 26.31% in the rural area.

The Prefecture of Marrakech includes two urban communes (Marrakech and Al Mechouar Kasbah) and thirteen rural communes (Oulad Hassoun, Al Ouidane, Ouaha Sidi Brahim, Harbile, Lamnabha, Ouled Dlim, Loudaya, Sidi Zouine, Aït Imour, Agfay, Souihla, Saâda et Tassoultanete).

This GEF project targets two urban municipalities of the Prefecture: the Municipality of Marrakech and the Municipality of Al Mechouar Kasbah, their population is estimated at 928,850 inhabitants.

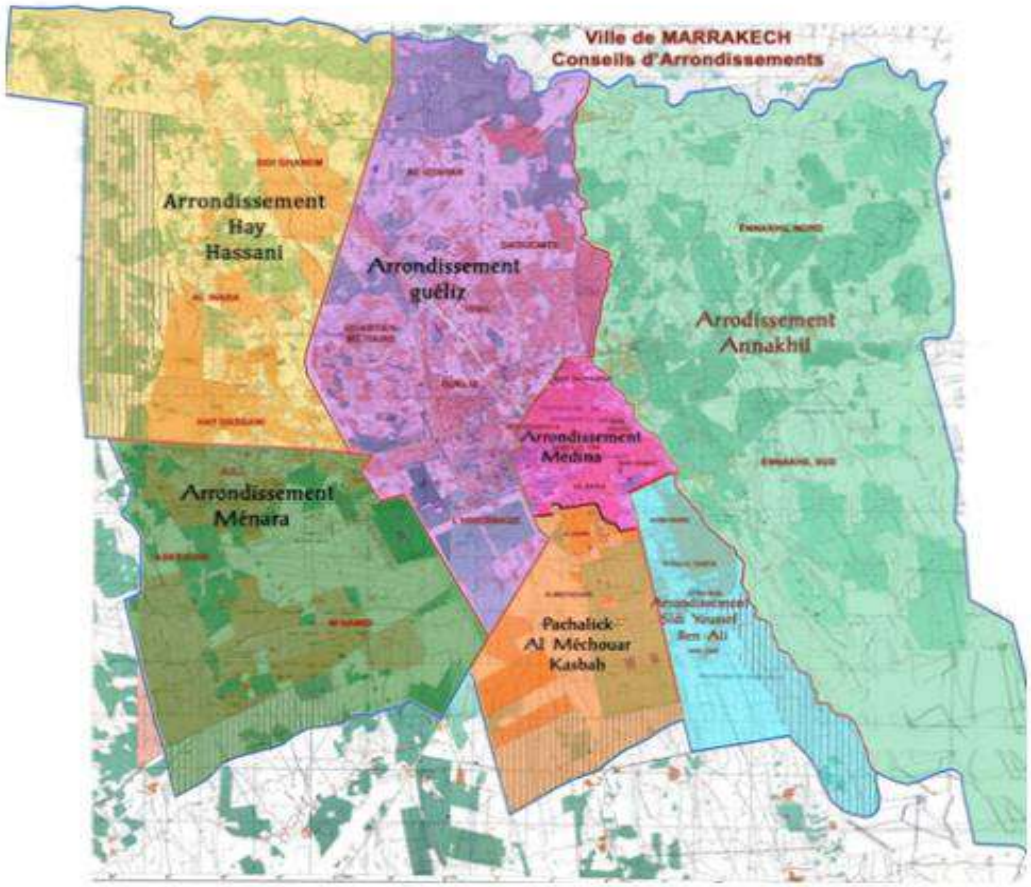


Figure 7: Administrative division of the project area

[86] Monograph of the Marrakech-Safi region-HCP (2018) https://www.hcp.ma/region-marrakech/attachment/2073814/

The territorial framework of the project zone is very wide and diversified, which offers several development opportunities in different economic sectors and activities, especially the tourism sector.

1.1 Environmental context

From a climate perspective, the project's target area is subject to a number of climate change pressures, whether in terms of the increasing temperatures or the deterioration of natural resources. The observed temperature trend is constantly increasing while the precipitation trend is decreasing, recording a drop of 50 mm during the period from 1961 to 2014. Heat waves are also getting longer, with an increase of 0.11 days per year[87].

As for water resources, they are increasingly rare due to insufficient rainfall. This scarcity is further exacerbated by the growing demand for water generated by the intensification of agricultural activities, development of the tourism sector and demographic evolution. In addition, water resources are subject to pollution due to domestic discharges and discharges resulting from various economic activities (crafts, industry, mines and quarries) [88].

In terms of GHG emissions, the Prefecture of Marrakech recorded a total of 6,727,613 tCO_2e in 2014. Transport, agriculture and food remain the most emitting sectors[89].

The green areas, especially the palm grove of Marrakech, are experiencing sever degradation. The impacts of human activities and climate change favors palm trees stress and inhibit their natural regeneration, cause drastic erosion of biodiversity and ecosystems and reduce their resilience[90].

1.2 Sociodemographic context

Marrakech is the fourth largest city in Morocco after Casablanca, Fez and Tangier. It is divided into two parts, the first represents the historic city (ten kilometers of enclosure) and the second represents the new city whose main districts are: Guéliz, l'Hivernage, Douar el Askar, Sidi Youssef Ben Ali (SYBA), M'hamid, and Daoudiate. Between 2004 and 2014, the city recorded an annual population growth rate of 1.174. The districts of the city are characterized by variable population rates. Ménara remains the most populated district with 411,094 residents followed by Guéliz, SYBA, Medina, and finally Annakhil[91].

The urban area of the city has greatly evolved from 2,000 ha in 1971 to 23,000 ha in 2014[92], it is essentially characterized by a strong centrality around Jamâa El Fna Square and Mohamed V Avenue.

1.3 Economic sectors

The three main productive economic sectors of the City of Marrakech are tourism, crafts and industry.

Tourism: Marrakech has a very rich and varied tourist heritage. It is the leading tourist destination in the country and attracts many travelers of all nationalities every year. This sector represents a major pillar in the socio-economic development of the City and Morocco in general, particularly in terms of jobs and financial balance.

In terms of accommodation capacity, and according to the statistics of 2017, Marrakech has 1,787 touristic structures with a total of 76,417 beds. The number of tourists was estimated at 1,483,972 for international tourists versus 816,772 for the national tourists[93].

The tourism offer is very diversified, whether sustainable tourism, green tourism, event tourism, health tourism, leisure tourism, etc. The sector is a real engine of growth contributing significantly to the promotion of the economic

[87] SDAU Marrakech
[88] SDAU Marrakech
[89] Territorial Climate Plan (Prefecture of Marrakech), Fondation Mohamed VI pour la Protection de l'Environnement, 2018
[90] SDAU Marrakech
[91] HCP
[92] HCP and www.ville-marrakech.ma/le-diagnostic/38/
[93] Monograph of the Marrakech-Safi region-HCP (2018) https://www.hcp.ma/region-marrakech/attachment/2073814/

and social development of the country through income generation, job creation, infrastructure development, investment, foreign exchange reserves, etc.

Craft: This sector occupies an important place in the economy of the Marrakech-Safi subregion. It stands out by its potential to combine both authenticity and new trends in different crafts whether it is leather, textile, ironwork or carpentry craft.

In 2017, the sales revenue of the sector of the City of Marrakech was estimated at 5,000,685,856 MAD, representing 68% of the country's total revenue in this sector, with a share in employment of 4.6%. The region is the leading exporter of craft products in the country with a share of 28%, the city of Marrakech exports reached 246.3 million MAD in 2018, compared to 187.6 million MAD in 2017, an increase of 31.25%. The traditional building is the most important craft activity in the city, generating 28% of the sales revenue and employing 21% of craftsmen, followed by textiles and carpentry which also represent key activities in the productive structure of the project territory[94].

Industry: In 2016, the region's industrial structure counted a total of 603 industrial units employing nearly 38,357 persons, with an investment of more than 17,509 million MAD representing 7.7% of national investments. The city of Marrakesh is one of the main industrial centers in the region, as it generates 60% of the total created jobs.

Table 7: Industrial Economic Data in different Prefectures of Marrakech-Safi Region (Year 2016)

	Number of enterprises	Employees	Added Value (10^3 MAD)	Investment (10^3 MAD)	Production (10^3 MAD)	Exports (10^3 MAD)	Turnover (10^3 MAD)
Chichaoua	1	15	550	85	2,705	-	3,205
El Kelaâ des Sraghna	20	345	26,792	12,128	126,031	81,934	142,979
Essaouira	83	918	49,401	163,912	244,762	22,626	248,736
Al Haouz	7	420	31,815	3,251	314,533	10,120	313,641
Marrakech	**387**	**23,043**	**2,300,519**	**639,834**	**8,895,405**	**2,049,519**	**9,809,485**
Safi	105	13,616	4,967,035	534,037	13,846,087	10,235,122	13,104,320
Total Région	603	38,357	7,376,112	1,353,247	23,429,523	12,399,321	23,622,366
Total Morocco	7,036	635,331	112,648,696	17,509,753	366,684,064	133,191,948	401,429,119
% Region/ Morocco	8.6	6.0	6.5	7.7	6.4	9.3	5.9

Source: General monography of the Marrakech-Safi region 2018

The main industrial activities are processing industries, in particular the agri-food, chemical and para-chemical industries. The infrastructure of industrial units is quite diverse and distributed throughout the territory of the region with a clear concentration in the city of Marrakech which includes 10 multifunctional industrial zones with lots of land dedicated for industry, trade and services. The most important zone remains the «Sidi Ghanem» industrial zone in Marrakech.

[94] Monograph of the Marrakech-Safi region-HCP (2018) https://www.hcp.ma/region-marrakech/attachment/2073814/

Annex 14: Details on GHG emission reduction calculations

1. Carbon sequestration in the AFOLU sector (Agriculture, Forestry and Land Use)

1.1 Historic and public gardens

Carbon sequestration is possible through the activities of Output 2.1.5 (Component 2), which focuses on the establishment of resilient investments that can ensure the restoration of biodiversity and conservation and sustainable management of land, especially the activity of rehabilitation and landscaping of historic and public gardens, greening of school grounds and creation of two ecological gardens.

There are three types of GHG emissions (CO2 eq) avoided through the carbon sequestration:

- GHG emissions directly mitigated by the activity, during the project implementation period (5 years), related to the period of rehabilitation and restauration of the target green spaces through tree planting, maintenance, etc.;
- GHG emissions that are directly mitigated by the activity after the completion of its implementation period, or post-project, and that are generated by the continuous carbon sequestration by the rehabilitated green spaces over a twenty-year period;
- Indirect mitigation of GHG emissions due to the long-term outcomes of the green space restauration activity through the removal of certain barriers, the capacity building, etc., that are detailed below.

In terms of emissions directly mitigated by the activity, the project foresees to restore 330.5 ha of degraded green spaces in the City of Marrakech and ensure the strengthening of their resilience. The direct mitigation, during the project implementation period, is therefore estimated by the carbon sequestration potential of the target green space area over a 5-year period. The restoration of green areas will be achieved gradually as follows: 15 ha in the first year, 100 ha in the second, 150 ha in the third, 60 ha in the fourth and the remaining 5.5 ha in the fifth and final year.

From the sixth year until the twenty-fifth year, rehabilitated green spaces will continue to sequester carbon and mitigate GHG emissions, since the planted trees will have a long lifetime (15 to 20 years depending on the species: olive, bitter orange, ornamental trees, etc.). In 2010, the perennial trees had a share of 36.33% in the CO2 sequestration, while they occupied only 8.8% of the City's and surrounding areas[95]. The GHG emissions directly mitigated during the post-project period are therefore estimated through the calculation of the carbon sequestration potential of the 330.5 ha targeted by the activity over a 20-year period.

The mitigation potential of the activity was estimated using the FAO EX-ACT[96] tool which uses the IPCC methodology to calculate GHG flows and thus calculate the carbon balance for the AFOLU sector. The implementation phase corresponds to the 5-year period of implementation of the activity and the capitalization phase corresponds to 20 years during which the rehabilitated green spaces will continue to generate benefits in terms of carbon sequestration. The directly mitigated emissions by activity are estimated to 67,891 tCO_2e.

[95] Marrakech Sustainable City – Phase 1

[96] EX-ACT | Economic and Policy Analysis of Climate Change | Food and Agriculture Organization of the United Nations (fao.org)

Composantes du projet	Flux bruts Sans	Flux bruts Avec	Bilan	Répartition du bilan par type de GES Tous les GES en tCO2eq CO_2 Biomasse	CO_2 Sol	CO_2 Autre	N_2O	CH_4
	Tous les GES en tCO2eq Positif=émission / négatif=puits							
Changements d'affectation								
Déforestation	0	0	0	0	0		0	0
Boisement	0	0	0	0	0		0	0
Autres CUT	0	-18 876	-18 876	-917	-17 959		0	0
Agriculture								
Annuelle	0	0	0	0	0		0	0
Pérenne	0	-49 015	-49 015	-46 833	-2 181		0	0
Riz	0	0	0	0	0		0	0
Patûrage & bétail								
Patûrage	0	0	0	0	0		0	0
Bétail	0	0	0				0	0
Dégradation et gestion								
Forest degradation	0	0	0	0	0		0	0
Peat extraction	0	0	0		0		0	0
Drainage organic soil	0	0	0		0		0	0
Rewetting organic soil	0	0	0		0		0	0
Fire organic soil	0	0	0	0				0
Coastal wetlands	0	0	0	0	0		0	0
Intrants & Investissements	0	0	0			0	0	0
Fishery & Aquaculture	0	0	0			0	0	0
Total	0	-67 891	-67 891	-47 750	-20 141	0	0	0

The 330.5 ha area targeted by the project represents almost the total of the degraded urban green spaces within the project zone, which is 380.79 ha. However, it only represents about 15% of the total urban green spaces in the City of Marrakech, estimated at 2,538.6 ha[97]. In fact, Marrakech is considered as a model of a city-garden given its natural wealth, its wide palm grove, and its numerous historic and public gardens. This project aims to remove some of the barriers identified in the Theory of Change, including the low level of public awareness, the lack of awareness of the stakeholders involved in matters of SD and CC, the lack of sharing and communication, the limited understanding of the economic value of green spaces, and the insufficiency of financial means for the implementation of development projects incorporating SD or CC.

Through the implementation of its four components, the project will strengthen the instruments and processes to promote the integration of sustainability into urban planning (Output 1.1.1 and 1.1.2), to design innovative and appropriate financial mechanisms to develop sustainable urban solutions (Output 3.1.2 and 3.1.3), to organize and conduct awareness campaigns for stakeholders and the general public (Output 4.1.1) and to compile and disseminate key experiences and lessons learned that can be replicated, through a variety of communication tools, including the project website, project narratives, synthesis documents and scaling-up of project outcomes (Output 4.1.2).

[97]Marrakech Urban Green Plan, 2020

Therefore, it could be assumed that, given the different results generated by the project, sustainable urban planning, rehabilitation of green spaces could cover indirectly an even wider area than the one covered directly by project investments (i.e., only 15%). The two proposed scenarios are:

- Scenario 1: An additional 10% of the city's total green space is rehabilitated (253.86 ha);
- Scenario 2: An additional 20% of the city's total space is rehabilitated (507.72 ha).

