Country programme

Republic of Lebanon

December 2024

GREEN CLIMATE FUND

Table of Content

List of Acronyms

AEs	Accredited Entities
AFD	Agence Française de Développement
BdL	Banque du Liban
BMLWE	Beirut and Mount Lebanon Water Establishment
BWE	Bekaa Water Establishment
CEDRE-CIP	Conférence Economique pour le Développement par les Réformes avec les Entreprises - Capital Investment Plan
CEDRO	Country Energy Efficiency and Renewable Energy Demonstration Project for the Recovery of Lebanon
CSOs	Civil Society Organisations
CTCN	Climate Technology Centre and Network
DAE	Direct Access Entity
EBRD	European Bank for Reconstruction and Development
EDL	Electricité du Liban
EE	Energy Efficiency
EIB	European Investment Bank
ESCWA	Economic and Social Commission for Western Asia
ESG	Environmental, Social, and Governance
ESS	Environmental and Social Safeguards
FAO	Food and Agriculture Organization of the United Nations
FMO	Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden N.V
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF-SCCF	Global Environment Facility-Special Climate Change Fund
GEFF	Green Economy Financing Facility
GHG	Greenhouse Gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GoG	Government of Germany
GoL	Government of Lebanon
GS	Gold Standard Foundation
HNAP	Health National Adaptation Plan
IBRD	International Bank for Reconstruction and Development
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IMF	International Monetary Fund
IRENA	International Renewable Energy Agency
IsDB	Islamic Development Bank
IUCN	International Union for Conservation of Nature
JICA	Japan International Cooperation Agency
JPN	Japan
KfW	Kreditanstalt für Wiederaufbau
KPIs	Key Performance Indicators
LCEC	Lebanese Center for Energy Conservation
LEEF	Lebanon Economic Empowerment Fund
LEEREFF	Lebanon Energy Efficiency & Renewable Energy Finance Facility

LEDS	Low-Emission Development Strategy
LEV	Lebanese Economic Vision
LFG	Landfill Gas
LGIF	Lebanese Green Investment Facility
LTS-LERD	Long-Term Strategy for Low-Emission and Resilient Development
MEPS	Minimum Energy Performance Standards
MoA	Ministry of Agriculture
MoE	Ministry of Environment
MoEW	Ministry of Energy and Water
MoI	Ministry of Industry
MoPH	Ministry of Public Health
NAMA	Nationally Appropriate Mitigation Actions
NAP	National Adaptation Plan
NDA	Nationally Designated Entity
NDC	Nationally Determined Contribution
NDCSP	Nationally Determined Contribution Support Programme
NEEAP	National Energy Efficiency Action Plan
NEEREA	National Energy Efficiency and Renewable Energy Action
NOP	No Objection Procedure
NREAP	National Renewable Energy Action Plan
PCA	Pegasus Capital Advisors
PROPARCO	Promotion et Participation pour la Coopération économique
PV	Photovoltaic
R20	Regions of Climate Action
RE	Renewable Energy
SALMA	Smart Adaptation of Forest Landscapes in Mountain Areas
SDC	Swiss Agency for Development and Cooperation
SDGs	Sustainable Development Goals
SMEs	Small and medium-sized entreprises
SnCF	National Company of the French Railways
TAPE	Tool for Agroecological Performance Evaluation
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UN-Habitat	United Nations Human Settlements Programme
UNICEF	United Nations International Children s Emergency Fund
UNIDO	United Nations Industrial Development Organization
UoMs	Unions of Municipalities
USAID	United States Agency for International Development
WASH	Water, sanitation and hygiene
WB	World Bank
WEFE	Water-Energy-Food-Ecosystems
WFP	World Food Programme
WWF	World Wildlife Fund, Inc
WWTP	Wastewater Treatment Plant

Section 1: Country Context

Introduction

Lebanon is a highly urbanized lower middle-income country on the Eastern shore of the Mediterranean Sea. It has a population of 6.8 million people, characterized by a high density per square kilometer. This includes foreign workers, Palestinian refugees, and Syrian displaced individuals, the latter estimated at 1.5 million in 2022. The economy is centered around services (especially financial services and tourism), which make up more than 79.3% of GDP in 2019 and 81.27% in 2020[1] followed by industry and agriculture.

Lebanon is currently going through one of the most difficult crises since the mid-19th century. It is facing an unprecedented humanitarian, economic, financial, monetary, and banking crisis. The accumulation of challenges listed in Table 1 has severely impeded government operations, the appetite for investment, and provision of basic services such as electricity and mobility. Communities' vulnerabilities have drastically increased, with an increasing rate of multidimensional poverty rate from 42% in 2019 to 82% of the total population in 2021[2]

Table 1: Major challenges facing Lebanon since 2011

2011	• The conflict in Syria has significantly impacted Lebanon's social and economic growth, caused deepening poverty and humanitarian needs, and exacerbated pre-existing development constraints in the country • Government of Lebanon (GoL) estimates that the country hosts 1.5 million Syrians who have fled the conflict in Syria
2019	• Civil protests erupt and demand reforms in government • Bank deposits are difficult to access and banking institutions cease lending, which slows down economic activity
2020	• The unemployment rate rose to nearly 30 % reported losing their jobs since the outbreak of COVID-19 and related containment measures [3] • Government defaulted on its Eurobond obligations • Lebanon's GDP plummeted from close to USD 55 billion in 2018 to an estimated USD 23 billion in 2021, with USD GDP/ capita falling by around 55 % • Lebanon experiences a devastating blast which resulted in over 200 deaths and 6,000 injuries, as well as damages estimated to be up to USD 4.6 million • Debt-to-GDP is estimated to have reached 174 % by the end of 2020

[1] Central Administration of Statistics, 2020
[2] ESCWA, 2021. Multidimensional poverty in Lebanon (2019-2021)
[3] WFP, 2020. Assessing the Impact of the Economic and COVID-19 Crises in Lebanon

2021	• The sudden stop in capital inflows, coupled with a smaller but still large current account deficit, has steadily depleted Banque du Liban (BdL)'s foreign exchange (FX) reserves • The 12-month inflation rate has risen steadily and sharply from 10 % in January 2020, to 89.7% in June 2020, 120% in August 2020, and most recently, to 157.9 % in March 2021
2022	• By 2022, the currency has lost more than 95% of its pre-crisis value. This rapid devaluation, as well as supply-chain bottlenecks and fuel shortages have caused food prices to increase dramatically by 483% in January 2022 compared to the year before. • As the Central Bank ran out of foreign reserves and lifted subsidies on the import of most vital goods, prices for electricity, water, and gas skyrocketed, increasing by 595% between June 2021 and June 2022.
2023	• Lebanon is hit by yet another crisis: the spillover effects of the conflict in the Middle East. • The economy was able to find a temporary bottom following years of sharp contraction, thanks to tourism and sizeable remittances. • Following the demarcation of the maritime border, exploration for oil and gas has started, but concluding results were negative.