Assuming a 5-year implementation period and a 20-year capitalization period, the emissions indirectly avoided by the green space rehabilitation activity are estimated at:

- **Scenario 1: 52,148 tCO_2e:**

Composantes du projet	Flux bruts Sans	Flux bruts Avec	Bilan	Répartition du bilan par type de GES Tous les GES en tCO2eq CO_2 Biomasse	CO_2 Sol	CO_2 Autre	N_2O	CH_4
	Tous les GES en tCO2eq Positif=émission / négatif=puits							
Changements d'affectation								
Déforestation	0	0	0	0	0		0	0
Boisement	0	0	0	0	0		0	0
Autres CUT	0	-14 499	-14 499	-704	-13 795		0	0
Agriculture								
Annuelle	0	0	0	0	0		0	0
Pérenne	0	-37 649	-37 649	-35 973	-1 675		0	0
Riz	0	0	0	0	0		0	0
Patûrage & bétail								
Patûrage	0	0	0	0	0		0	0
Bétail	0	0	0				0	0
Dégradation et gestion								
Forest degradation	0	0	0	0	0		0	0
Peat extraction	0	0	0		0		0	0
Drainage organic soil	0	0	0		0		0	0
Rewetting organic soil	0	0	0		0		0	0
Fire organic soil	0	0	0	0				0
Coastal wetlands	0	0	0	0	0		0	0
Intrants & Investissements	0	0	0			0	0	0
Fishery & Aquaculture	0	0	0			0	0	0
Total	0	-52 148	-52 148	-36 677	-15 470	0	0	0

- **Scenario 2: 104,295 tCO_2e**

Composantes du projet	Flux bruts Sans	Flux bruts Avec	Bilan	Répartition du bilan par type de GES Tous les GES en tCO2eq CO_2 Biomasse	CO_2 Sol	CO_2 Autre	N_2O	CH_4
	Tous les GES en tCO2eq Positif=émission / négatif=puits							
Changements d'affectation								
Déforestation	0	0	0	0	0		0	0
Boisement	0	0	0	0	0		0	0
Autres CUT	0	-28 998	-28 998	-1 409	-27 590		0	0
Agriculture								
Annuelle	0	0	0	0	0		0	0
Pérenne	0	-75 297	-75 297	-71 946	-3 351		0	0
Riz	0	0	0	0	0		0	0
Patûrage & bétail								
Patûrage	0	0	0	0	0		0	0
Bétail	0	0	0				0	0
Dégradation et gestion								
Forest degradation	0	0	0	0	0		0	0
Peat extraction	0	0	0		0		0	0
Drainage organic soil	0	0	0		0		0	0
Rewetting organic soil	0	0	0		0		0	0
Fire organic soil	0	0	0	0				0
Coastal wetlands	0	0	0	0	0		0	0
Intrants & Investissements	0	0	0			0	0	0
Fishery & Aquaculture	0	0	0			0	0	0
Total	0	-104 295	-104 295	-73 355	-30 940	0	0	0

Altogether, the project expects a GHG mitigation of approximately 120,039 tCO_2e for the first indirect scenario, versus 172,186 tCO_2e when considering the second indirect scenario.

Table 8: Project Carbon Sequestration from 2022-2041 in tCO2eq

Carbone sequestration over 20 years		**Area (ha)**		**tCO_2e**	
Direct	Carbon sequestration by the rehabilitated and redeveloped green spaces	330,5		67 891	
Indirect	Capacity building, implementation of funding instruments, awareness-raising and communication, etc.	**Scenario 1**	**Scenario 2**	**Scenario 1**	**Scenario 2**
		253.86	507.72	52,148	104,295
TOTAL		584.36	838.22	120,039	172,186

For the GEF core indicator values in the Annex 15, scenario 2 is considered.

1.2 Palm grove:

Carbon sequestration is also possible through the activities of Output 2.1.5 (Component 2) focusing on the Palm Grove improvement of its management and protection.

Under the safeguard and development of Marrakech palm grove program launched by the Mohammed VI Foundation for Environmental Protection in 2007, 610,017 young palm trees were planted at an average rate of 40,000 palm / year from 2007 until 2021.

Under the Voluntary Carbon Offset program of Mohammed VI Foundation for Environmental Protection, 15,000 additional palm trees will be planted between 2022 and 2026, i.e. at a rate of 3,000 plants / year.

Considering that palm trees are characterized by a lifetime of 100 years, a significant carbon storage potential and adaptation to hot climates, it is possible to estimate the GHG emissions avoided through CO2 sequestration through the following three phases:

1. The GHG emissions directly avoided by planting 15,000 plants during the project implementation period (5 years; 2022 - 2026);
2. The GHG emissions directly avoided by planting of 15,000 palm trees after the end of its implementation period, and which are generated by the continuous sequestration of carbon over 100 years period;
3. The GHG emissions directly avoided by planting 610,017 plants over their residual lifetime left from 100 years.

It should be noted that given that most of ancient palm trees at the Marrakech Palm grove are aging, the potential for carbon storage is not considered.

The table below shows the avoided GHG emissions of the three phases. It is important to note that the calculation of CO2 sequestration is estimated by considering the Mohammed VI Foundation for Environmental Protection sequestration rate used in the Carbon Offset program (equivalent to 12 kgeCO2/palm/year).

Table 9: Project Carbon Sequestration from the Palm grove in tCO2eq

Phases	CO2 sequestration (teqCO2)
15,000 plants over 5 years (3,000 plants / year)	**360**
15,000 plants over the lifespan (100 years)	**17,640**
610,017 plants over the lifespan (100 years)	**732,380**
Total (over the lifetime = 100 years)	**750,020**

Considering the implementation phase corresponds to 5 years and the capitalization phase corresponds to 100 years (during this time the palms will continue to generate benefits in terms of carbon sequestration), 750,020.40 tCO2e can be avoided by planting and improving the management of 625,017 plants youths.

1.3 Total GHG emissions avoided in the AFOLU Sector

2.1 **Total emissions avoided outside AFOLU**

The direct and indirect GHG emissions reductions that will be generated by AFOLU activities are summarized as follow:

Table 10: Project Carbon Sequestration from the AFOLU sector in tCO2eq

	Carbon sequestered or emissions avoided in the AFOLU sector in tons CO2	
	Direct	**Indirect**
Historical gardens	67,891	104;295
Palm grove	750,020	-
Total	**817,911**	**104;295**

2. **GHG emissions avoided outside AF**

3. **OLU (Transport, waste management and EE/ER)**

2.2 Sustainable urban mobility

The urban agglomeration of Marrakech is experiencing from year to year a growing urban traffic with a predominance of two-wheeled vehicles which are estimated at about 169,180 [98]motorcycles in 2017 and represent 51% of the modal split of urban transport in the city of Marrakech according to the PDU (urban mobility plan) of 2008. These are followed by private vehicles with a share of 38%, with a car fleet of 141,936 vehicles in 2017[99]. While public transport by bus represents only 5% of road traffic (121 diesel buses in 2015[100]) and cabs 6% (the cab fleet in Marrakech consists of 3,200 vehicles according to the PDU of 2008).

[98] Study conducted in 2018 by the Mohammed VI Foundation for the Protection of the Environment "feasibility study for the introduction of electric mobility in the city of Marrakech".
[99] Data provided by the Ministry of Equipment, Transport and Logistics
[100] Data provided by Alsa during the elaboration of the Territorial Climate Plan of the Prefecture of Marrakech

The current modal split characterized by the predominance of motorcycles is due to the flat topography of the urban agglomeration of Marrakech favorable to the use of two-wheelers as well as the preference of the inhabitants of Marrakech for this mode of transport which has several advantages. Indeed, it is a means of transport that saves time specifically during rush hours by easily avoiding traffic jams, saves waiting time for public transport (bus and cabs which do not present a sufficient offer compared to the current demand given low frequency and comfort). Motorcycles are also easy to park and less expensive than a car.

Public transport by bus:

Public bus transport in the city of Marrakech is managed by a concessionary company belonging to the Spanish group ALSA transport. This service is provided through several lines where 121 diesel buses circulate, 113 of which are standard buses (12 m) and 8 are articulated buses (>12m).[101]

Table 11: Number and characteristics of buses in Marrakech

	Articulated bus	Standard bus
Number of buses	8	113
Diesel consumption in liters/100km	60	50

A study conducted in 2017 regarding the technical feasibility of extending the first electric BRT lane and associated solar charging capacity in the City of Marrakech[102] estimated the overall consumption of diesel buses in 2015 to 4,137,477 liters distributed as follows:

- 397,198 liters of diesel for the articulated buses;
- 3,740,279 liters of diesel for standard buses.

The design of the BRT network in the City of Marrakech by the PDU concerns four major urban lanes: Massira, M'Hamid, Gare Routière and Sidi Youssef Ben Ali, of which only one lane is currently operational, namely that of Massira. For the M'hamid lane, only the basic infrastructure (dedicated corridor) has been built but no BRT lane is yet operational.

The official launch of the first electric BRT in Marrakech took place on September 28, 2017. This first launch concerned the commissioning of 10 electric buses along the Massira lane. A dedicated corridor lane equipped with intelligent light signaling have been created for the circulation of these electric BRT independently of road traffic constraints. The electric BRT introduced have a high level of service with a frequency of 6 minutes, a service duration of 17 hours (from 6 a.m. to 11 p.m.), a projected commercial speed of 18 km/h and a travel time of 25 minutes per direction and is expected to absorb an annual passenger traffic of 4,882,449 and a daily passenger traffic of 13,377. The first 10 electric BRT were supplied by the Chinese company YANGTSE. They are equipped with a catenary charging system and an energy storage battery to supply themselves with electricity when they leave the electrical charging network. The introduction of these buses is geared to save 374,427 liters of diesel fuel per year and consequently reduce the annual GHG emissions of public transport by 1,003 tCO_2e.

[101] Data provided by Alsa during the elaboration of the Territorial Climate Plan of the Prefecture of Marrakech
[102] Study carried in the framework of the GEF-UNDP project "*Renewable Energy for the City of Marrakech's Bus Rapid Transit System*".

A solar PV plant with a peak power of 750 kWp has been installed between 2016-2017 as a part of the GEF-UNDP project "*Renewable Energy for the City of Marrakech's Bus Rapid Transit System*" to ensure the power supply of the first electric BRT lane. The solar PV plant is composed of 2,944 polycrystalline photovoltaic solar panels with a unit power of 255Wp and is expected to produce annually an average of 1,446 MWh/year and 33.7 GWh over 25 years.

Motorcycles:

The City of Marrakech is characterized by an increase in the rate of use of two-wheeled vehicles which are more interesting for users in terms of comfort, speed, access, and cost, at the expense of other factors, including air pollution, increased GHG emissions, noise, etc. The motorcycle fleet in Marrakech is estimated at about 169,180 motorcycles in 2017. The average daily fuel consumption is between 10 and 20 MAD for both categories of motorcycles (2-stroke and 4-stroke) contributing to an increase in GHG emissions of the transport sector (annual emission of 91,218 tCO_2e in 2017)[103].

To address the problem of anarchy of two-wheeled vehicles, the 2008 PDU envisaged promoting travel demand management to increase the share of public transport by bus to 9% in 2015 and 14% in 2030, through the redistribution of current network to optimize bus routes, improvement of service in terms of comfort, frequency, etc., upgrading of infrastructure, and above all, introduction of the BRT system.

Thus, the modal shift from two-wheeled vehicles (a modal share of 35% of Marrakech's urban transport by 2030) to public transport by bus will reduce the impacts of road traffic, notably through reduction of GHG emissions, air pollution, noise and road congestion. Other sustainable and low-carbon transport solutions have been adopted and/or are planned in the urban agglomeration of Marrakech to reduce GHG emissions from this sector, including the promotion and deployment of electric motorcycles, self-service bicycles, cab fleet renewal, among others.

Taxi cabs:

The fleet of cabs circulating in the urban area of Marrakech is about 3,200 vehicles. It is composed of 1,700 small beige taxicabs which operate with an odometer and can transport a maximum of 3 people with an average occupancy of 1.5 passengers and 1,500 large taxicabs dedicated to internal travel in the city, suburban or interurban and can accommodate up to 6 people with an average occupancy of 4.1 passengers. Under normal circumstances, 40% of the large taxicabs, i.e. 600 vehicles, are active over long distances, while the rest of taxicabs operates within the city.

Urban taxicabs (small and large) carry about 140,000 passengers per day, or 56 percent of daily internal public transport trips in Marrakech. The low quality of bus service is the main cause of the high number of taxicab trips, contributing high loads observed on roads.

Table 12: Transport GHG Emissions by Mode (Part 1: 2014 - 2030)

Year	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Motorcycles	28213	30188	32301	34562	36982	39570	42340	45304	48475	51869	55499	59384	63541	67989	72748	77841	83290
Cars	55711	58496	61421	64492	67717	71103	74658	78391	82310	86426	90747	95285	100049	105051	110304	115819	121610
taxicabs	26974	26974	26974	26974	26974	26974	26974	26974	26974	26974	26974	26974	26974	26974	26974	26974	26974
Bus	11088	11 088	11 324	10 560	10 918	11 287	11 787	12 059	12 465	12 752	13 179	13 482	13 933	14 252	14 728	15 064	15 566

[103] Study conducted in 2018 by the Mohammed VI Foundation for the Protection of the Environment "feasibility study for the introduction of electric mobility in the City of Marrakech".

Total emissions (TCO_2e)	**121986**	**126746**	**132020**	**136588**	**142591**	**148934**	**155759**	**162728**	**170224**	**178021**	**186399**	**195125**	**204497**	**214266**	**224754**	**235698**	**247440**

Table 13: Transport GHG Emissions by Mode (Part 2: 2031 - 2045)

Year	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Motorcycles	89120	95358	102034	109176	116818	124995	133745	143107	153125	163844	175313	187584	200715	214765	229799
Cars	127690	134075	140779	147818	155208	162969	171117	179673	188657	198090	207994	218394	229314	240779	252818
Cabs	26974	26974	26974	26974	26974	26974	26974	26974	26974	26974	26974	26974	26974	26974	26974
Bus	16 083	16 616	17 167	17 736	18 322	18 927	19552	20196	20861	21547	22255	22986	23740	24518	25321
Total emissions (TCO_2e)	259867	273023	286954	301704	317322	333865	351388	369950	389617	410455	432536	455938	480743	507036	534912

2.1.1 GHG mitigation calculations:

a. Improvement of public bus transportation through the implementation of a mobile application

In terms of public transport by bus, the creation and implementation of a mobile application for public transport will increase the use of public transport by standard buses and by BRT electric buses. In addition, the SDL (local development company) foresees the following BRT extension plan covered by the SDL City Bus Moutajadida co-financing of USD 164 million which will have to increase the fleet of electric BRTs available in the city:

Table 14: Electric BRT expansion plan

Year	2021	2024
Number of new electric buses	11	29

The expected direct impact is calculated on the basis of the new buses that SDL plans to purchase based on two mitigation scenarios: i) Scenario 1: includes the implementation of a mobile application for public transport and the extension of the electric BRT network; ii) Scenario 2: adds a solar power plant to power future electric buses as designed for the initial BRT project in 2017. The approach used for the calculation does not include any quantified impact of the mobile application. The calculation is made from the energy consumption of the new buses. The application makes it possible to maximize the chances of success of these buses and to democratize the use of public transport.

Calculations were based on data derived from the 2017 electric BRT feasibility study, whereas updated electric emission factors were derived from a LEAP (Low Emissions Analysis Platform) model used for Morocco's second NDC which integrates all future planned renewable power plants.

- **Baseline**

Table 15: Existing bus lanes in Marrakech

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total emissions (diesel and electric)	10560	10918	11287	11787	12059	12465	12752	13179	13482	13933	14252	14728	15064	15566

Year	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Total emissions (diesel and electric)	16083	16 616	17 167	17736	18322	18 927	19552	20196	20 861	21547	22255	22986	23 740	24 518	25321

- **Direct impact: Mitigation Scenario 1:**

Table 16: Results of mitigation scenario 1

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Diesel savings (liters)		0	0	0	411870	411870	411870	1497710	1497710	1497710	1497710	1497710	1497710	1497710
New electric bus consumption (MWh)		0	0	0	2059	2059	2059	7489	7489	7489	7489	7489	7489	7489
Total emissions (diesel and electric)	**10560**	**10918**	**11287**	**11787**	**12290**	**12584**	**12828**	**13461**	**13661**	**14046**	**14268**	**14532**	**14871**	**15057**
Reduction of GHG emissions (tCO_2e)	**0**	**0**	**0**	**0**	**-230**	**-119**	**-76**	**-282**	**-179**	**-113**	**-16**	**196**	**193**	**509**

Year	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Diesel savings (liters)	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710
New electric bus consumption (MWh)	7489	7489	7489	7489	7489	7489	7489	7489	7489	7489	7489	7489	7489	7489	7489
Total emissions (diesel and electric)	**15274**	**15696**	**16247**	**16816**	**17402**	**18007**	**18632**	**19276**	**19941**	**20627**	**21335**	**22066**	**22820**	**23598**	**24401**
Reduction of GHG emissions (tCO_2e)	809	920	920	920	920	920	920	920	920	920	920	920	920	920	920

It should be noted that the emission reductions of electric BRT are negative in the first years since the emission factor of the national electricity grid is still quite high. Indeed, Morocco's energy mix still includes several power plants powered by fossil fuels, but with the advancement of solar, wind and hydro plants, it decreases until the reductions become positive from 2028. The development of solar, wind and hydropower plants for electricity production represent a firm engagement of the country within its NDC and it's also part of the national energy strategy which foresees a total of 52% of installed capacities from renewable energy by 2030.

- **Direct impact: Mitigation Scenario 2:**

Table 17: Results of mitigation scenario 2

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Diesel savings (liters)		0	0	0	411870	411870	411870	1497710	1497710	1497710	1497710	1497710	1497710	1497710
New electric bus consumption (MWh)		0	0	0	2059	2059	2059	7489	7489	7489	7489	7489	7489	7489

Total emissions (diesel and electric)		**10918**	**11287**	**11787**	**10955**	**11361**	**11648**	**9165**	**9468**	**9919**	**10238**	**10714**	**11050**	**11552**
Reduction of GHG emissions (tCO2)		0	0	0	1104	1104	1104	4014	4014	4014	4014	4014	4014	4014

Year	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**
Diesel savings (liters)	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710	1497710
New electric bus consumption (MWh)	7489	7489	7489	7489	7489	7489	7489	7489	7489	7489	7489	7489	7489	7489	7489
Total emissions (diesel and electric)	**12069**	**12603**	**13153**	**13722**	**14308**	**14913**	**15538**	**16182**	**16847**	**17533**	**18241**	**18972**	**19726**	**20504**	**21307**
Reduction of GHG emissions (tCO2)	4014	4014	4014	4014	4014	4014	4014	4014	4014	4014	4014	4014	4014	4014	4014

It was assumed that the project should attract further investments in new electric BRTs to fully electrify the Marrakech bus fleet in 2045 (a total of 278 electric BRT). For the indirect impact calculations, we considered the two scenarios (with PV and without PV).

- **Indirect impact: Mitigation Scenario 1:**

Table 18: Results of mitigation scenario 1

Year	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Diesel savings (liters)		0	0	0	411870	411870	411870	1497710	1497710	1497710	1497710	1497710	2021908	2546107
New electric bus consumption (MWh)		0	0	0	2059	2059	2059	7489	7489	7489	7489	7489	10110	12731

Total emissions (diesel and electric)	10560	10918	11287	11787	12290	12584	12828	13461	13661	14046	14268	14532	14804	14700
Reduction of GHG emissions (tCO_2e)	0	0	0	0	-230	-119	-76	-282	-179	-113	-16	196	260	865

Year	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**
Diesel savings (liters)	3070305	3594503	4118702	4642900	5167099	5691297	6215495	6739694	7263892	8039971	8304167	8576790	8858111	9148405	9447960
New electric bus consumption (MWh)	15352	17973	20594	23215	25835	28456	31077	33698	36319	38940	41561	44182	46803	49424	52045
Total emissions (diesel and electric)	14425	14409	14637	14884	15148	15431	15734	16056	16399	16088	17171	18254	19337	20420	21503
Reduction of GHG emissions (tCO_2e)	1657	2208	2530	2852	3174	3496	3818	4140	4462	5459	5084	4732	4403	4098	3818

- **Indirect impact: Mitigation Scenario 2:**

Table 19: Results of mitigation scenario 2

Year	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Diesel savings (liters)		0	0	0	411870	411870	411870	1497710	1497710	1497710	1497710	1497710	2021908	2546107
New electric bus consumption (MWh)		0	0	0	2059	2059	2059	7489	7489	7489	7489	7489	10110	12731
Total emissions (diesel and electric)		10918	11287	11787	10955	11361	11648	9165	9468	9919	10238	10714	9646	8742
Reduction of GHG emissions (tCO2)		0	0	0	1104	1104	1104	4014	4014	4014	4014	4014	5419	6824

Year	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Diesel savings (liters)	3070305	3594503	4118702	4642900	5167099	5691297	6215495	6739694	7263892	8039971	8304167	8576790	8858111	9148405	9447960
New electric bus consumption (MWh)	15352	17973	20594	23215	25835	28456	31077	33698	36319	38940	41561	44182	46803	49424	52045
Total emissions (diesel and electric)	7854	6983	6129	5293	4474	3674	2894	2134	1394	0	0	0	0	0	0
Reduction of GHG emissions (tCO2)	8228	9633	11038	12443	13848	15253	16658	18062	19467	20483	21191	21921	22675	23453	24256

b. Contribution to investments related to the deployment of the first phase of electric scooter sharing system by the company EMOB.

In collaboration with EMOB company, the City of Marrakech plans to launch the first electric motorcycles project of sharing system in the country. The direct and indirect impacts presented below are based on data derived from EMOB business plan:

Table 20: Calculation assumptions for electric motorcycles

Average trip time (min)	15.00
Average speed (km / h)	30.00
Average mileage / trip (km)	7.50
Motor power (W)	1,500.00
Energy consumed per trip (kWh)	0.38
Share of petrol motorcycles (%)	57.50%
Share of cars (%)	42.50%
Average motorcycle consumption (l / 100km)	2.50
Average auto consumption (l / 100km)	6.00

For calculations, EMOB forecasted data (shared business plan) were taken into account while keeping steady the strong growth expected at inception. Calculations were based on number of trips replacing trips with normal motorcycles or cars that EMOB will have to ensure.

- **Baseline scenario:**
  - **Direct impact**

Table 21: Direct GHG emission - electric motorcycle baseline scenario

Year	0	1	2	3	4	5	6	7	8	9	10	11	12
Nb of trips	162960	891240	1648680	2310120	2773523	3051703	3204743	3285101	3326287	3347139	3357630	3362891	3365527
Total km	1222200	6684300	12365100	17325900	20801421	22887770	24035574	24638257	24947154	25103539	25182222	25221686	25241449
Gasoline consumption to be saved (liters)	17569	96087	177748	249060	299020	329012	345511	354175	358615	360863	361994	362562	362846
Diesel consumption to be saved (liters)	31166	170450	315310	441810	530436	583638	612907	628276	636152	640140	642147	643153	643657
GHG emissions (TCO2)	122	666	1232	1726	2072	2280	2395	2455	2485	2501	2509	2513	2515

Year	13	14	15	16	17	18	19	20	21	22	23	24	25
Nb of trips	3366845	3367505	3367835	3367999	3368082	3368123	3368144	3368154	3368159	3368162	3368163	3368164	3368164
Total km	25251339	25256285	25258759	25259996	25260615	25260924	25261079	25261156	25261195	25261214	25261224	25261229	25261231
Gasoline consumption to be saved (liters)	362988	363059	363095	363112	363121	363126	363128	363129	363130	363130	363130	363130	363130
Diesel consumption to be saved (liters)	643909	644035	644098	644130	644146	644154	644158	644159	644160	644161	644161	644161	644161
GHG emissions (tCO2)	2516	2516	2517	2517	2517	2517	2517	2517	2517	2517	2517	2517	2517

  - **Indirect impact**

The sharing project should push other private initiatives to set up a fleet of electric motorcycles but also private individuals. This should increase the number of trips made by electric motorcycles instead of thermal motorcycles or cars. It should also be noted that the implementation of a Low Emission Zone (LEZ) and dedicated routes for two-wheelers in the city should further encourage this shift to electric motorcycles.

Below are the figures used for the indirect impact calculations.

Table 22: Indirect GHG emissions - electric motorcycle baseline scenario

Year	0	1	2	3	4	5	6	7	8	9	10	11	12
Nb of trips						200000	301149	402298	503447	604596	705745	806894	908043

Total km	0	0	0	0	0	1500000	2258618	3017235	3775853	4534470	5293088	6051705	6810323
Gasoline consumption to be saved (liters)	0	0	0	0	0	21563	32468	43373	54278	65183	76088	86993	97898
Diesel consumption to be saved (liters)	0	0	0	0	0	38250	57595	76939	96284	115629	134974	154318	173663
GHG emissions (TCO2)	0	0	0	0	0	149	225	301	376	452	527	603	679

Year	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
Nb of trips	1009192	1110341	1211490	1312639	1413788	1514937	1616086	1717235	1818384	1919533	2020682	2121831	2222980
Total km	7568940	8327558	9086175	9844793	10603410	11362028	12120645	12879263	13637880	14396498	15155115	15913733	16672350
Gasoline consumption to be saved (liters)	108804	119709	130614	141519	152424	163329	174234	185139	196045	206950	217855	228760	239665
Diesel consumption to be saved (liters)	193008	212353	231697	251042	270387	289732	309076	328421	347766	367111	386455	405800	425145
GHG emissions (TCO2)	754	830	905	981	1056	1132	1208	1283	1359	1434	1510	1585	1661

- **Mitigation scenario:**
  - **Direct:**

Table 23: Direct GHG emissions - Electric Motorcycle mitigation scenario

Year	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**
Electrical energy consumed (kwh/year)	61110	334215	618255	866295	1040071	1144389	1201779	1231913	1247358	1255177	1259111	1261084	1262072
Electricity EF (tCO2/MWh)	0,681	0,648	0,594	0,573	0,574	0,560	0,551	0,538	0,510	0,510	0,468	0,428	0,413
GHG emissions (tCO2/year)	42	217	367	496	597	641	662	663	636	640	589	540	521
GHG reduction (tCO2)	80	449	865	1230	1476	1640	1732	1792	1849	1861	1920	1973	1993

Year	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
Electrical energy consumed (kwh/year)	1262567	1262814	1262938	1263000	1263031	1263046	1263054	1263058	1263060	1263061	1263061	1263061	1263062

Electricity FE (tCO2/MWh)	0,413	0,413	0,413	0,413	0,413	0,413	0,413	0,413	0,413	0,413	0,413	0,413	0,413
GHG emissions (tCO2/year)	522	522	522	522	522	522	522	522	522	522	522	522	522
GHG reduction (tCO2)	1994	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995	1995

- **Indirect:**

Table 24: Indirect GHG emissions - electric motorcycle mitigation scenario

Year	0	1	2	3	4	5	6	7	8	9	10	11	12
Electrical energy consumed (kwh/year)	0	0	0	0	0	75000	134403	193806	253209	312612	372015	431418	490821
Electricity EF (tCO2/MWh)	0,68	0,65	0,59	0,57	0,57	0,56	0,55	0,54	0,51	0,51	0,47	0,43	0,41
GHG emissions (tCO2/year)	0	0	0	0	0	42	74	104	129	160	174	185	203
GHG reduction (TCO2)	0	0	0	0	0	107	194	282	375	463	567	675	775

Year	13	14	15	16	17	18	19	20	21	22	23	24	25
Electrical energy consumed (kwh/year)	550224	609627	669030	728433	787836	847239	906642	966045	1025448	1084851	1144254	1203657	1263060
Electricity EF (tCO2/MWh)	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41	0,41
GHG emissions (tCO2/year)	227	252	276	301	325	350	375	399	424	448	473	497	522
GHG reduction (TCO2)	869	963	1057	1151	1244	1338	1432	1526	1620	1713	1807	1901	1995

c. Development of a network of solar charging stations for motorcycles and electric vehicles

Installation of solar charging stations across the city is a supporting measure to encourage purchase and use of electric vehicles. This measure should also be accompanied by other incentives, such as subsidies among others. In the following calculations, 30 single-phase charging stations of 3.7kW are considered in line with project budget. These stations require 6 to 8 hours for a complete recharge and are powered by solar electricity. It should be noted that the GHG reduction impacts calculated here concerns only the solar charging stations for passenger vehicles, whereas the BRT has its own charging infrastructure.

The first GHG reduction impact due to the use of electric vehicles is due to the reduction of transport consumption of diesel and gasoline. This consumption will be replaced by electrical energy, which will ultimately reduce GHG emissions. Afterwards, the fact of using solar chargers makes it possible to bypass the electricity network which remains quite high presently because of the energy mix of the country, which still contains several fossil powered plants. Concretely, the charging stations encourage the electrification of vehicle fleet, while the use of solar makes it possible to optimize GHG reductions.