This series of ongoing crises have added to Lebanon's long-term structural vulnerabilities, which include low-grade infrastructure (a poorly performing electricity sector, water supply shortages, and inadequate solid waste and wastewater management), as well as weak public financial mismanagement, large macroeconomic imbalances, and deteriorating social indicators[4].

Lebanon has been dealing with a crippling humanitarian crisis since 2011 due to the displaced Syrian population, that has stretched an already fragile public infrastructure with demands exceeding the capacity of institutions to meet the required needs. It has been estimated that domestic water has faced significant additional stress due to the Syrian crisis. It is estimated that 2.45 million people are currently suffering from extreme water stress (compared to 2.1 million before crisis), and 3.2 million inhabitants are suffering from high water stress (compared to 2.5 million before the crisis). There are additional 0.5kg/day/person of solid waste, and 34.5 kg BOD/year/person of wastewater being generated by the Syrian displaced population.[5] The displaced Syrian population require a power generation of 480 MW, with an estimated financial burden estimated at USD 330 million[6]

Lebanon's national circumstances changed drastically between 2019 and 2021, with a GDP decrease from approximately USD 55 billion in 2018 to USD 23 billion in 2021, causing GDP per capita to drop by an alarming 55%. This rapid contraction, unprecedented in modern times, is typically associated with conflicts or wars, signifying a significant setback of over 15 years of development and economic growth. The crisis has been further exacerbated by a series of compounding factors including the COVID-19

[4] World Bank, 2021. Country Overview.
[5] MoE/UNDP/GEF, 2022. Lebanon's 4th National Communication to the UNFCCC.
[6] UNDP, 2017. The Impact of Syrian Crisis on the Lebanese Power Sector and Priority Recommendations.

pandemic, the Beirut Port explosion, and recent geopolitical tensions such as the war in Ukraine and the Middles East, which has caused a food security shock and an oil price hike.

Moreover, the Lebanese Pound has devalued while inflation rates soared, impacting the Purchasing Power Parity of Lebanese citizens. The fact that Lebanon relies on imports for most of its food and energy supplies has aggravated the situation even further. The cost of fuel increased drastically since 2018, which significantly changed the domestic, institutional, and industrial pattern of fuel consumption for electricity and heat generation as well as transport. On August 4th, 2020, the port of Beirut explosion damaged the Port infrastructure, and surrounding area, which further set back an already struggling economy and has halted a large area of commercial activity and essential services.

According to Lebanon's updated NDC (2020), "**Despite these hardships, Lebanon is committed to actively taking part in fighting the global climate crisis and will enable** the improvement of the energy and transport sectors through energy efficiency, the sustainable use of Lebanon's land and water resources, the reduction of polluting practices in agriculture, waste, and industry, and enhancing the resilience of communities and infrastructure. This will entail policy and fiscal reforms. These solutions go in tandem with Lebanon's economic recovery and would increase revenue to the government, which are crucial steps to emerge from the current crisis, and move to a low-emission and resilient future".

A Staff-Level Agreement (SLA) between the IMF and the Lebanese Government has been signed in April 2022, yet reforms to support the recovery of the financial sector have been limited. The outlook of the Lebanese economy, in the absence of any reforms will maintain the status quo of inadequate macro-fiscal reforms. This in turn can result in the lack of fiscal space, coupled with an impaired financial sector, with limited access to international capital markets. Under these circumstances, GDP is expected to continue contracting until 2028, and real GDP growth averages 3% over the 2020-2030 period and stands at 0.5% over the next decade (2030-2040). The SLA, which could pave the way for securing USD 3 billion funding from the IMF and unlock funding from the broader international community, is subject to the prior completion of ten actions, including the approval of the implementation of reforms within the banking sector. If reforms are implemented, and debt restructuring are completed by 2025, indicating Lebanon's gradual return and access to international capital markets, the GDP growth is expected to return positive by 2027. Real GDP growth is then projected to average 4.3% for the 2020-2030 period, and 4.1% over the 2030-2040 timeframe[7].

The role of GCF financing in Lebanon stems from GCF's ability to filling the funding gap of climate-related policy implementation in Lebanon, thus contributing the shift towards a low emission sustainable development pathway with increased climate-resilient solutions tailored for Lebanon through innovative, scalable, and replicable project and programme implementation. This in turn will strive the creation of jobs, and specifically green ones. In parallel, GCF can contribute towards strengthening national regulatory frameworks and policies to drive investments in climate-resilient and low-emission technologies and solutions, with additional social benefits, economic benefits, and environmental benefits. Through its private investment arm, the GCF funding can leverage additional private investments, and thus can provide a pathway to strengthen the partnership with the private sector, in investment as well as implementation of climate-related actions, leading to an accelerated implementation of Lebanon's NDC. With limited resources available, Lebanon needs to access the GCF

[7] World Bank. 2024. Country Climate and Development Report.

to implement adaptation and mitigation programmes and projects that will assist the country to attain its ultimate goal of achieving climate resilience and green growth. Yet, there is opportunity to involve the private sector in investing in climate action, and accelerate the green recovery of Lebanon. Therefore GCF will contribute to increasing capital access in Lebanon, through leveraging additional private capital against GCF funding (grant and loans), while at the same time, and due to GCF's concessional funding, will reduce the cost of capital and financing in Lebanon.

Therefore, access to climate financing through the Green Climate Fund would be an opportunity for Lebanon to mainstream the Green recovery concept as the country works on recovering its economic, political and social institutions and dynamics through the following entry points:

- applying the ESS and Gender safeguards required by the GCF for the different projects and climate proofing of projects, which would increase the investment attraction of projects.

- providing access to financial instruments which are currently inaccessible in the country (concessional loans and de-risking)

- blending, which would mobilize several national and international stakeholders in projects that would create jobs and improve the resilience and sustainability of the national economy.