Table 25: Typology of charging stations

Alimentation	Puissance	Tension	Intensité Max.	Durée de chargement
Monophasé	2kW	230 VAC	8 A	12-14 heures
Monophasé	3.7kW	230 VAC	16 A	6-8 heures
Triphasé	11kW	400 VAC	16 A	2-3 heures
Monophasé	7kW	230 VAC	32 A	3-4 heures
Triphasé	22kW	400 VAC	32 A	1-2 heures
Triphasé	43kW	400 VAC	63 A	20-30 minutes
Continu	50kW	400 – 500 VDC	100 – 125 A	20-30 minutes

As such, an average 24-hour utilization rate of 60% was considered. From the power delivered by the charging stations, the electrical energy consumed is calculated , which will replace diesel consumption. In addition, the following assumptions were considered:

Table 26: Calculation assumptions for solar electric chargers

Average charging power	3.7	kW
Current average utilization rate	60%	
Future average utilization rate	25%	
Average consumption of an EV	15	kWh/100km
Average consumption of a diesel vehicle	6	l/100km
Average consumption of a gasoline vehicle	7	l/100km
Part diesel vehicle	90%	
Part gasoline vehicle	10%	
Diesel EF	2.518	kgCO2/litre
Gasoline EF	2.464	kgCO2/litre

Based on the above data and assumptions, the following results are obtained:

- **Direct impact: mitigation scenario 1**

Table 27: Direct GHG emission of the mitigation scenario - Impact of electric solar chargers

Years	0	1	2	3	4	5	6	7	8	9	10	11	12
Number of installed solar powered electric chargers	4	6	10	6	4	0	0	0	0	0	0	0	0
Electrical energy sold (kWh)	77789	194472	388944	505627	583416	583416	583416	583416	583416	583416	583416	583416	583416
Diesel saved (liters)	28004	70010	140020	182026	210030	210030	210030	210030	210030	210030	210030	210030	210030
Gasoline saved (liters)	3630	9075	18151	23596	27226	27226	27226	27226	27226	27226	27226	27226	27226
GHG emissions saved (tCO2)	29	83	174	226	269	274	282	298	298	323	346	355	355

Years	13	14	15	16	17	18	19	20	21	22	23	24	24
Number of installed solar powered electric chargers	0	0	0	0	0	0	0	0	0	0	0	0	0
Electrical energy sold (kWh)	583416	583416	583416	583416	583416	583416	583416	583416	583416	583416	583416	583416	583416
Diesel saved (liters)	210030	210030	210030	210030	210030	210030	210030	210030	210030	210030	210030	210030	210030
Gasoline saved (liters)	27226	27226	27226	27226	27226	27226	27226	27226	27226	27226	27226	27226	27226
GHG emissions saved (tCO2)	355	355	355	355	355	355	355	355	355	355	355	355	355

- **Direct impact: mitigation scenario 2:**

It is possible to further increase the mitigation with the use of PV to generate the electricity used in the charging stations.

Table 28: Direct GHG emission of the mitigation scenario - Impact of electric solar chargers

Years	0	1	2	3	4	5	6	7	8	9	10	11	12
Number of installed solar powered electric chargers	4	6	10	6	4	0	0	0	0	0	0	0	0

Electrical energy sold (kWh)	77789	194472	388944	505627	583416	583416	583416	583416	583416	583416	583416	583416	583416
Diesel saved (liters)	28004	70010	140020	182026	210030	210030	210030	210030	210030	210030	210030	210030	210030
Gasoline saved (liters)	3630	9075	18151	23596	27226	27226	27226	27226	27226	27226	27226	27226	27226
GHG emissions saved (tCO2)	79	199	397	516	596	596	596	596	596	596	596	596	596

Years	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**24**
Number of installed solar powered electric chargers	0	0	0	0	0	0	0	0	0	0	0	0	0
Electrical energy sold (kWh)	583416	583416	583416	583416	583416	583416	583416	583416	583416	583416	583416	583416	583416
Diesel saved (liters)	210030	210030	210030	210030	210030	210030	210030	210030	210030	210030	210030	210030	210030
Gasoline saved (liters)	27226	27226	27226	27226	27226	27226	27226	27226	27226	27226	27226	27226	27226
GHG emissions saved (tCO2)	596	596	596	596	596	596	596	596	596	596	596	596	596

- **Indirect impact:**

This is based on the assumption that other public and private entities will install other electric charging stations. These charging stations will not necessarily be powered by a renewable energy source. In addition, implementation of a LEZ should also increase the conversion of users from thermal vehicles to electric vehicles. Whether these are individuals with their home charging stations or companies and shopping centers, it estimated that within 25 years, the City of Marrakech will have approximately 11,364 charging stations operating at an average rate of 25% and powered by the national electricity grid (whose emission factor has been calculated for each year using LEAP model).

The number of chargers to be installed is based on future projections made by the Moroccan Energy Federation, which foresees an increase in the country's electricity supply according to 3 scenarios of electrical vehicle's growth[104] (see figure below).

[104] Source : http://www.voitureelectrique.ma/etude-sur-la-mobilite-durable-au-maroc/

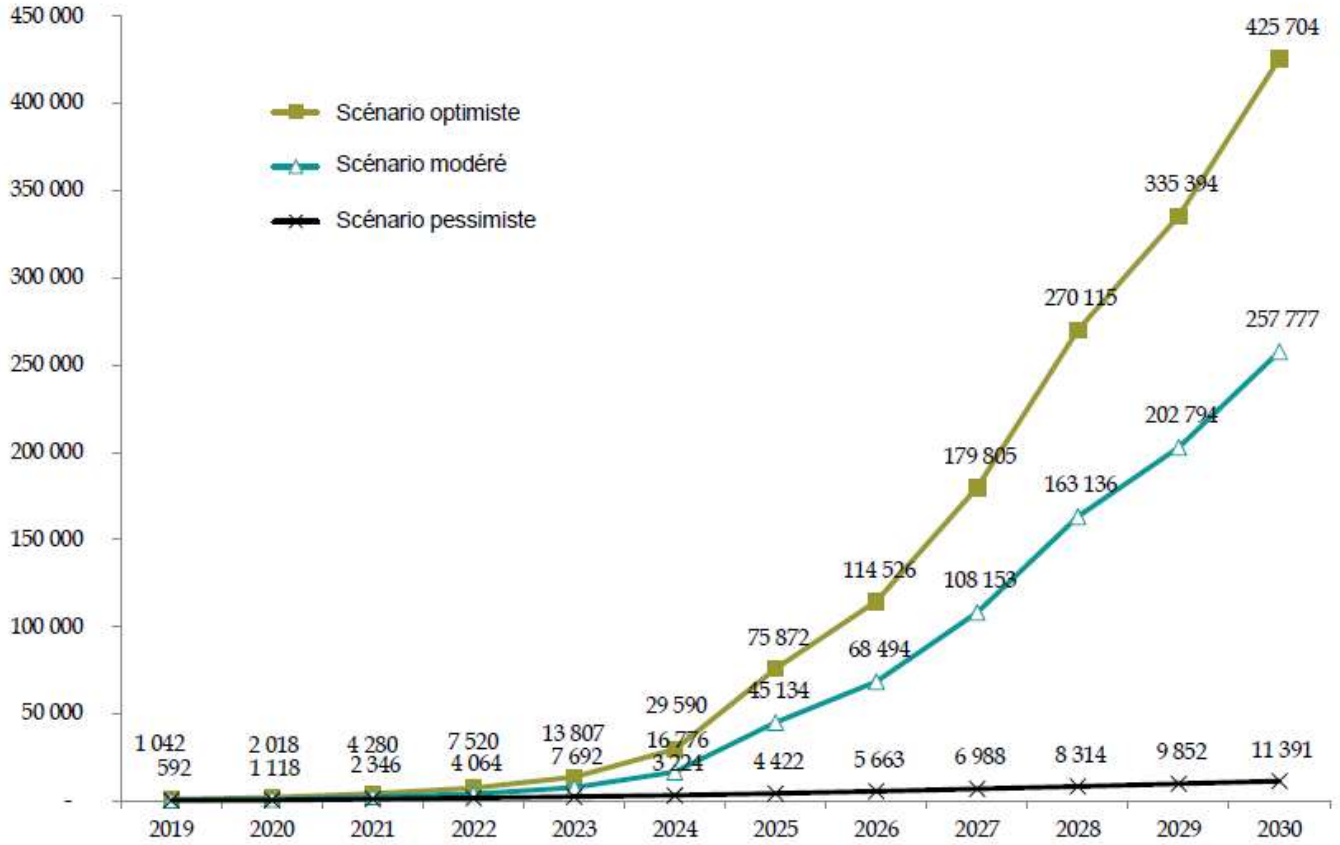


Figure 8: Projections of electric vehicles in Morocco

Based on these assumptions and data, the indirect mitigation results are as follow:

Table 29: Indirect GHG emission of the mitigation scenario - Impact of electric solar chargers

Year	0	1	2	3	4	5	6	7	8	9	10	11	12
Number of installed electric chargers	-	-	-	-	5	8	11	17	25	38	57	85	128
Electrical energy sold (kWh)	0	0	0	0	40515	101288	192446	329184	534292	841952	1303444	1995680	3034035

GHG emissions (tCO2)	-	-	-	-	23	56	104	168	273	394	558	825	1 254
Diesel saved (liters)	0	0	0	0	14585	36464	69281	118506	192345	303103	469240	718445	1092253
Gasoline saved (liters)	0	0	0	0	1891	4727	8981	15362	24934	39291	60827	93132	141588
GHG emissions saved (tCO2)	-	-	-	-	41	103	197	336	546	860	1 331	2 039	3 099
GHG reduction (tCO2e)	-	-	-	-	19	48	93	168	273	466	774	1 214	1 846

Year	13	14	15	16	17	18	19	20	21	22	23	24
Number of installed electric chargers	192	288	375	487	585	702	842	1 010	1 212	1 455	1 746	2 095
Electrical energy sold (kWh)	4591568	6927867	9965056	13913401	18651416	24337033	31159774	39347063	49171810	60961506	75109142	92086304
GHG emissions (tCO2)	1 897	2 862	4 117	5 748	7 706	10 055	12 874	16 256	20 315	25 186	31 031	38 045
Diesel saved (liters)	1652965	2494032	3587420	5008824	6714510	8761332	11217519	14164943	17701852	21946142	27039291	33151070
Gasoline saved (liters)	214273	323300	465036	649292	870399	1135728	1454123	1836196	2294684	2844870	3505093	4297361
GHG emissions saved (tCO2)	4 690	7 077	10 179	14 212	19 052	24 859	31 829	40 192	50 227	62 270	76 721	94 063
GHG reduction (tCO2e)	2 793	4 214	6 062	8 464	11 346	14 805	18 955	23 935	29 912	37 084	45 690	56 018

- **Indirect impact: mitigation scenario 2:**

It is possible to further increase the mitigation with the use of PV to generate the electricity used in the charging stations.

Table 30: Indirect GHG emission of the mitigation scenario - Impact of electric solar chargers

Year	0	1	2	3	4	5	6	7	8	9	10	11	12
Number of installed electric chargers	-	-	-	-	5	8	11	17	25	38	57	85	128

Electrical energy sold (kWh)	0	0	0	0	40515	101288	192446	329184	534292	841952	1303444	1995680	3034035
GHG emissions (tCO2)	0	0	0	0	0	0	0	0	0	0	0	0	0
Diesel saved (liters)	0	0	0	0	14585	36464	69281	118506	192345	303103	469240	718445	1092253
Gasoline saved (liters)	0	0	0	0	1891	4727	8981	15362	24934	39291	60827	93132	141588
GHG emissions saved (tCO2)	-	-	-	-	41	103	197	336	546	860	1 331	2 039	3 099
GHG reduction (tCO2e)	-	-	-	-	41	103	197	336	546	860	1 331	2 039	3 099

Year	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**
Number of installed electric chargers	192	288	375	487	585	702	842	1 010	1 212	1 455	1 746	2 095
Electrical energy sold (kWh)	4591568	6927867	9965056	13913401	18651416	24337033	31159774	39347063	49171810	60961506	75109142	92086304
GHG emissions (tCO2)	0	0	0	0	0	0	0	0	0	0	0	0
Diesel saved (liters)	1652965	2494032	3587420	5008824	6714510	8761332	11217519	14164943	17701852	21946142	27039291	33151070
Gasoline saved (liters)	214273	323300	465036	649292	870399	1135728	1454123	1836196	2294684	2844870	3505093	4297361
GHG emissions saved (tCO2)	4 690	7 077	10 179	14 212	19 052	24 859	31 829	40 192	50 227	62 270	76 721	94 063
GHG reduction (tCO2e)	4 690	7 077	10 179	14 212	19 052	24 859	31 829	40 192	50 227	62 270	76 721	94 063

d. Financing a set of dedicated two-wheelers lane in certain roads of the City

Dedicating specific urban road lanes to two-wheelers can convert former car or taxicab users to bicycles or electric motorcycles. The Pays de la Loire regional directorate for the environment, development and housing has conducted a study showing that a bicycle path can convert an average of 15% of new users of two wheels[105].

- **Direct Impact:**

From these figures, it was considered that 70% of the 15% came from former car users, 20% from former bus users and 10% from former taxicab users. While the conversion to two-wheelers is 50% from bicycles and 50% from motorcycles. These percentages were estimated based on the city's modal mix, consumer behavior and incentive actions taken upstream (EMOB sharing system, dedicated roads etc.). Ultimately, the problems of congestion and the awareness of citizens will push car users to use bicycles or motorcycles for certain trips.

Table 31: Direct GHG emission's reductions - Mitigation scenario of the two-wheeler lanes

Year	0	1	2	3	4	5	6	7	8	9	10	11	12
Baseline emissions (tCO2)	605	613	620	627	634	642	649	656	664	671	678	685	693
GHG reductions (tCO2)	50	51	51	52	52	53	54	54	55	55	56	57	57
Emissions - Mitigation scenario (tCO2)	555	562	569	575	582	589	595	602	609	615	622	629	635

Years	13	14	15	16	17	18	19	20	21	22	23	24	25
Baseline emissions (tCO2)	700	707	714	722	729	736	743	751	758	765	773	780	700
GHG reductions (tCO2)	58	58	59	60	60	61	61	62	63	63	64	64	58
Emissions - Mitigation scenario (tCO2)	642	649	655	662	669	675	682	689	695	702	709	715	642

- **Indirect part:**

For the calculation of the indirect part, it has been considered that an additional 10% will be converted to two-wheelers, according to the same weighting. However, it should be noted that the implementation of the LEZ should encourage this indirect impact and thus this additional use of bicycles and motorcycles (electric or thermal).

[105] Source : http://www.pays-de-la-loire.developpement-durable.gouv.fr/IMG/pdf/dreal-etudesocioecovelo.pdf

Table 32: Indirect GHG emission's reductions - Mitigation scenario of two-wheeler lanes

Year	0	1	2	3	4	5	6	7	8	9	10	11	12
Baseline emissions	2 422	2 451	2 480	2 509	2 538	2 567	2 596	2 625	2 654	2 683	2 712	2 741	2 770
GHG reductions (tCO2)	2 221	2 248	2 275	2 301	2 328	2 355	2 381	2 408	2 435	2 461	2 488	2 515	2 541
Emissions - Mitigation scenario (tCO2)	200	203	205	207	210	212	215	217	219	222	224	227	229

Year	13	14	15	16	17	18	19	20	21	22	23	24	25
Baseline emissions	2 799	2 829	2 858	2 887	2 916	2 945	2 974	3 003	3 032	3 061	3 090	3 119	2 799
GHG reductions (tCO2)	2 568	2 595	2 621	2 648	2 675	2 701	2 728	2 755	2 781	2 808	2 835	2 861	2 568
Emissions - Mitigation scenario (tCO2)	231	234	236	239	241	243	246	248	251	253	255	258	231

2.3 Energy efficiency and renewable energy measures in public and tourist buildings as well as in Sidi Ghanem's IZ:

GHG emission reductions for EE/RE measures were assessed using the GEF tool "*Revised Methodology for Calculating Greenhouse Gas Benefits of GEF Energy Efficiency Projects (Version 1.0)* [106]".

- **100% financing of public buildings energy audits with an annual electricity / water bill greater than 0.25 million MAD ($ 28 350) and 25% financing of EE-RE investments in 10 PB**

Direct Impact

Calculations of GHG emission reductions from public buildings are based on the following assumptions:

- Average energy and water bill for public buildings around 600,000 MAD ($ 68 000) with a share of 83% for electricity and 17% for water;
- Average saving on energy bill due to implementation of energy efficiency and renewable energy measure of 60% (i.e. electricity savings of approximately 283 MWh/year/building over a lifetime of approximately 20 years);

[106] https://www.thegef.org/publications/revised-methodology-calculating-greenhouse-gas-benefits-gef-energy-efficiency-projects

- Even if the project contributes to only 10 Public Building (PB), GHG reduction are considered for the total 20 PB assuming that the energy audits will engage all buildings in EE/ER measures.

The table below summarizes the consecutive GHG emission reductions initiated during the life of the project and 20 years after the end of the project.

Table 33: GHG emission reductions initiated during the project time span and 20 years after the end of the project

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Project: Number of efficient public buildings / year	2	4	8	4	2									
BASELINE: Nbr of efficient public buildings / year	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET Cumulative of efficient public buildings put in place	2	6	14	18	20	20	20	20	20	20	20	20	20	20
DIRECT SAVINGS Annual electricity savings (MWh))	566	1 699	3 964	5 097	5 663	5 663	5 663	5 663	5 663	5 663	5 663	5 663	5 663	5 663

	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
Project: Number of efficient public buildings / year											
BASELINE: Nbr of efficient public buildings / year	0	0	0	0	0	0	0	0	0	0	0
NET Cumulative of efficient public buildings put in place	20	20	20	20	20	20	20	20	20	20	20
DIRECT SAVINGS Annual electricity savings (MWh))	5 663	5 663	5 663	5 663	5 663	5 663	5 097	3 964	1 699	566	0

TOTAL	Direct Energy Savings 2022-2026 (GJ)	61 165	Direct Emissions Avoided 2022-2026 (tCO2)	11 570
	Direct Energy Savings 2027-2046 (GJ)	346 599	Direct Emissions Avoided 2027-2046 (tCO2)	65 565
CUMULATIVE	Direct Energy Savings 2022-2046 (GJ)	407 763	Direct Emissions Avoided 2022-2046 (tCO2)	77 135

Indirect impact

The consequential (indirect) GHG emission reductions were calculated using a Bottom-up approach, considering the direct energy savings resulting from the pilot investments, the lifetime of the technology adopted as well as the total number of replications resulting from the project.

The resulting reductions in consequential GHG emissions were calculated for a cumulative 20 years after the completion of the project between 2027 and 2046 and are estimated at 77,135 tCO2 (see table below).

Table 34: Indirect GHG emission reductions

Direct energy saving in electricity (MWh / year / PB)		283
Technology lifetime (year)		20
Number of effective PBs implemented during the project Number of project replications Total Bottom-up Estimate		20 1 20
Indirect GHG emission reductions	(tCO2/year)	3 857
	Between 2027-2046 (tCO2)	77 135

- **20% financing of energy audits in tourist establishments with less than thirty (30) rooms / 10% subsidy of EE-RE investments in 50 Touristic Establishments / Study for the selection of the 50 future "Green Key" recipients**

Direct impact

The assumptions considered to calculate the GHG emission reductions are as follows:

- The number of touristic establishments targeted by the project is 50;
- The average energy and water bill for touristic establishments with less than 30 rooms is around 300,000 MAD ($ 34 010) with a share of 60% for electricity, 10% for thermal energy and 30% for water;
- The average saving on the energy bill due to the implementation of energy efficiency and renewable energy measures represents 40% (equivalent to savings in electricity of around 68 MWh / year / touristic establishment and 104 GJ of thermal energy over a lifespan of around 20 years).

The table below summarizes the consecutive GHG emission reductions initiated during the life span of the project and 20 years after the end of the project.

Table 35: Consecutive GHG emission reductions initiated during the life span of the project and 20 years after the end of the project

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Project: Number of efficient touristic establishment/ year	5	10	20	10	5									
BASELINE: Number of efficient tourist establishment/ year	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NET Cumulative of efficient tourist icestablishment put in place	5	15	35	45	50	50	50	50	50	50	50	50	50	50
DIRECT SAVINGS Annual electricity savings (MWh))	340	1 020	2 380	3 060	3 400	3 400	3 400	3 400	3 400	3 400	3 400	3 400	3 400	3 400
Annual LPG savings (GJ)	520	1 559	3 639	4 678	5 198	5 198	5 198	5 198	5 198	5 198	5 198	5 198	5 198	5 198

	2036	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**
Project: Number of efficient touristic establishment/ year											
BASELINE: Number of efficient touristic establishment/ year	0	0	0	0	0	0	0	0	0	0	0
NET Cumulative of efficient tourist establishment put in place	50	50	50	50	50	50	45	35	15	5	0
DIRECT SAVINGS Annual electricity savings (MWh))	3 400	3 400	3 400	3 400	3 400	3 400	3 060	2 380	1 020	340	0
Annual LPG savings (GJ)	5 198	5 198	5 198	5 198	5 198	5 198	4 678	3 639	1 559	520	0

TOTAL Direct Energy Savings 2022-2026 (GJ)	52 315	Direct Emissions Avoided 2022-2026 (tCO2)	8 113
Direct Energy Savings 2027-2046 (GJ)	296 451	Direct Emissions Avoided 2027-2046 (tCO2)	45 973
CUMULATIVE Direct Energy Savings 2022-2046 (GJ)	348 766	Direct Emissions Avoided 2022-2046 (tCO2)	54 086

Indirect impact

The resulting consequential GHG emission reductions were calculated using the Bottom-up approach for a cumulative 20 years after project completion between 2027 and 2046 and are estimated at 432,688 tCO2 (see table below).

Table 36: Indirect GHG emission reductions

Direct energy saving in electricity (MWh / year / Touristic establishment)	68
Direct energy saving in LPG (GJ / year / Touristic establishment)	105
Technology lifetime (year)	20

Number of efficient touristic establishments implemented during the project		50
Number of project replications		8
Total Bottom-up Estimate		400
Indirect GHG emission reductions	(tCO2/year)	21 634
	between 2027-2046 (tCO2)	432 688

- **Transformation of the Sidi Ghanem IZ into an Industrial ECOPARC comprising: 1/ New intelligent public lighting network comprising 1,100 LP; 2/ Installation of roof PV for a capacity of 2,650 kWp and 3/ Smart Grid of the industrial zone electrical network**

Direct impact

1 / New intelligent public lighting network comprising 1,100 LP

The energy savings resulting from the installation of a new intelligent public lighting network (using light-emitting diode - LED) are estimated at 566.49 MWh / year over a lifespan of approximately 10 years (Source: Diagnosis of the public lighting network carried out by SDL-Hadirat Al Anwar).

The table below summarizes the resulting GHG emission reductions during the life span of the project and the 20 years after the end of the project.

Table 37: GHG emissions reductions resulting during the life of the project and 20 years after the end of the project

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Project: Number of LED LP / year	110	220	440	220	110									
BASELINE: Number of LED LP / year	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET Cumulative of LED LP put in place	110	330	770	990	1 100	1 100	1 100	1 100	1 100	1 100	990	770	330	110
DIRECT SAVINGS **Electricity savings** (MWh/year)	57	170	397	510	566	566	566	566	566	566	510	397	170	57

	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
Project: Number of LED LP / year											
BASELINE: Number of LED LP / year	0	0	0	0	0	0	0	0	0	0	0

NET Cumulative of LED LP put in place	0	0	0	0	0	0	0	0	0	0	0
DIRECT SAVINGS **Electricity savings** (MWh/year)	0	0	0	0	0	0	0	0	0	0	0

TOTAL Direct Energy Savings 2022-2026 (GJ)	6 118	Direct Emissions Avoided 2022-2026 (tCO2)	1 157
Direct Energy Savings 2027-2046 (GJ)	14 276	Direct Emissions Avoided 2027-2046 (tCO2)	2 700
CUMULATIVE Direct Energy Savings 2022-2046 (GJ)	20 394	Direct Emissions Avoided 2022-2046 (tCO2)	3 858

The impacts in terms of GHG emissions reductions resulting from the installation of a new public lighting network will end by 2035 given that the lifespan of LED light points is 10 years.

2 / PV installation on roofs for a total capacity of 2,650 kWp

The reductions in GHG emissions have been estimated on the basis of an electricity production from a 2650 kWp PV plant which is 4643 MWh / year or approximately 1.8 MWh / year / Wp for a lifetime a technology of 25 years.

Table 38: GHG emissions reductions from PV installation

-	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
PROJECT KWp of Solar PV/ year	265	530	1 060	530	265									
BASELINE KWp of Solar PV/ year	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET Cumulative KWp of Solar PV/ year put in place	265	795	1 855	2 385	2 650	2 650	2 650	2 650	2 650	2 650	2 650	2 650	2 650	2 650
DIRECT SAVINGS Electricity savings (MWh / year)	464	1 393	3 250	4 179	4 643	4 643	4 643	4 643	4 643	4 643	4 643	4 643	4 643	4 643

	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
PROJECT KWp of Solar PV/ year											
BASELINE KWp of Solar PV/ year	0	0	0	0	0	0	0	0	0	0	0
NET Cumulative KWp of Solar PV/ year put in place	2 650	2 650	2 650	2 650	2 650	2 650	2 650	2 650	2 650	2 650	2 650

DIRECT SAVINGS Electricity savings (MWh / year)	4 643	4 643	4 643	4 643	4 643	4 643	4 643	4 643	4 643	4 643	4 643

TOTAL Direct Energy Savings 2022-2026 (GJ)	50 142	Direct Emissions Avoided 2022-2026 (tCO2)	9 485
Direct Energy Savings 2027-2046 (GJ)	334 282	Direct Emissions Avoided 2027-2046 (tCO2)	63 235
CUMUL Direct Energy Savings 2022-2026 (GJ)	384 424	Direct Emissions Avoided 2022-2026 (tCO2)	72 720

Indirect impact

The consequential reductions in GHG emissions generated by the implementation of energy efficiency actions and renewable energies in the industrial district were calculated using the Bottom-up approach for a cumulative 20 years after the achievement of the projet between 2027 and 2046 and are estimated at 829,015 tCO2 (see table below).

Table 39: Indirect GHG emissions reductions

		Smart street lighting network	PV installation
Direct energy saving in electricity (MWh / year / LP or kWp installed)		0,5	1,8
Technology lifetime (year)		10	25
Number of LED LP or KWp installed during the project		1100	2650
Number of project replications		10	10
Total Bottom-up Estimate		11 000	26 500
Consequential GHG emissions reductions	(tCO2/year)	3 858[107]	31 617
	between 2027-2046 (tCO2)	38 578	632 349
		Total	829 015

- **Energy efficiency in public lighting of the City of Marrakech**

The project consists of improving the energy performance of public lighting in Marrakech city through the integration of modern and quality lighting according to international standards in force in Europe (standard EN 13201). It aims to replace 61,000 light points with LED streetlights managed remotely. Reductions in GHG emissions were estimated based on an energy saving ratio of 363 kWh / light point/year and a lifetime of 15 years.

[107] The consequential reductions in GHG emissions from this action will be generated over 10 years, which is the lifespan of the LED light points.

Table 40: GHG emissions reductions from energy efficiency of public lighting

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
PROGRAMME Light Point(s) in Year	10 200	10 200	10 200	10 200	10 200									
BASELINE Light Point(s) in Year	10 000	0	0	0	0	0	0	0	0	0	0	0	0	0
NET Cumulative Light Point(s) in Place	20 200	30 400	40 600	50 800	61 000	61 000	61 000	61 000	61 000	61 000	61 000	61 000	61 000	61 000
DIRECT SAVINGS Annual Electricity Savings (MWh)	7 331	11 033	14 735	18 437	22 139	22 139	22 139	22 139	22 139	22 139	22 139	22 139	22 139	22 139

	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
PROGRAMME Light Point(s) in Year												
BASELINE Light Point(s) in Year	0	0	0	0	0	0	0	0	0	0	0	
NET Cumulative Light Point(s) in Place	61 000	40 800	30 600	20 400	10 200	0	0	0	0	0	0	
DIRECT SAVINGS Annual Electricity Savings (MWh)	22 139	14 808	11 106	7 404	3 702	0	0	0	0	0	0	

TOTALS Direct Energy Avoided 2022-2026 (GJ)	265 237	Direct GHG Avoided 2022-2026 (tCO2)	50 174
Direct Energy Avoided 2027-2046 (GJ)	930 288	Direct GHG Avoided 2027-2046 (tCO2)	175 979
CUMUL Direct Energy Savings 2022-2026 (GJ)	1 195 524	Direct Emissions Avoided 2022-2046 (tCO2)	226 15

Indirect impact

The consequential reductions in GHG emissions generated by the energy efficiency in public lighting of the Marrakech city were calculated using the Bottom-up approach for a cumulative 20 years after the achievement of the projet between 2027 and 2046 and are estimated at 678 460 tCO2 (see table below).

Table 41: Indirect GHG emissions reductions from energy efficiency of public lighting

		Energy efficiency of public lighting
Direct energy saving in electricity (MWh / year / LP)		0,36
Technology lifetime (year)		15
Number of LED LP Number of project replications Total Bottom-up Estimate		61 000 3 183 000
Consequential GHG emissions reductions	(tCO2/year)	33 923
	between 2027-2046 (tCO2)	678 460

- **Promotion of the solar PV installations in residential and tertiary sector**

The awareness-raising and training activities planned under the project will promote the use of photovoltaic solar installations in the residential and tertiary sectors to achieve an objective of 58.8 MWp, i.e., 30% of electricity consumption in the tertiary sector and 5% of that of residential.

The reductions in GHG emissions from this action are considered indirect since there will be no direct investment in the installation of solar PV but rather training and awareness of its environmental and economic importance. The impact of the project will begin in 2024.

Table 42: Indirect GHG emissions reductions from the promotion of solar PV installation in residential and tertiary sector

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
PROGRAMME kWp of solar PV(s) in Year	0	0	5 881	5 881	5 881	5 881	5 881	5 881	5 881	5 881	5 881	5 881	0	0
BASELINE kWp of solar PV(s) in Year	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NET Cumulative kWp of solar PV(s) in Place	0	0	5 881	11 762	17 643	23 524	29 405	35 286	41 167	47 048	52 929	58 810	58 810	58 810
INDIRECT SAVINGS Annual Electricity Savings (MWh)	0	0	7 848	15 696	23 544	31 391	39 239	47 087	54 935	62 783	70 631	78 478	78 478	78 478

	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
PROGRAMME kWp of solar PV(s) in Year	0	0	0	0	0	0	0	0	0	0	0
BASELINE kWp of solar PV(s) in Year	0	0	0	0	0	0	0	0	0	0	0
NET Cumulative kWp of solar PV(s) in Place	58 810	58 810	58 810	58 810	58 810	58 810	58 810	58 810	58 810	58 810	58 810
INDIRECT SAVINGS Annual Electricity Savings (MWh)	78 478	78 478	78 478	78 478	78 478	78 478	78 478	78 478	78 478	78 478	78 478

TOTAL INDIRECT ENERGY SAVINGS MWh 2024-2046	1 451 851
TOTAL INDIRECT GHG EMISSIONS REDUCTIONS teCO2 2024-2046	984 394

- **Promotion of energy efficiency in the envelope of new housing**

The action aims to promote energy efficiency at the level of the envelope of new housing by applying the thermal construction regulations of Morocco (RTCM) for the reduction of heating and air conditioning needs and consequently the reduction of the energy bill. This through the organization of training and awareness activities.