Climate Change Profile

Lebanon is characterized by hot dry summers (June to September) and cool rainy winters (December to mid-March) with an average annual temperature of 15°C and highs of 30-40°C in July and August. Most of the rainfall and snow takes place from November to March, with 75-80% of precipitation peaking in January and reaching up to 160-180 mm/month. The remaining 20 to 25% of rainfall is during the autumn thunderstorms and spring showers.

Lebanon's climate is already changing, as recognized by historical trend assessments conducted for the period 1950-2020, showing an increase of 1.6°C of the annual mean temperatures, a decreasing trend of precipitation (0.35 to 0.53 mm per decade), and increase in natural disaster frequency since 2010, with three times the number of flood incidents in 2015 and increase in heatwave intensity in 2020[8].

According to the latest projections, Lebanon's climate will keep on changing in the medium and long-term. Studies have estimated an increase in the annual mean temperature by 2.2°C by mid-century and 4.4°C by end-century and a decrease in annual precipitation of 10% to 16% by mid-century and by end-century respectively as compared to the reference period of 1995-2014 for the SSP5-8.5 scenario. As a result, consecutive dry days and drought risk will increase in all regions during the 2050-2100 period, Heat waves will increase in duration and intensity, with considerable health impacts to people living in urban areas as well as enhanced needs for energy consumption for cooling needs[8].

In addition, the compound events of heatwaves and droughts are expected to increase almost fivefold for the period 2041-2060 as compared to the reference period 1986-2005. The increase will reflect up to 15 more incidents for inland Lebanon, and 20+ incidents for the northeast and southeast regions. Increase will be overall less pronounced in coastal regions.

Lack of climate-responsive development action would lower Lebanon's growth potential by up to 2 % annually by 2040, and impede service provision, especially in water and energy, hindering key growth

[8] MoE/UNDP/GEF, 2022. Lebanon's 4th National Communication to the UNFCCC.

sectors such as agriculture and tourism. In Lebanon, climate change is projected to induce significant losses in key recovery-driving sectors, particularly in agriculture (up to USD 250 million per year) and tourism (several hundred million per year), threatening jobs, income and livelihoods[9]. Summary of impacts are summarized in Table 2.

Table 2: Sectoral impacts of climate change for Lebanon

Type of Impact	Climate stressors	Projected Risks
LESS SNOW	➢ Increased Temperature ➢ Reduced Rainfall	➢ Reduction in snow cover by 40% ➢ Shift in snow fall from 1,500 m to 1,700 m by 2050, and to 1,900 m by 2090 ➢ Decrease in snow residence time from 110 to 45 days by 2090
LESS WATER AVAILABILITY	➢ Increased Temperatures ➢ Reduced Rainfall and Snow Cover ➢ Increased Drought Incidences ➢ Rise in Sea level	➢ Alteration in seasonal water regimes; reduced flow of most springs; and increase up to 30% in winter floods (up to 30%) ➢ Reduction in river flows leading to increased strain on limited groundwater sources in the dry season ➢ Increased evaporation of surface water ➢ Increased saltwater intrusion/salinization of coastal aquifers
INCREASED DROUGHT PERIODS	➢ Increased Temperatures ➢ Reduced Rainfall and Snow Cover	➢ Disproportionate impact the poorest communities in areas such as Akkar and Baalbek-Hermel, where agriculture is a primary source of income and employment, further exacerbating an already sensitive balance ➢ Impact on fruit trees, cereals, and food legumes, which constitute the majority of Lebanon's agricultural production, export commodities, and are major components of Lebanese cultural and culinary traditions.
LESS AGRICULTURE PRODUCTIVITY	➢ Increased Temperature ➢ Reduced Rainfall and Snow Cover ➢ Increased Incidence of Droughts ➢ More frequent Heat Waves and Fewer Frost Days ➢ Rise in Sea Level	➢ Reduced land productivity (especially wheat, cherries, tomatoes, apples, and olives, and may affect the quality of grapes despite some transient benefits from the expansion of coastal plantations such as banana and tomatoes) ➢ Reduced fruit tree yields (up to 50% through blossom pollination and fecundation of mountainous fruit trees) ➢ Declined soil moisture (high temperatures/ reduced precipitation/ higher evapotranspiration) impacting agricultural yields ➢ Migration of mountain fruit production to higher elevations ➢ Decreased crop quality (particularly wine grapes) ➢ Increased infestation (fungi and bacterial diseases) ➢ Shift in grazing areas and periods for livestock ➢ Increased pumping for irrigation needs
HIGH ENERGY DEMAND	➢ Increased Temperatures	➢ Increased demand on cooling (1.8% increase in electricity consumption for a 1°C increase, and 5.8% for a 3°C increase)

[9] World Bank. 2024. Country Climate and Development Report.

SEA LEVEL RISE	➢ Increased Rise (30-60 cm in 30 Years-2mm/ year)	➢ Increased in seawater intrusion into aquifers ➢ Increased risk of coastal flooding and inundation ➢ Increased coastal erosion altering coastal ecosystems in natural reserves and elsewhere
FORESTS AT RISK	➢ Increased Temperatures	➢ Increased adverse effects on forests suffering from fragmentation, pest outbreaks, forest fires and harmful practices
INCREASE IN MORBIDITY AND MORTALITY	➢ Increased changing Temperatures ➢ Increased Extreme Weather Events	➢ Increased outbreaks of infectious diseases ➢ Increased morbidity and mortality from heat and other extreme weather events ➢ Increased malnutrition from droughts and floods ➢ Increased rates of water-borne, rodent-borne, and vector-borne diseases ➢
TOURISM	➢ Increased Temperatures ➢ Reduced Precipitation	➢ Diminished winter outdoor tourism ➢ Shortened skiing season ➢ Increased losses of natural attractions (e.g., sandy public beaches) ➢ Increased structural damage to the country's archaeological heritage ➢

As per Lebanon's Fourth National Communication[10], Lebanon emitted in 2019 around 30,089 Gg CO_2eq. (as total emissions), which is a 7% decrease from 2018 mainly due to a significant decrease in energy-related emissions. The main contributor to greenhouse gas emissions in Lebanon remains the energy sector (including transport) with 80% of Greenhouse Gas emissions, followed by industrial processes (11%). CO_2 removals from forestry and land use change amounted to -3,060 Gg CO_2 in 2019, bringing Lebanon's Net emissions to 27,028 Gg CO_2eq (figure 1).