The implementation of this project will make it possible to reach 30% of the new households built annually at the level of the city of Marrakech. The emissions reductions from this action are mainly indirect since there is no direct investment for the application of the RTCM.

The reductions in GHG emissions have been estimated by considering a ratio of savings in heating and air conditioning needs of 30 kWh/m²/year, an annual housing production of 11,167 units and an average housing area of 100 m².

Table 43: Indirect GHG emissions reductions from energy efficiency at the level of the envelope of new housing

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
PROGRAMME Area m² in Year	0	0	335 020	335 020	335 020	335 020	335 020	335 020	335 020	335 020	335 020	335 020		
BASELINE Area m² in Year	0	0	0	0	0	0	0	0	0	0	0	0	0	0

NET Cumulative area m² in Place	0	0	335 020	670 040	1 005 060	1 340 080	1 675 100	2 010 120	2 345 140	2 680 160	3 015 180	3 350 200	3 350 200	3 350 200
INDIRECT SAVINGS Annual Electricity Savings (MWh)	0	0	10 051	20 101	30 152	40 202	50 253	60 304	70 354	80 405	90 455	100 506	100 506	100 506

	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046
PROGRAMME Area m² in Year											
BASELINE Area m² in Year	0	0	0	0	0	0	0	0	0	0	0
NET Cumulative area m² in Place	3 350 200	3 350 200	3 350 200	3 350 200	3 350 200	3 350 200	3 350 200	3 350 200	3 350 200	3 350 200	3 350 200
INDIRECT SAVINGS Annual Electricity Savings (MWh)	100 506	100 506	100 506	100 506	100 506	100 506	100 506	100 506	100 506	100 506	100 506

TOTAL INDIRECT ENERGY SAVINGS MWh	2024-2046	1 859 361
TOTAL INDIRECT GHG EMISSIONS REDUCTIONS teCO2	2024-2046	1 266 225

- **Promotion of solar water heaters in the residential and tertiary sectors**

The proposed action aims to promote solar water heaters (SWH) to replace the use of butane and propane gas for producing domestic hot water in the tertiary (hotels, indoor swimming pools, etc.) and residential sectors of the Marrakech city. This through the organization of training and awareness sessions on the environmental importance of SWH and their profitability.

The reductions in GHG emissions have been estimated by considering a target of 40% reduction in the consumption of butane and propane intended for the production of domestic hot water. The impact of this action is essentially indirect and will start from the third year of the project (year 2024).

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
PROGRAMME GJ in Year	0	0	19 864	19 864	19 864	19 864	19 864	19 864	19 864	19 864	19 864	19 864	0	0
BASELINE	0	0	0	0	0	0	0	0	0	0	0	0	0	0

GJ in Year														
INDIRECT SAVINGS Annual LPG Savins (GJ)	0	0	19 864	39 728	59 593	79 457	99 321	119 185	139 049	158 914	178 778	198 642	198 642	198 642

	2036	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**	**2046**
PROGRAMME GJ in Year											
BASELINE GJ in Year	0	0	0	0	0	0	0	0	0	0	0
INDIRECT SAVINGS Annual LPG Savins (GJ)	198 642	198 642	198 642	198 642	198 642	198 642	198 642	198 642	198 642	198 642	198 642

TOTAL INDIRECT ENERGY SAVINGS GJ	2024-2046	3 655 013
TOTAL INDIRECT GHG EMISSIONS REDUCTIONS teCO2	2024-2046	273 443

2.4 Sustainable waste management

a. Setting up a sorting and recovery platform for construction and demolition waste (CDW)

Based on the feasibility study for the establishment of a sorting and recovery platform for CDW at the City of Marrakech, a potential volume of recoverable products has been identified. This volume will serve for production of different types of aggregates (sand, gravel, pebbles, etc.). The production of these aggregates from CDW allows for the mitigation of GHG emissions that would have been emitted for the extraction of these products in quarries and their transport. The platform is sized to process the entire CDW generated in the city, which means that indirect impacts are not to be considered.

For the GHG calculations, several emission factors were taken from the carbon database of France[108] and from the study "Environmental assessment of recycling in France according to the methodology of life cycle analysis" performed by the French Agency of Environment and Energy Efficiency (ADEME)[109]. Below are the different EFs used.

[108] Source : https://www.bilans-ges.ademe.fr/documentation/UPLOAD_DOC_FR/index.htm?dechets_batiment.htm
[109] Source : https://federec.com/FEDEREC/documents/EvaluationenvironnementaleduRecyclageenFranceMai2017123.pdf

Table 44: Calculation assumptions for GHG reductions due to sorting and recovery of CDW

Collection and disposal EF – concrete (KgCO2/t)	0.53
Collection and disposal EF - inert waste (KgCO2/t)	1.85
collection and disposal EF – Non dangerous waste (KgCO2/t)	13.47
Aggregate production EF (KgCO2/t)	4
Recycled aggregate production EF (KgCO2/t)	3
Aggregate energy consumption (kwh/t)	35
Energy consumption of recycled aggregate (kwh/t)	29

- **Baseline:**

The CDW sorting and recovery platform will produce the following quantities:

Table 45: Quantity (tons) of recovered material

Year	1	2	3	4	5	6	7	8	9	10	11	12	13
Sand	15117	22676	30235	30235	30235	30235	30235	30235	30235	30235	30235	30235	30235
Gravel	20157	30235	40313	40313	40313	40313	40313	40313	40313	40313	40313	40313	40313
Grave	50392	75587	100783	100783	100783	100783	100783	100783	100783	100783	100783	100783	100783
Pebbles	15117	22676	30235	30235	30235	30235	30235	30235	30235	30235	30235	30235	30235
Total	100783	151174	201566	201566	201566	201566	201566	201566	201566	201566	201566	201566	201566

Year	14	15	16	17	18	19	20	21	22	23	24	25
Sand	30235	30235	30235	30235	30235	30235	30235	30235	30235	30235	30235	30235
Gravel	40313	40313	40313	40313	40313	40313	40313	40313	40313	40313	40313	40313
Grave	100783	100783	100783	100783	100783	100783	100783	100783	100783	100783	100783	100783
Pebbles	30235	30235	30235	30235	30235	30235	30235	30235	30235	30235	30235	30235
Total	201566	201566	201566	201566	201566	201566	201566	201566	201566	201566	201566	201566

If there was no CDW recovery center, the production of these quantities and their disposal in landfills would generate the GHG emissions presented below.

- **Production Impact:**

Table 46: Production GHG emissions impact

Year	1	2	3	4	5	6	7	8	9	10	11	12	13
Total aggregates produced (tons)	100783	151174	201566	201566	201566	201566	201566	201566	201566	201566	201567	201568	201569
Energy consumed (Kwh)	3527405	5291090	7054810	7054810	7054810	7054810	7054810	7054810	7054810	7054810	7054845	7054880	7054915
GHG emissions (tCO2e)	403	605	806	806	806	806	806	806	806	806	806	806	806

Year	14	15	16	17	18	19	20	21	22	23	24	25
Total aggregates produced (tons)	201570	201571	201572	201573	201574	201575	201576	201577	201578	201579	201580	201581
Energy consumed (Kwh)	7054950	7054985	7055020	7055055	7055090	7055125	7055160	7055195	7055230	7055265	7055300	7055335
GHG emissions (tCO2e)	806	806	806	806	806	806	806	806	806	806	806	806

- **Landfill Impact:**

Table 47: GHG emissions impact due to CDW landfilling

Year	1	2	3	4	5	6	7	8	9	10	11	12	13
Concrete	10925	16388	21850	21850	21850	21850	21850	21850	21850	21850	21850	21850	21850
Mixed inert waste	120175	180263	240350	240350	240350	240350	240350	240350	240350	240350	240350	240350	240350
Non-hazardous waste	93151	139725	186300	186300	186300	186300	186300	186300	186300	186300	186300	186300	186300
GHG emissions (tCO2e)	1483	2224	2966	2966	2966	2966	2966	2966	2966	2966	2966	2966	2966
Total GHG emissions (tCO2e)	1886	2829	3772	3772	3772	3772	3772	3772	3772	3772	3772	3772	3772

Year	14	15	16	17	18	19	20	21	22	23	24	25
Concrete	21850	21850	21850	21850	21850	21850	21850	21850	21850	21850	21850	21850
Mixed inert waste	240350	240350	240350	240350	240350	240350	240350	240350	240350	240350	240350	240350
Non-hazardous waste	186300	186300	186300	186300	186300	186300	186300	186300	186300	186300	186300	186300
GHG emissions (tCO2e)	2966	2966	2966	2966	2966	2966	2966	2966	2966	2966	2966	2966
Total GHG emissions (tCO2e)	3772	3772	3772	3772	3772	3772	3772	3772	3772	3772	3772	3772

- **Mitigation Scenario:**

For the mitigation scenario, GHG emissions were considered from CDW treatment, which gives the following figures:

Table 48: GHG emissions impact of the CDW mitigation scenario

Year	1	2	3	4	5	6	7	8	9	10	11	12	13
Total aggregates produced (tons)	100783	151174	201566	201566	201566	201566	201566	201566	201566	201566	201567	201568	201569
Energy consumed (Kwh)	2922707	4384046	5845414	5845414	5845414	5845414	5845414	5845414	5845414	5845414	5845443	5845472	5845501
GHG emissions (tCO2e)	302	454	605	605	605	605	605	605	605	605	605	605	605
Reduction of GHG emissions	1584	2375	3167	3167	3167	3167	3167	3167	3167	3167	3167	3167	3167

Year	14	15	16	17	18	19	20	21	22	23	24	25
Total aggregates produced (tons)	201570	201571	201572	201573	201574	201575	201576	201577	201578	201579	201580	201581
Energy consumed (Kwh)	5845530	5845559	5845588	5845617	5845646	5845675	5845704	5845733	5845762	5845791	5845820	5845849
GHG emissions (tCO2e)	605	605	605	605	605	605	605	605	605	605	605	605
Reduction of GHG emissions	3167	3167	3167	3167	3167	3167	3167	3167	3167	3167	3167	3167

b. Setting up a platform for recovery of used oils (UO)

Given the touristic vocation of the city of Marrakech, generation of used edible oils is quite substantial from hotels and restaurants. The generated volume of such oils can be processed to produce biodiesel which could be used elsewhere in the city, for example for buses.

For the calculation of direct and indirect impacts, the study "Life Cycle Analysis applied to first generation biofuels consumed in France" of ADEME[110] has identified the emission factors of biodiesels in order to compare them with the same amount of fossil energy.

- **Direct Impacts:**

Table 49: Direct GHG Impacts of used oil Mitigation Scenario

Year	0	1	2	3	4	5	6	7	8	9	10	11	12	13
Production of UO in Morocco (t)[111]	530604	541216	552040	563081	574343	585830	597546	609497	621687	634121	646803	659739	672934	686393
Production of UO in Marrakech (t)	19832	20229	20633	21046	21467	21896	22334	22781	23236	23701	24175	24659	25152	25655

[110] Source : https://www.ademe.fr/analyses-cycle-vie-appliquees-biocarburants-premiere-generation-consommes-france

[111] Source: The National Waste Reduction and Recovery Strategy of Morocco (2019): https://www.environnement.gov.ma/images/D%C3%A9chets/Rapport_de_synth%C3%A8se_SNRVD_FR.pdf

Recoverable portion (t)	4958	5057	5158	5261	5367	5474	5584	5695	5809	5925	6044	6165	6288	6414
Recoverable volume (liters)	5389139	5496922	5606861	5718998	5833378	5950045	6069046	6190427	6314236	6440520	6569331	6700717	6834732	6971426
GHG reduction (tCO2)	8142	8305	8471	8640	8813	8989	9169	9352	9540	9730	9925	10123	10326	10532

Year	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**
Production UO in Morocco (t)	700121	714123	728406	742974	757833	772990	788450	804219	820303	836709	853443	870512
Production of UO in Marrakech (t)	26168	26691	27225	27770	28325	28892	29469	30059	30660	31273	31899	32537
Recoverable portion (t)	6542	6673	6806	6942	7081	7223	7367	7515	7665	7818	7975	8134
Recoverable volume (liters)	7110855	7253072	7398133	7546096	7697018	7850958	8007978	8168137	8331500	8498130	8668092	8841454
GHG reduction (tCO2)	10743	10958	11177	11401	11629	11861	12098	12340	12587	12839	13096	13358

- **Indirect impacts:**

Table 50: Indirect GHG Impact of used Oil Mitigation Scenario

Year	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**
Production of UO in Morocco (t)	530604	541216	552040	563081	574343	585830	597546	609497	621687	634121	646803	659739	672934	686393
Production of UO Marrakech (t)	19832	20229	20633	21046	21467	21896	22334	22781	23236	23701	24175	24659	25152	25655
Recoverable portion (t)	1983	2023	2063	2105	2147	2190	2233	2278	2324	2370	2418	2466	2515	2565
Recoverable volume (liters)	2155656	2198769	2242744	2287599	2333351	2380018	2427618	2476171	2525694	2576208	2627732	2680287	2733893	2788571
GHG reduction (tCO2)	3257	3322	3388	3456	3525	3596	3668	3741	3816	3892	3970	4049	4130	4213

Year	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**

Production of UO in Morocco (t)	700121	714123	728406	742974	757833	772990	788450	804219	820303	836709	853443	870512
Production of UO in Marrakech (t)	26168	26691	27225	27770	28325	28892	29469	30059	30660	31273	31899	32537
Recoverable portion (t)	2617	2669	2723	2777	2833	2889	2947	3006	3066	3127	3190	3254
Recoverable volume (liters)	2844342	2901229	2959253	3018438	3078807	3140383	3203191	3267255	3332600	3399252	3467237	3536582
GHG reduction (tCO2)	4297	4383	4471	4560	4651	4744	4839	4936	5035	5136	5238	5343

c. Enhancing sorting and recycling of household waste

The management of household waste in Moroccan cities is framed by the National Household Waste Plan (PNDM), which has established the principles of sector reforms at the national level. It constitutes the national strategic framework that guides local actions associated with the management of household waste, through ambitious objectives for 2023, particularly in terms of:

- Professionalized collection: reach a rate of 90% ;
- Development of the “sorting-recycling-recovery” sector: reach a rate of 20%;
- Rehabilitation and closure of uncontrolled landfills;
- Generalization of Master Plans in all provinces and prefectures of the Kingdom.

This comprehensive strategic framework provides a solid basis for reorienting the management of household waste at the level of Moroccan provinces and prefectures. At the level of the City of Marrakech, the management of household waste has long presented several shortcomings, mainly in terms of collection rate and treatment through unauthorized landfilling.