[10] MoE/UNDP/GEF, 2022. Lebanon's 4th National Communication to the UNFCCC.

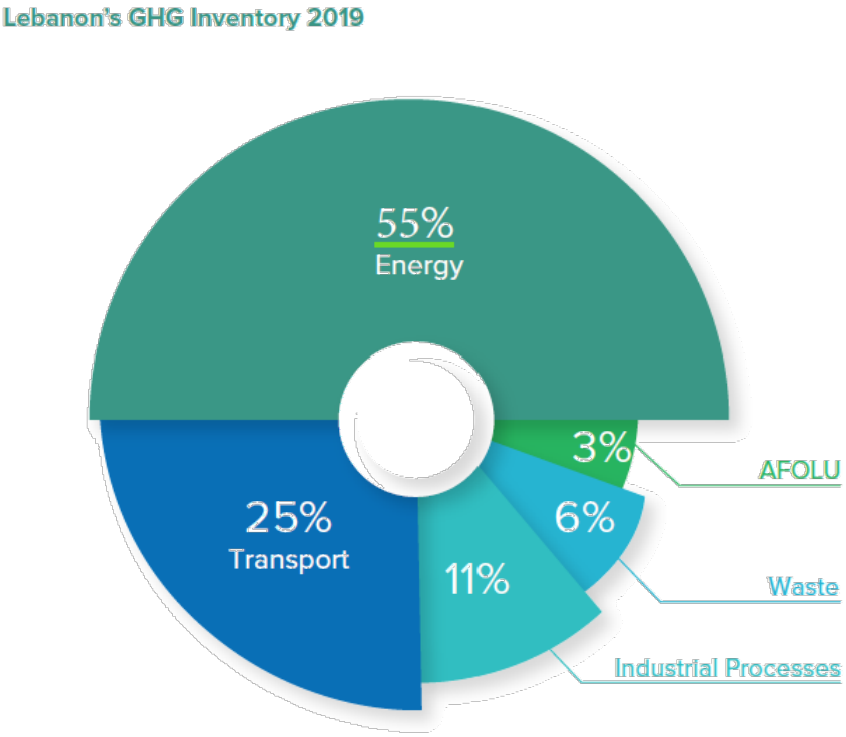

Figure 1 Lebanon's national greenhouse gas inventory by category in 2019.

Lebanon's GHG emissions are increasing at an average rate of 6% every year, which has led to a significant increase in emissions since 1994. As shown in figure 2, the trend of increase in total GHG emissions closely follows the trend of emissions from the energy sector. This significant growth in emissions reflects the growing demand for electricity and transport, despite changing national circumstances, due in part to the changing socio-economic conditions and to the expansion of the national grid. In fact, the sharp increase noticed between the years 1994 and 2000 emissions is due to the increase in gas/diesel oil consumption that accompanied the installation and operation of 4 thermal diesel power plants (the Baalbeck, Tyre, Beddawi and Zahrani) during this period.

However, emission growth did not follow a stable trend, as it witnessed 3 detectable drops in 2007, 2010 and 2019 in addition to one significant increase in 2009.

- The drop in the emission trend in 2007, mainly driven by a similar drop in gas diesel oil import, is an indirect result of the July 2006 war where significant damage to the road network and electricity infrastructure was inflicted. Indeed, due to the impairment of the electricity distribution network, it was impossible to distribute all the electricity produced and consequently thermal power plants were operating at partial load during the year 2007. The rehabilitation of the infrastructure extended over 2 years, and it was not until 2009 that power plants started to run on full capacity again, hence explaining the peak in GHG emissions in 2009.
- The drop in the emission trend in 2010 which is proportional to the decrease in gas/diesel oil import, it is mainly caused by 1) the use of natural gas in the Deir Amar plant in 2010 thus consuming 40% less diesel oil, 2) the increase in hydropower production by 34% from 2009 to 2010 and 3) the decrease in production of the Tyre plant (consuming 30% less gas diesel oil).

- As for the last drop in emissions in 2019, it is the consequence of the civil unrest of October 2019 that was followed by the monetary devaluation and the economic crisis. Indeed, the annual consumption of fuel for electricity and energy generation dropped by around 10% in 2019 compared to 2018, as detected at both the EDL power plant levels, and the private generation levels. In addition, the import and consumption of petcoke, which has a high CO_2 emission factor, decreased by 40% in 2019, further decreasing energy-related emissions.

The transport sector contributed to 23% of Lebanon's emissions in 2019, with most of GHG emissions emanating from passenger cars that run on gasoline. With the absence of efficient and organized public transport, Lebanon's transport patterns are still dominated by the use of private cars, with one of the highest car ownership rates in developing countries (865 out of every 1,000 residents in Lebanon own a car) and a low vehicle occupancy (1.2 compared to average standards for computing travel time reliability of 1.7). Emission from transport has increased by a factor of 5.8 since 1994 reaching 7.6 million tonnes CO_2eq. (7,664 Gg CO_2eq.) in 2019, mainly due to the increase in the vehicle fleet by a factor of 5 during the same period. Solving the problems of the Lebanese transport sector requires both a holistic and integrated strategy that goes beyond the visible incidence of the sector's problems and extends to setting a national transport strategy managing all transport services as a whole. Under Lebanon's NDC, measures are planned to reduce emissions from this sector and hence, contribute in reaching the 2030 target.

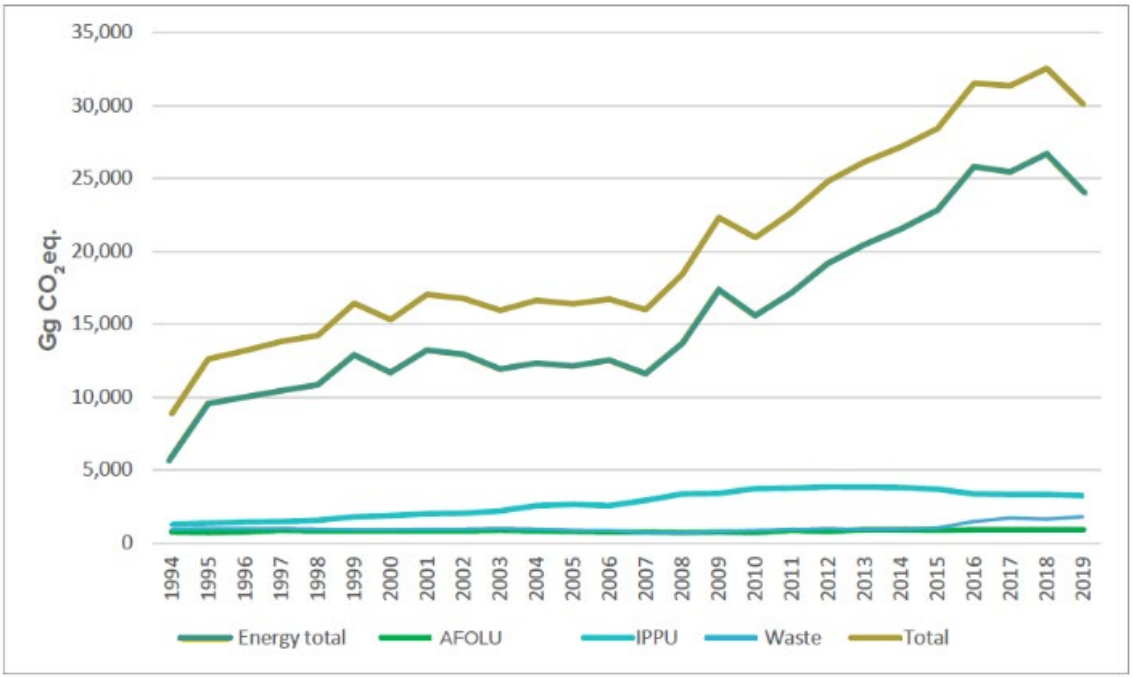

Figure 2 Trend in total and sectoral GHG emissions 1994-2019

Policies and Measures on Climate Change

In 2020, and in accordance with Articles 4.9 and 4.11 of the Paris Agreement (and Law 115/2019, ratification of the Paris Agreement), Lebanon updated its Nationally Determined Contribution (NDC) to respond to the call for enhancement and to meet the goals of the Paris Agreement.

The NDC emphasizes that Lebanon's priority for the next decade is to spur sustainable economic growth through the creation of decent jobs and improve the well-being of its population through welfare programmes and protection of natural resources.

Lebanon's adaptation priorities aim to increase resilience to climate in tandem with enhancing resilience against economic shocks and other possible disasters. The updated NDC sets out 7 adaptation priorities, ranging from disaster risk reduction to ecosystem protection. Most of these priorities are embedded in existing national development strategies and plans. In many cases, they imply mitigation co-benefits and cut across a number of GCF results areas.

The NDC update also puts forward an ambitious mitigation target of 20% emission reduction as an unconditional target by 2030 with clear sector- specific objectives (Table 3). These targets are tied to mitigation principles, which involve green mobility, sustainable cities, sustainable production and energy security.

Table 3 Overview of Lebanon 2020 NDC, including mitigation targets and adaptation priorities

Mitigation Targets
Unconditional targets 2020[11]
1. A GHG emission reduction of 20% compared to the Business-As-Usual (BAU) scenario in 2030, *(amounting to 7,790 Gg. CO_2eq.)*. 2. 18% of the power demand (i.e. electricity demand) and 11% of the heat demand (in the building sector) in 2030 is generated by renewable energy sources. 3. A 3% reduction in power demand through energy-efficiency measures in 2030 compared to the demand under the BAU scenario.
Conditional targets 2020[12]
1. A GHG emission reduction of 31% compared to the Business-As-Usual (BAU) scenario in 2030 *(amounting to 12,075 Gg. CO_2eq.)*. 2. 30% of the power demand (i.e. electricity demand) and 16.5% of the heat demand (in the building sector) in 2030 is generated by renewable energy sources. 3. A 10% reduction in power demand through energy-efficiency in 2030 compared to the demand under the BAU scenario.

[11] The unconditional mitigation scenario includes the impacts of mitigation actions which Lebanon can nationally implement, and through international support in the form of loans or other repayable instruments.

[12] The conditional mitigation scenario covers the mitigation actions under the unconditional scenario, as well as further mitigation actions which can be implemented upon the provision of additional international support in the form of grants.

Adaptation guiding principles
1. Achieve food and water security through the sustainable management of resources 2. Enhance the resilience of the infrastructure, urban and rural areas to subsist climate-related disasters 3. Ensure and protect public health, well-being and safety of all communities through climate-resilient systems 4. Incorporate Nature-Based Solutions as a first line of defense from adverse impacts of climate change 5. Combat desertification and land degradation by achieving Land Degradation Neutrality 6. Substantially reduce the risk of climate and non-climate related disasters to protect lives, the economy and physical and natural assets
Adaptation priorities
1. Strengthen the agricultural sector's resilience to enhance Lebanon's agricultural output in a climate-smart manner 2. Promote the sustainable use of natural resources, restore degraded landscapes, and increase Lebanon's forest cover while meeting the ecological, social and economic needs of sustainable forest management 3. Structure and develop sustainable water services, including irrigation, in order to improve people's living conditions 4. Value and sustainably manage Lebanon's terrestrial and marine biodiversity for the preservation and conservation of its ecosystems and habitats and the species they harbor in order to adequately respond to anthropogenic and natural pressures and to ensure Lebanese citizens equal access to ecosystem goods and services 5. Reduce the vulnerability of climate change impacts on coastal zones, especially in cities 6. Ensure overall public health and safety through climate-resilient health systems 7. Reduce disaster risk and minimize damages by mitigating and adapting to climate-related natural hazards and extreme weather

These mitigation and adaptation priorities derive from principles which constitute their backbone and offer entry-points to prioritize potential investments. Linkages with economic drivers are highlighted in Figure 3 and Figure 4.