However, the year 2015 marked the start of a new era of waste management in Marrakech. After decades of management based solely on uncontrolled landfilling, the sector has been subject of ambitious planning which aims to be ecological, sustainable, job-creating, and beneficial to the local economy. The sector also takes advantage of several strengths and opportunities, including national planning and financing.

The new local strategy incorporates several components, ranging from the rehabilitation of the old landfill with a biogas capture system and the creation of a sanitary landfill with a sorting and treatment center to segregate recyclable materials, compost organic waste and preparation of Residual Derived Fuel (RDF) for cement kilns (new landfill at the Rural Municipality of Mnabha).

Using the Tool for Calculating Greenhouse Gases (GHG) in Solid Waste Management developed by Ifeu (Institut für Energie- und Umweltforschun Heidelberg) [112], it is possible to estimate the GHG reductions from household management. The kye results are presented below:

Table 51: Summary of key household waste data and direct GHG emissions reductions

Total household waste	364,169 ton/year
Waste characteristics	Food waste: 60.0% Garden and park waste: 15.0% Paper, cardboard: 7.5% Plastics: 7.0% Glass: 2.5% Ferrous Metals: 1.5% Others: 6.5%
Waste sorting and recycling rates	Dry material recycling rate: 10.0% Food & Garden waste recycling rate: 10.0% Composting rate of organic waste: 100%
Disposal rate (after sorting and recycling)	Disposal rate in landfill: 90% Mechanical and biological treatment + coprocessing in cement kiln: 10%
GHG emissions	Baseline: 505,565 tCO2e/year Treated waste: 352,760 tCO2e/year Net Direct reductions: 152,805 tCO2e/year

2.5 **Total emissions avoided outside AFOLU**

The direct and indirect GHG emissions reductions that will be generated by low carbon transport, energy efficiency, renewable energy and waste management activities are summarized as follow:

Table 52: Summary of direct and indirect GHG emissions reductions

Type of activity	**Direct impact in tCO_2e**		**Indirect impact over 20 years after the end of the project in tCO_2e**
	5 years during the project	**20 years after the end of the project**	
Low carbon urban mobility	20,071	145,931	807,380

[112] https://www.ifeu.de/en/project/tool-for-calculating-greenhouse-gases-ghg-in-solid-waste-management-swm/

Energy efficiency and renewable energy	80,499	353,452	4,383,272
Sustainable waste management	820,704	3,308,002	109,658
Total	**918,274**	**3,807,395**	**5,300,310**

Whereas impacts in terms of energy saving and increase in renewable energy installed capacity by technology are summarized below:

Table 53: Energy saved and increased renewable energy capacity

Type of activity	Direct energy saving over 25 years (MJ)	Increase in installed capacity in MWp
Low carbon urban mobility	2,373,997,631	na
Energy efficiency and renewable energy	2,356,871,497	61,46
Sustainable waste management	6,104,038,025	na
Total	**10,834,907,153**	**61.46**

Total GHG emissions for all sectors for the project

Direct	**5,543,580 tCO2e**
consequential*	**5,404,605 tCO2e**
TOTAL	**10,948,185 tCO2e**

Annex 15: Additional agreements: such as cost sharing agreements, project cooperation agreements signed with NGOs (where the NGO is designated as the "executing entity"), letters of financial commitments etc. N/A

Annex 16: GEF and/or LDCF/SCCF Core indicators

Core Indicator 1	**Terrestrial protected areas created or under improved management for conservation and sustainable use**						***(Hectares)***
			Hectares (1.1+1.2)				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
			15,500	12,000			
Indicator 1.1	Terrestrial protected areas newly created						
Name of Protected Area	WDPA ID	IUCN category	Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
Marsh Site North-Ouest of the Palm grove		(select)	15,500	280			
		(select)					
		Sum	15,500	280			
Indicator 1.2	Terrestrial protected areas under improved management effectiveness						
Name of Protected Area	WDPA ID	IUCN category	Hectares				
				Baseline		Achieved	
				Endorsement	MTR	TE	
Palm grove		(select)		11,720			
		(select)					
		Sum		11,720			
Core Indicator 2	**Marine protected areas created or under improved management for conservation and sustainable use**						***(Hectares)***
			Hectares (2.1+2.2)				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	*TE*	
Indicator 2.1	Marine protected areas newly created						
Name of Protected Area	WDPA ID	IUCN category	Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
		(select)					
		(select)					
		Sum					
Indicator 2.2	Marine protected areas under improved management effectiveness						
Name of Protected Area	WDPA ID	IUCN category	Hectares				
				Baseline		Achieved	
			PIF stage	Endorsement	MTR	TE	
		(select)					
		(select)					
		Sum					
Core Indicator 3	**Area of land restored**						***(Hectares)***
			Hectares (3.1+3.2+3.3+3.4)				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
Indicator 3.1	Area of degraded agricultural land restored						
			Hectares				
			Expected		Achieved		
			PIF stage	Endorsement	MTR	TE	
Indicator 3.2	Area of forest and forest land restored						
			Hectares				

			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 3.3	Area of natural grass and shrublands restored					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 3.4	Area of wetlands (including estuaries, mangroves) restored					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 4	**Area of landscapes under improved practices (hectares; excluding protected areas)**					***(Hectares)***
			Hectares (4.1+4.2+4.3+4.4)			
			Expected		Expected	
			PIF stage	Endorsement	MTR	TE
			450	*460.50*		
Indicator 4.1	Area of landscapes under improved management to benefit biodiversity					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Resilient urban green spaces			450	460.50		
Indicator 4.2	Area of landscapes that meet national or international third-party certification that incorporates biodiversity considerations					
Third party certification(s):			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 4.3	Area of landscapes under sustainable land management in production systems					
			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 4.4	Area of High Conservation Value Forest (HCVF) loss avoided					
Include documentation that justifies HCVF			Hectares			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 5	**Area of marine habitat under improved practices to benefit biodiversity**					***(Hectares)***
Indicator 5.1	Number of fisheries that meet national or international third-party certification that incorporates biodiversity considerations					
Third party certification(s):			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 5.2	Number of large marine ecosystems (LMEs) with reduced pollution and hypoxial					
			Number			

			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 5.3	Amount of Marine Litter Avoided					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 6	**Greenhouse gas emission mitigated**					***(Metric tons of CO_2e)***
			Expected metric tons of CO_2e (6.1+6.2)			
			PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)		*4,661,484*	*5,543,580*		
	Expected CO2e (indirect)		*6,373,470*	*5,404,605*		
Indicator 6.1	Carbon sequestered or emissions avoided in the AFOLU sector					
			Expected metric tons of CO_2e			
			PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)		*ND*	817,911		
	Expected CO2e (indirect)		*ND*	104,295		
	Anticipated start year of accounting		*2021*	*2022*		
	Duration of accounting		*ND*	*25 year for historical gardens & 100 years for Palm grove*		
Indicator 6.2	Emissions avoided Outside AFOLU					
			Expected metric tons of CO_2e			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
	Expected CO2e (direct)		*4,661,484*	4,725,669		
	Expected CO2e (indirect)		*6,373,470*	5,300,310		
	Anticipated start year of accounting		*2021*	*2022*		
	Duration of accounting		*20*	*25years*		
Indicator 6.3	Energy saved					
			MJ			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
	Expected Energy Saved		*10,312,596,429*	*10,834,907,153*		
Indicator 6.4	Increase in installed renewable energy capacity per technology					
		Technology	Capacity (MW)			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		solar photovoltaic	*159.6*	*61.46*		
Core Indicator 7	**Number of shared water ecosystems (fresh or marine) under new or improved cooperative management**					***(Number)***
Indicator 7.1	Level of Transboundary Diagnostic Analysis and Strategic Action Program (TDA/SAP) formulation and implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE

Indicator 7.2	Level of Regional Legal Agreements and Regional Management Institutions to support its implementation					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.3	Level of National/Local reforms and active participation of Inter-Ministerial Committees					
		Shared water ecosystem	Rating (scale 1-4)			
			PIF stage	Endorsement	MTR	TE
Indicator 7.4	Level of engagement in IWLEARN through participation and delivery of key products					
		Shared water ecosystem	Rating (scale 1-4)			
			Rating		Rating	
			PIF stage	Endorsement	MTR	TE
Core Indicator 8	**Globally over-exploited fisheries Moved to more sustainable levels**					***(Metric Tons)***
Fishery Details			Metric Tons			
			PIF stage	Endorsement	MTR	TE
Core Indicator 9	**Reduction, disposal/destruction, phase out, elimination and avoidance of chemicals of global concern and their waste in the environment and in processes, materials and products**					***(Metric Tons)***
			Metric Tons (9.1+9.2+9.3)			
			Expected		Achieved	
			PIF stage	PIF stage	MTR	TE
Indicator 9.1	Solid and liquid Persistent Organic Pollutants (POPs) removed or disposed (POPs type)					
POPs type			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
(select)	(select)	(select)				
(select)	(select)	(select)				
(select)	(select)	(select)				
Indicator 9.2	Quantity of mercury reduced					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.3	Hydrochloroflurocarbons (HCFC) Reduced/Phased out					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.4	Number of countries with legislation and policy implemented to control chemicals and waste					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 9.5	Number of low-chemical/non-chemical systems implemented particularly in food production, manufacturing and cities					
		Technology	Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE

Indicator 9.6	Quantity of POPs/Mercury containing materials and products directly avoided					
			Metric Tons			
			Expected		Achieved	
			PIF stage	Endorsement	PIF stage	Endorsement
Core Indicator 10	**Reduction, avoidance of emissions of POPs to air from point and non-point sources**					***(grams of toxic equivalent gTEQ)***
Indicator 10.1	Number of countries with legislation and policy implemented to control emissions of POPs to air					
			Number of Countries			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Indicator 10.2	Number of emission control technologies/practices implemented					
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
Core Indicator 11	**Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment**					***(Number)***
			Number			
			Expected		Achieved	
			PIF stage	Endorsement	MTR	TE
		Female	*505,000*	*464,425*		
		Male	*495,000*	*464,425*		
		Total	*1,000,000*	928,850		

Annex 17: GEF 7 Taxonomy

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

	☐**Targeted Research**		
	☒**Learning**		
		☒Theory of Change	
		☐Adaptive Management	
		☒Indicators to Measure Change	
	☒**Innovation**		
	☒**Knowledge and Learning**		
		☒Knowledge Management	
		☒Innovation	
		☒Capacity Development	
		☒Learning	
	☒**Stakeholder Engagement Plan**		
☒**Gender Equality**			
	☒**Gender Mainstreaming**		
		☒Beneficiaries	
		☐Women groups	
		☒Sex-disaggregated indicators	
		☒Gender-sensitive indicators	
	☒**Gender results areas**		
		☐ Access and control over natural resources	
		☒Participation and leadership	
		☒Access to benefits and services	
		☒Capacity development	
		☒Awareness raising	
		☒Knowledge generation	
☒**Focal Areas/Theme**			
	☒**Integrated Programs**		
		☐ Commodity Supply Chains (Good Growth Partnership)	
			☐Sustainable Commodities Production
			☐Deforestation-free Sourcing
			☐Financial Screening Tools
			☐High Conservation Value Forests
			☐High Carbon Stocks Forests
			☐Soybean Supply Chain
			☐Oil Palm Supply Chain
			☐Beef Supply Chain
			☐Smallholder Farmers
			☐Adaptive Management
		☐Food Security in Sub-Sahara Africa	
			☐Resilience (climate and shocks)
			☐Sustainable Production Systems
			☐Agroecosystems
			☐Land and Soil Health

			☐Diversified Farming
			☐Integrated Land and Water Management
			☐Smallholder Farming
			☐Small and Medium Enterprises
			☐Crop Genetic Diversity
			☐Food Value Chains
			☐Gender Dimensions
			☐Multi-stakeholder Platforms
		☐ Food Systems, Land Use and Restoration	
			☐Sustainable Food Systems
			☐Landscape Restoration
			☐Sustainable Commodity Production
			☐Comprehensive Land Use Planning
			☐Integrated Landscapes
			☐Food Value Chains
			☐Deforestation-free Sourcing
			☐Smallholder Farmers
		☒Sustainable Cities	
			☒Integrated urban planning
			☒Urban sustainability framework
			☒Transport and Mobility
			☒Buildings
			☐Municipal waste management
			☒Green space
			☒Urban Biodiversity
			☐Urban Food Systems
			☒Energy efficiency
			☒Municipal Financing
			☒Global Platform for Sustainable Cities
			☒Urban Resilience
	☒**Biodiversity**		
		☒Protected Areas and Landscapes	
			☒Terrestrial Protected Areas
			☐Coastal and Marine Protected Areas
			☐Productive Landscapes
			☐Productive Seascapes
			☐ Community Based Natural Resource Management
		☒Mainstreaming	
			☐Extractive Industries (oil, gas, mining)
			☐Forestry (Including HCVF and REDD+)
			☐Tourism
			☐Agriculture & agrobiodiversity
			☐Fisheries
			☒Infrastructure

			☐Certification (National Standards)
			☐Certification (International Standards)
		☐Species	
			☐Illegal Wildlife Trade
			☐Threatened Species
			☐Wildlife for Sustainable Development
			☐Crop Wild Relatives
			☐Plant Genetic Resources
			☐Animal Genetic Resources
			☐Livestock Wild Relatives
			☐Invasive Alien Species (IAS)
		☐Biomes	
			☐Mangroves
			☐Coral Reefs
			☐Sea Grasses
			☐Wetlands
			☐Rivers
			☐Lakes
			☐Tropical Rain Forests
			☐Tropical Dry Forests
			☐Temperate Forests
			☐Grasslands
			☐Paramo
			☐Desert
		☐Financial and Accounting	
			☐Payment for Ecosystem Services
			☐ Natural Capital Assessment and Accounting
			☐Conservation Trust Funds
			☐Conservation Finance
		☐Supplementary Protocol to the CBD	
			☐Biosafety
			☐ Access to Genetic Resources Benefit Sharing
	☐**Forests**		
		☐Forest and Landscape Restoration	
			☐REDD/REDD+
		☐Forest	
			☐Amazon
			☐Congo
			☐Drylands
	☒**Land Degradation**		
		☒Sustainable Land Management	
			☒ Restoration and Rehabilitation of Degraded Lands

			☐ Ecosystem Approach
			☒ Integrated and Cross-sectoral approach
			☐ Community-Based NRM
			☐ Sustainable Livelihoods
			☐ Income Generating Activities
			☐ Sustainable Agriculture
			☐ Sustainable Pasture Management
			☐ Sustainable Forest/Woodland Management
			☒ Improved Soil and Water Management Techniques
			☐ Sustainable Fire Management
			☐ Drought Mitigation/Early Warning
		☐ Land Degradation Neutrality	
			☐ Land Productivity
			☐ Land Cover and Land cover change
			☐ Carbon stocks above or below ground
		☐ Food Security	
	☐ **International Waters**		
		☐ Ship	
		☐ Coastal	
		☐ Freshwater	
			☐ Aquifer
			☐ River Basin
			☐ Lake Basin
		☐ Learning	
		☐ Fisheries	
		☐ Persistent toxic substances	
		☐ SIDS : Small Island Dev States	
		☐ Targeted Research	
		☐ Pollution	
			☐ Persistent toxic substances
			☐ Plastics
			☐ Nutrient pollution from all sectors except wastewater
			☐ Nutrient pollution from Wastewater
		☐ Transboundary Diagnostic Analysis and Strategic Action Plan preparation	
		☐ Strategic Action Plan Implementation	
		☐ Areas Beyond National Jurisdiction	
		☐ Large Marine Ecosystems	
		☐ Private Sector	
		☐ Aquaculture	
		☐ Marine Protected Area	
		☐ Biomes	