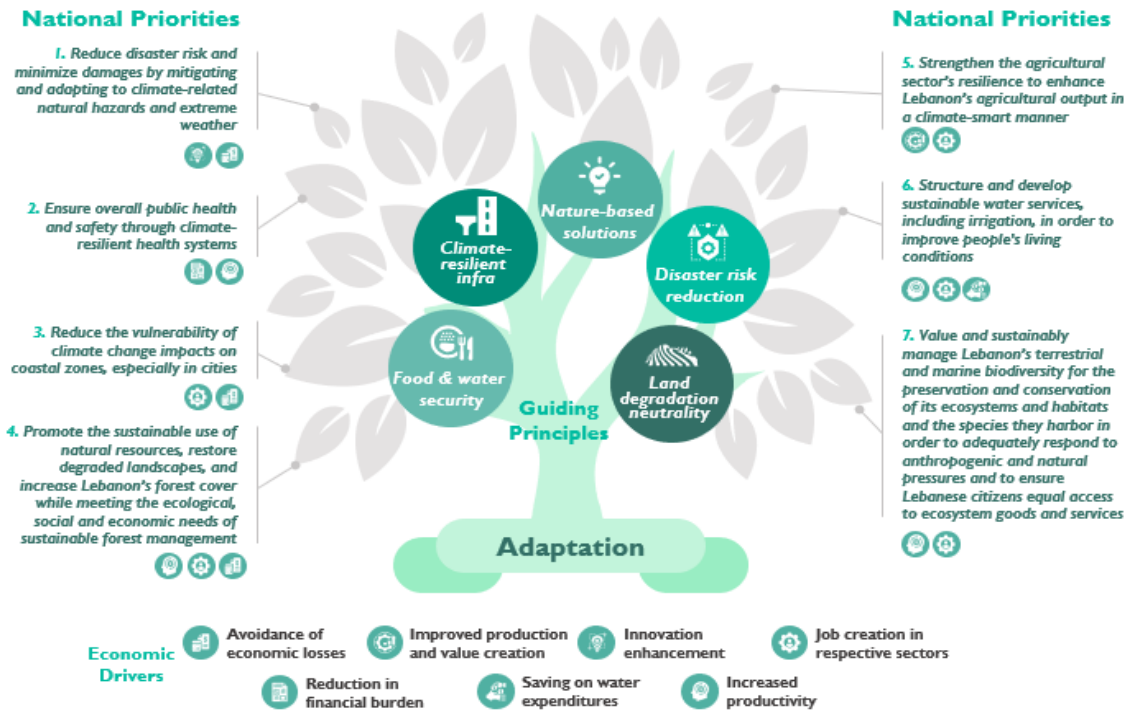

Figure 3: Lebanon's adaptation priorities and linkages to economic drivers

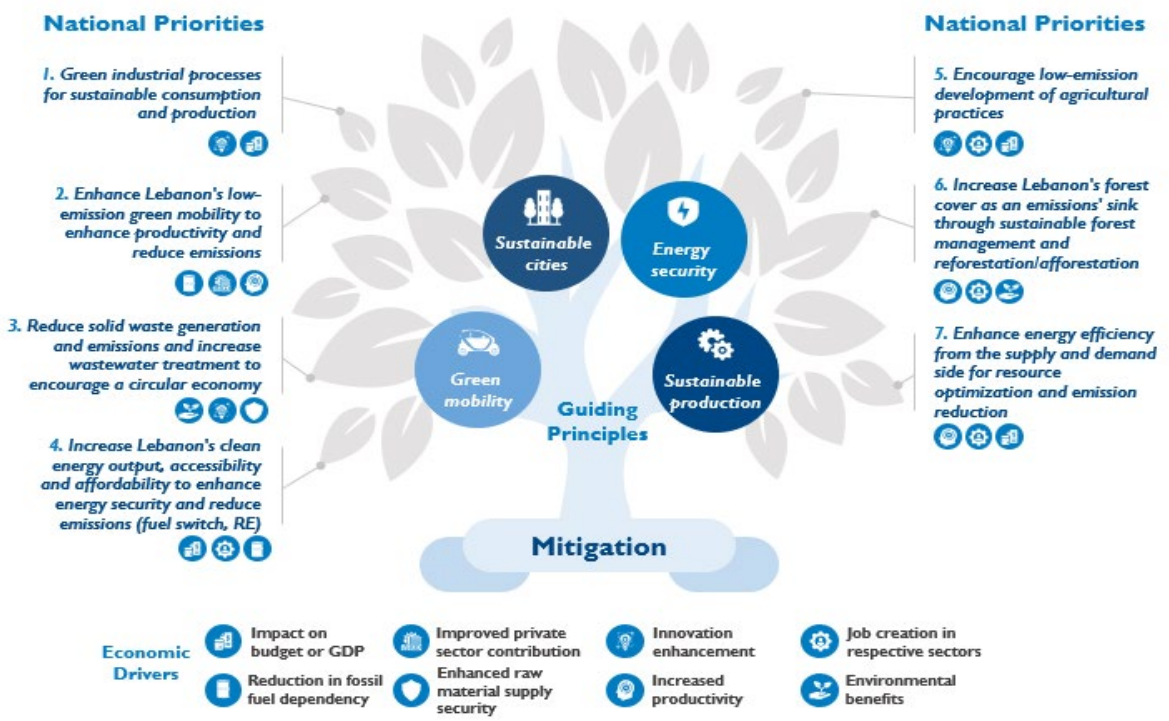

Figure 4: Lebanon's mitigation priorities and linkages to economic drivers

Lebanon's NDC is intended to align climate mitigation and adaptation measures with the country's economic recovery effort. To this end, it recognizes that effective climate action must be based on robust governance mechanisms, regulations and partnerships, setting out six key Climate Action Enablers to advance this goal:

1. Improved governance and institutional capacities
2. Incentivized action and fiscal reform – such as tax incentives for clean technology uptake
3. Strengthened Partnerships – collaboration with the private sector and civil society organizations
4. Innovative Research and Development Encouraged – including partnership with academic bodies, and encouraging innovation labs
5. Comprehensive Integration – including gender institutions, youth groups and vulnerable communities
6. Enhanced Monitoring and Transparency[13]

Linkages with sustainable development

Climate change is one of the greatest threats to sustainable development. If left unmitigated at the global level, it has the potential to severely undermine national efforts in meeting their own development goals. Consequently, the achievement of the SDGs and low-emission resilient development should be integrated to reduce risks and enhance livelihoods and ecosystems beyond 2030 until the second half of the century.