			☐Mangrove
			☐Coral Reefs
			☐Seagrasses
			☐Polar Ecosystems
			☐Constructed Wetlands
	☒**Chemicals and Waste**		
		☐Mercury	
		☐Artisanal and Scale Gold Mining	
		☐Coal Fired Power Plants	
		☐Coal Fired Industrial Boilers	
		☐Cement	
		☐Non-Ferrous Metals Production	
		☐Ozone	
		☐Persistent Organic Pollutants	
		☐ Unintentional Persistent Organic Pollutants	
		☐Sound Management of chemicals and Waste	
		☒Waste Management	
			☒Hazardous Waste Management
			☒Industrial Waste
			☒e-Waste
		☐Emissions	
		☐Disposal	
		☐New Persistent Organic Pollutants	
		☐Polychlorinated Biphenyls	
		☐Plastics	
		☐Eco-Efficiency	
		☐Pesticides	
		☐DDT - Vector Management	
		☐DDT - Other	
		☐Industrial Emissions	
		☐Open Burning	
		☐ Best Available Technology / Best Environmental Practices	
		☐Green Chemistry	
	☒**Climate Change**		
		☒**Climate Change Adaptation**	
			☒Climate Finance
			☐Least Developed Countries
			☐Small Island Developing States
			☐Disaster Risk Management
			☐Sea-level rise
			☒Climate Resilience
			☐Climate information
			☐Ecosystem-based Adaptation

			☐Adaptation Tech Transfer
			☐National Adaptation Programme of Action
			☐National Adaptation Plan
			☒Mainstreaming Adaptation
			☐Private Sector
			☐Innovation
			☐Complementarity
			☐Community-based Adaptation
			☐Livelihoods
		☒**Climate Change Mitigation**	
			☒Agriculture, Forestry, and other Land Use
			☒Energy Efficiency
			☒Sustainable Urban Systems and Transport
			☐Technology Transfer
			☒Renewable Energy
			☒Financing
			☐Enabling Activities
		☐**Technology Transfer**	
			☐ Poznan Strategic Programme on Technology Transfer
			☐ Climate Technology Centre & Network (CTCN)
			☐Endogenous technology
			☐Technology Needs Assessment
			☐Adaptation Tech Transfer
		☐ **United Nations Framework on Climate Change**	☐Nationally Determined Contribution
	☒ **Rio Markers**		
		☒Paris Agreement	
		☒Sustainable Development Goals	
		☐Climate Change Mitigation 0	
		☐Climate Change Mitigation 1	
		☒Climate Change Mitigation 2	
		☐Climate Change Adaptation 0	
		☒Climate Change Adaptation 1	
		☐Climate Change Adaptation 2	

Annex 18: Detailed Theory of Change

Expected change					
	Impact	**Promote integration and innovative urban planning and financing for the sustainable development of Marrakech**			
Interventions that will lead to the change	**Components**	**1. Evidence-based sustainable and integrated urban planning & policy reform**	**2. Sustainable integrated low-Carbon, resilient, conservation and land restoration investments**	**3. Innovative financing and scaling-up**	**4. Advocacy, Knowledge Exchange, Capacity Building and Partnerships**
	Outcomes	1.1. Local and national governments have strengthened institutions, processes, and capacities to undertake evidence-based sustainable integrated planning and policy reform	2.1. Local and national governments have undertaken sustainable integrated low carbon, resilient, conservation and land restoration investments	3.1. Local and national governments initiate innovative financing and business models for scaling-up sustainable urban solutions	4.1. Policy making, and action are influenced at local, regional and national levels to advance the urban sustainability agenda
	Outputs	• 1.1.1: Enabling framing conditions to support vertical integration are improved at the national level. This will be in line with the tools developed by the Sustainable Cities Impact Program Global Platform (SCIP GP) • 1.1.2: Evidence-based sustainable integrated planning and processes are improved and implemented at the City of Marrakech	• 2.1.1: Business plans of low-carbon, resilient and integrated investments are available for the city of Marrakech • 2.1.2: Low carbon investments are performed in urban mobility. This includes BRT system, electric motorcycles and bicycles • 2.1.3: Energy efficiency and renewable energy investments are performed in public and residential buildings. This includes street lighting, buildings and hotels • 2.1.4: New investments are leveraged to improve resource efficiency in urban and peri-urban areas. This includes energy efficiency and water efficiency • 2.1.5: Resilient investments are performed at the Palm grove and urban and peri-urban gardens to ensure biodiversity restoration, conservation and sustainable land management. This will include a vulnerability analysis and a restoration of critical areas.	• 3.1.1: Support to the city of Marrakech to improve its creditworthiness for scaling-up sustainable investments, including review of existing legal frameworks, revenue collection and management, and capital planning • 3.1.2: Innovative and new business, revenue and procurement models to engage private sector are specified and designed for the City of Marrakech • 3.1.3: Innovative financial mechanisms are designed and tested at the City of Marrakech. This may include, but not limited to green bonds infrastructure asset-recycling, and value capture investments.	• 4.1.1: Specific and differentiated outreach and awareness campaigns targeting urban practitioners, the general public are conducted • 4.1.2: In close partnership with SCIP GP, key experiences and lessons learned are compiled and widely disseminated for replication through a range of communication tools including the project website, project stories, issue papers, and scaling up of project results supported • 4.1.3: Project gender mainstreaming plan, stakeholder engagement plan, and a Monitoring and Evaluation (M&E) plan implemented

	Assumptions (internal and external factors)	• Political commitment maintained. • Dialogue involves stakeholders engaged in the decision-making process at all levels (national and local). • Data and information are exchanged in a transparent manner. • Legal procedures and amendments are completed and approved within a reasonable time. • Available human capacities are sufficient and capable of supporting the improvement of urban planning procedures and documents.	• Commitment of local elected officials and territorial collectivity to support sustainable urban development actions. • Multisectoral scientific data is available to effectively inform the design and deployment of actions. • Citizens, following awareness campaigns, make optimal use of the urban equipment and infrastructure establishment (low-carbon transport, green spaces, etc.). • A team of technicians from the city of Marrakech has the necessary skills to ensure the maintenance of the installed equipment (public lighting, fleet of electric motorcycles, sorting at source, smart irrigation, etc.). • The necessary budgets to ensure maintenance and sustainability are implemented. • The concept of eco-districts is becoming a reality.	• The institutional and regulatory framework relating to innovative financing is implemented. • Technical capacities within territorial collectivity are developed and are able to ensure better financial planning. • Sustainable urban investments are designed to attract other sources of finance, including the private sector. • A consultation phase is carried out to meet the main actors of the private sector, to identify the barriers and the keys to the success of the financing mechanisms to be designed. • The concerns of the private sector are effectively taken into account in the design of the financing mechanisms. • Long-term vision of the available, coherent, and understandable territory.	• The tools developed for the realization of the awareness campaigns are understandable, available and adapted to the different categories of targeted actors, including the population. • The capacity building needs are properly assessed and the contents of the workshops meet the needs, especially those related to technical aspects. • The capacity building workshops target the actors actually involved in the implementation of sustainable and resilient actions to climate change in Marrakech. • The beneficiaries of the capacity building workshops correctly apply the instructions provided. • Project results are shared transparently, including difficulties and constraints encountered. • Local actors are committed to sharing their experiences with the SCIP GP platform. • The CPSC plays a full role in ensuring exchanges, disclosure of results, knowledge sharing, etc.
	Activities	**Output 1.1.1** - Diagnosis of framework conditions relating to territorial urban planning (institutional framework, legal framework, procedures, documents, tools, etc.) - Organization of a multisectoral policy dialogue on the integration of sustainability in urban planning and in sectoral strategic planning documents - Development of a national roadmap for the establishment of the framework conditions related to the integration of sustainability into urban planning, to be	**Output 2.1.1** - Development of the Sustainable Urban Mobility Plan - Environmental and social impact studies of the scaling-up of the BRT system - Development of new business plans to promote sustainable solutions related to waste management (dangerous and non-dangerous waste), biodiversity and water resources **Output 2.1.2** - Contribution to the investment related to the deployment of the first phase of EMOB's sharing system of electric scooters	**Output 3.1.1** - Assessment of the financial planning modalities and processes applied in Marrakech - Support for improving financial planning to strengthen financial solvency - International benchmark on the upgrading of legal frameworks associated with business models and innovative financing mechanisms for cities - Review and recommendations for upgrading the legal framework associated with business models and	**Output 4.1.1** - Mapping of stakeholders to be outreached on urban sustainability at national and local level (decision-makers, institutions, civil society, companies, young people, etc.) - Development of an awareness plan on urban sustainability combining standard (workshops and media.) and digital (e.g., social networks, web, blogs) approaches - Preparation of of awareness-raising material specific to the various identified target groups covering the various themes of sustainability (energy, transport, waste, water resources, biodiversity, etc.)

		operationalized through a policy instrument. **Output 1.1.2** - Development of an action plan to reflect the commitment of the Marrakech-Safi sub-region within the framework of the implementation of the SNDD - Territorial dialogue to ensure alignment of objectives and priorities of strategic documents and identification of integrated and sustainable orientations for the city. - Upgrade of the Communal Action Plan (PAC) and other strategic documents of the City of Marrakech to ensure integration of sustainability - Support to the establishment of a multisectoral data management unit (waste, energy, transport, green spaces, etc.) at the City of Marrakech, to scientifically inform the process of integrating sustainability into urban planning.	- Implementation of a Low Emission Pilot Zone (LEZ) near the tourist area Jamaa Lafna Square - Financing of two-wheeled vehicles lanes in some key roads of the city - Development of a smartphone application dedicated to the different public transport means available in the City of Marrakech - Development of a network of solar charging stations for electric motorcycles and vehicles **Output 2.1.3** - Financing of 100% of energy audits of public buildings with an annual electricity / water bill greater than 0.25 million MAD and 25% of EE and RE investments in 10 of the audited buildings - Financing of 20% of energy audits in tourist establishments with a capacity of less than 30 rooms, grant assistance that covers 10% of EE and RE investments in 50 tourist establishments and conducting a study to select 50 future recipients of the sustainable tourism label"Green Key" - Transformation of the Sidi Ghanem industrial zone into an industrial ECO-PARK including : 1/ New intelligent public lighting network with 1 100 light points ; 2/ Installation of rooftop solar PV panels of a capacity of 2,650 kWp and ; 3/ Smart Grid for the industrial zone power network **Output 2.1.4** - Support for the development of at least one non-domestic waste stream (dangerous and non-dangerous waste) with a treatment and recovery center at the Sidi Ghanem Industrial District, such as used oils or electrical and electronic equipment waste - Contribution to the financing of the municipal platform for sorting and recovering construction and demolition waste - Support for the establishment of a standardization system for construction and	innovative financing mechanisms for the city of Marrakech **Output 3.1.2** - International benchmark relating to the methods of private sector involvement in the financing of Citi's assets and services - Design of innovative business, revenue and procurement models to engage the private sector - Training of national and local stakeholders on innovative and new business, income and supply models at city level **Output 3.1.3** - Feasibility analysis of innovative financing mechanisms for the city of Marrakech - Design of innovative mechanisms adapted to the city of Marrakech - Training of national and local stakeholders on innovative financial mechanisms for cities - Support for the implementation of the developed mechanisms	- Deployment of the awareness plan through the organization of awareness campaigns and events targeting key stakeholders (national and local) - Strengthening national and local advocacy capacities to promote urban sustainability (civil society, press, young people, etc.) **Output 4.1.2** - Development of a specific communication plan for the dissemination of project results - Development of communication and knowledge sharing tools (e.g., website, social networks, etc.) - Sharing of project results via SCIP GP **Output 4.1.3** - Implementation of the Gender Action Plan: This action plan, presented in Annex 11, is composed of two parts: (i) an Action Plan by component and by activity linked to gender, and (ii) a detailed gender action plan relating to this activity 4.1.3.1. - Implementation of the stakeholder engagement plan (see Annex 9) - Implementation of the social and environmental management framework (see Annex 10) - Implementation of the monitoring & evaluation plan (see Annex 5).

			demolition waste treatment and recovery byproducts **Output 2.1.5** - Vulnerability assessment including evaluation of the City Biodiversity Index (CBI) of Marrakech and proposal of green charter to be adopted by the city - Intelligent green areas management system : Developing an IoT (Internet of Things) solution through the installation of technological equipment in green areas of Marrakech to ensure their management from a central location, minimize the costs of maintenance and generate water and energy savings - Restoration and landscaping of certain urban green areas (historic garden, public gardens), greening of schoolyards and the creation of 2 agro-ecological gardens - Development of a digitalized monitoring and evaluation system of the Palm Groove - Supporting the organic transition of local farmers at the Palm groove - Supporting the regulatory protection of the Palm groove marsh site under the framework of Law 22-09 relating to Protected Areas		

	Causes/ Barriers	• Diversity of actors in charge of urban planning, lack of coordination and political dialogue with local actors. • Weak consideration of Sustainable Development/Climate Change in public policies, especially at the local level. • Lack of a coordinated global and transversal vision for all sectors. • Discrepancy between planning and implementation. • Delay in updating strategic and planning documents. • Slowness of legal processes. • Insufficient systemic and institutional capacity at the communal level to plan and manage certain aspects related to Sustainable Development/Climate Change. • Lack of consolidation of scientific data at the local level to improve urban planning and its sustainability.	• Low deployment of renewable energy/ energy efficiency measures. • Low quality of public transport service and a modest rate of use • Local culture associated with the motorcycles use. • Lack of sorting at source. • Presence of the informal sector in the upstream solid waste circuit. • Deficit of water resources. • Increase in water needs for irrigation of green spaces. • Rapid increase in urban water needs to the detriment of the agricultural sector.	• Financial resources of local governments remain limited and dependent on the state. • Lack of solvency resulting from below-cost recovery tariffs and inadequate transfers from central government. • Lack of adequate pricing (interest rate and maturity) to encourage climate investments. • Insufficient existing financing tools for the private sector. • Limited financial resources pushing to seek affordable solutions rather than Sustainable Development/Climate Change favorable options.	• Low level of awareness of the Development/Climate Change importance among of the stakeholders involved. • Low level of awareness among the population. • Lack of territorial collectivity capacity in terms of experience and skills to assess investment opportunities in green infrastructure, technical know-how, human resources, and adequate institutional establishment. • Limited understanding of the economic value of green spaces, wetlands, biodiversity, and ecosystem services. • Insufficient knowledge of biodiversity components, genetic erosion, and ecosystem functions. • Low level of awareness among citizens of the soft transport benefits. • Lack of technical capacity. • Low level of knowledge sharing, lessons learned, difficulties encountered, etc. for scaling up sustainable and climate change resilient urban actions. • Weak integration of the gender dimension in urban management.

Annex 19: Co-financing letters *(provided separately)*