When looking at the climate crisis through the security lens in Lebanon, additional impacts emerge: the reduced availability of resources (natural and otherwise, such as water, land, electricity) will spur local and transboundary competition. Moreover, migration due to lack of resources or extreme weather events may exacerbate the current crisis already ongoing in Lebanon. This will cause more food insecurity and impact on basic services infrastructure. Similar to other countries in the region, this multiplier effect puts Lebanon on a risky path and less likely to secure peace[14]. Therefore, **adverse climate impacts will add an additional layer of challenges and will set back any improvement in the Lebanese socio-economic status.**

Addressing sustainability and risk reduction at all levels of policy-making and planning from the government to non-state actors is urgently needed, to enhance prosperity. In Lebanon, climate action would heavily contribute to economic growth and job creation for example, which sets the stage for an economic and environmental transition. In addition to the prioritization of sustainable economic growth in several ministerial strategies, Lebanon has developed 3 national plans to pave the way to its recovery from these crises and define future growth:

- **The Government financial recovery plan: The 3-year development plan[15]**: to overcome short-term financial challenges through USD10-15 billion in external financing among other

[13] Lebanon's Nationally Determined Contribution, NDC
[14] Regional climate security stakeholder dialogue, 2020. Towards an integrated climate security framework in the Arab region.
[15] Government Financial Recovery Plan, 2020

financial measures. The plan also outlines structural reforms including grid modernization, anti-corruption, and social protection measures.

- **Lebanon Economic Vision (LEV)[16]:** to outline a national strategy for reviving the economy through targeted investments in the 5 sectors it has identified as core engines of growth: agriculture, industry, tourism, financial services, and the knowledge economy. It aims to increase GDP growth to 6% within three years of implementation and cut the unemployment rate by 50% in five to seven years.

- **The CEDRE-CIP (Conférence Economique pour le Développement par les Réformes avec les Entreprises - Capital Investment Plan)[17]**: to outline infrastructure projects that both align with national development goals and create opportunities for economic growth in the short and medium term. These projects cover infrastructure projects in transport, water and irrigation, wastewater, electricity, telecommunications, solid waste, tourism and industrial sectors. For each sector, the programme plan presents an assessment and gap analysis, and identifies how the sector's infrastructure needs line up against SDGs.

Although these plans, if implemented, may put Lebanon back on the path to economic recovery, there is a need to ensure they do not jeopardize the country's GHG emission trajectory under the NDC. **A climate proofing exercise** has been conducted to identify synergy opportunities and showcase how these development plans can achieve their aforementioned objectives while delivering GHG mitigation and building resilience to climate change.[18] Results indicate that for every USD 1 invested in climate proofing the 3 national plans, generates USD 3.2 in long-term savings. Lebanon is also drafting its Long-Term Strategy for Low-Emission and Resilient Development (LTS-LERD), which aims at harmonizing economic growth with reduced ecological impact in 2050 by aligning with concepts of sustainable development and green economy.

Furthermore, in order to synchronize the preparation, update and tracking of Lebanon's NDC, an NDC-SDG assessment was conducted to explore opportunities for complementarity of climate action and sustainable development implementation and support, under the Nationally Determined Contribution Support Programme (NDCSP). The assessment had important implications for Lebanon's NDC update, which merges climate action under the NDC with the SDGs, along with a green and blue economy, leaving no one behind.

Under the synchronization exercise, the mitigation and adaptation strategies that constitute Lebanon's NDC were matched with the different Sustainable Development Goals (SDGs) sub-targets, using the SDG Climate Action Nexus tool (SCAN-tool), developed under the umbrella of the NDC Support Cluster. This tool identifies the climate mitigation and adaptation actions that may impact specific SDG targets. By linking 12 strategies with the 169 SDG sub-targets, the main findings show a high rate of synchronization between climate action and sustainable development in Lebanon, making the achievement of SDG 13 (Climate Action) an enabler for the implementation of other SDGs. It was also found that a large number of linkages were made with non-environment SDGs, such as SDG 3 (Good Health and Well-Being) and SDG 8 (Decent Work and Economic Growth), among others.

[16] MoET, 2018, Lebanon Economic Vision, McKinsey,
[17] GoL, 2018. CEDRE – Capital Imvestment Plan
[18] UNDP, 2021. Climate-Proofing Lebanon's Development Plans

For each strategy/sector (energy, waste, transport, water, biodiversity, industry) a guidance document was produced to showcase the primary SDG linkage, along with other important linkages, based on the tool's matching properties. Moreover, the guidance document recommended further possible linkages with SDGs, to be taken up in the next policy-making cycle.

Examples of linkages include:

- Agriculture is a primary source of income and employment in rural areas reaching up to 25% of the labor force. Socio-economic stability can be maintained for low-income workers through introducing more sustainable agricultural processes that reduce environmental impact, increases resiliency, and uses water and land resources more efficiently (SDGs 1, 2, 6 and 12).
- Renewable energy technologies such as hydro, solar and wind power, can greatly reduce greenhouse gas emissions and greatly reduce premature deaths from air pollutants. Deploying cleaner energy sources that enable the phasing out of diesel generators can therefore have a significant impact on SDGs 3.4 and 3.9 which relate to achieving more positive health outcomes by reducing harmful pollutants.
- Mass transit strategies can reduce transport cost as part of the household budget by providing public transit as an alternative to car ownership, which could potentially positively impact low-income families (SDG 1) and household income (SDG 4). Further, mass transit that aims to increase mobility and accessibility can greatly improve access to jobs and income potential and provide more equitable access to other important places such as schools, hospitals, and shopping (SDG 10).

Lebanon's latest report on the progress towards the Sustainable Development Goals, as published by ESCWA in 2023, indicates progress in 7 of the Sustainable Development Goals, with one goal deemed "on track" while two others are categorized as "off track." Lebanon is advancing in eradicating poverty and ensuring clean water and sanitation in addition to making strides in clean and affordable energy, industry, innovation, and infrastructure. Furthermore, Lebanon is progressing in sustainable cities and communities, life on land, and partnerships for the goals. However, challenges remain in achieving zero hunger and promoting decent work and economic growth. The report also notes a lack of comprehensive data in critical areas like gender equality, quality education, and climate action, hindering a full assessment of Lebanon's sustainable development progress.

Lebanon is currently in the process of finalizing its Low-Emission Development Strategy, which will enable the move to a green and blue economy by removing barriers to clean investments, enhancing research and development and decoupling economic growth and GHG emissions, in line with the concept of sustainable development, just transition and leave no one behind. The LEDS puts forward 9 sectoral objectives (Table 4) that align with Lebanon's climate goals by 2050.

Table 4 Main objectives of Lebanon's Low Emission Development Strategy.

Objective	**1**	Financing maximized renewable energy and grid modernization potential and connectivity
Objective	**2**	Sustainable transportation
Objective	**3**	Accelerated Transition and Modernization Through Re-skilling and Training

Objective	**4**	Shifting sustainable debt through conversion and attribution of capital to climate projects
Objective	**5**	Carbon Financing Hub to value blue carbon, soil carbon, forest carbon, etc.
Objective	**6**	Financially protect the economy and livelihoods
Objective	**7**	Developing domestic food and commercial markets
Objective	**8**	Green and resilient built environment
Objective	**9**	Building resilience to heat-related diseases

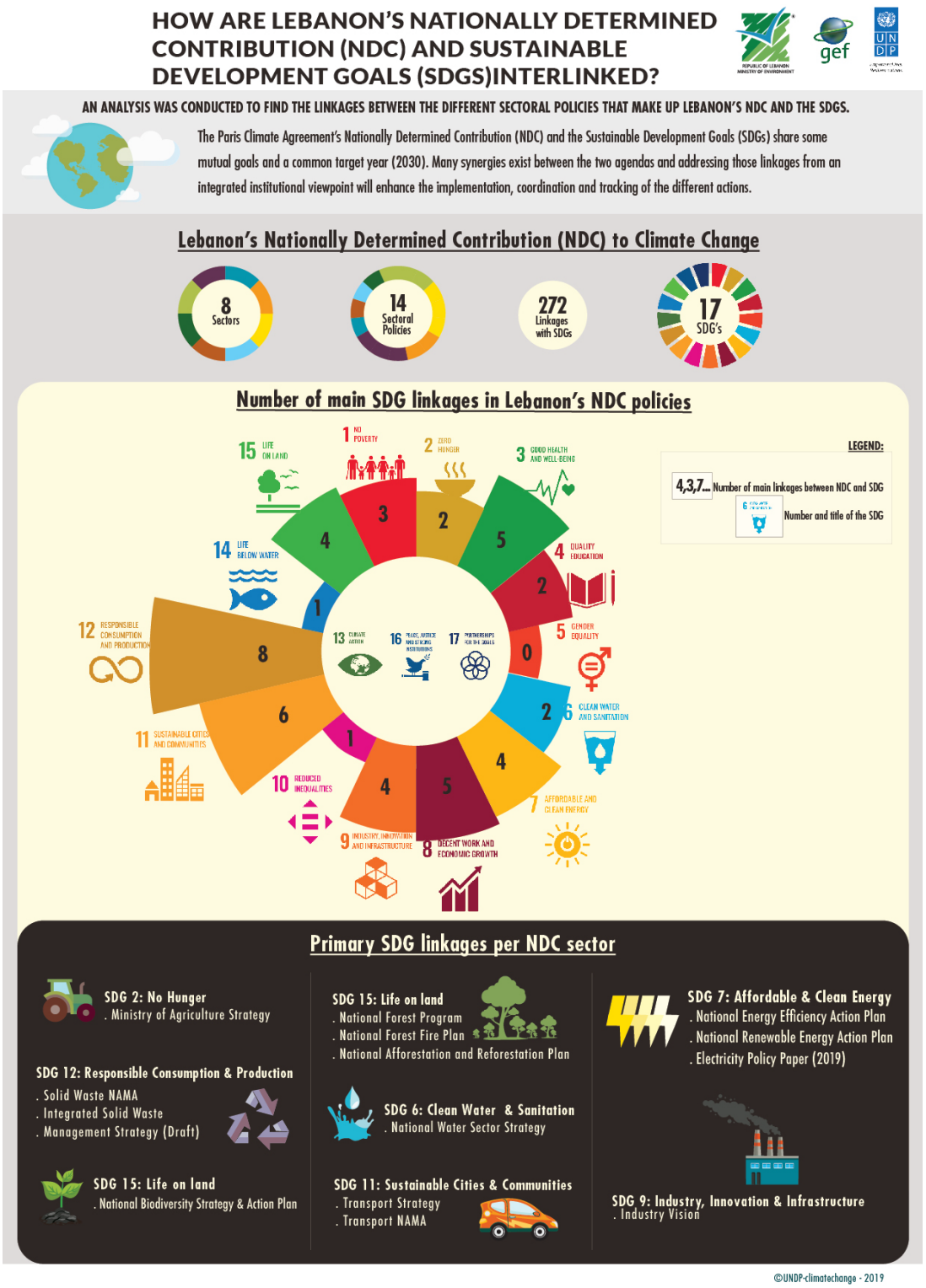

Figure 5: Interlinkages between Lebanon's NDC and SDGs

Section 2: Climate Finance Strategy and Priorities

Landscape of climate finance

Climate finance from multilateral and bilateral sources has played an important role in advancing climate action in Lebanon. It has contributed to the implementation of sectoral policies and programmes, supporting initiatives from both public and private institutions.[19]

In the last few years, Lebanon has been receiving grant funding from the Global Environment Facility, the Adaptation Fund (and is envisaged to continue doing so) and other bilateral donors in support of climate action. While some of these supports (primarily the bilateral ones) are tagged under support to host communities, as part of the support received to alleviate the impacts of the Syrian crisis in Lebanon, this has seen a shift towards general support to Lebanon post-economic crisis. World Bank has been re-directing previously agreed loans for such purposes as well, while recently has started negotiating a new lending window to support the Lebanese agriculture sector with the government of Lebanon. In addition, few private investment funds have been operating, filling the gap left by the banking sector, and have been lending on commercial basis to private sector entities. UNDP, Cedar Oxygen (an investment fund), with partial grants from the European Union have support renewable energy installations in several private enterprises, while USAID in collaboration with IM Fund, has launched the Solar and Renewable Energy Fund, dedicated for investments in the renewable sector.

There is no single entity responsible for tracking and reporting on climate change projects and related expenditures. Therefore, the information presented below is by no means a comprehensive overview of the financial, technical and capacity building support received in relation to climate change in Lebanon. All non-grant climate finance activities have been suspended as a result of Lebanon's current economic and political situation. The status of some of the climate and climate-related finance projects and programmes in Lebanon (budget exceeding USD 5 Million) is shown in Table 5.

[19] MoE/UNDP/GEF, 2021. Lebanon's 4th Biennial Update Report

Table 5: Climate Finance Projects and Programmes in Lebanon

Project/Initiative	Funder	Budget[20]	Expected outputs	Timeframe /status
Greater Beirut Public Transport Project	World Bank	USD 345 Million (loan)[21]	Establish and operate a Bus Rapid Transit (BRT) infrastructure and stations for parts of Beirut. There are ongoing discussions to determine restructuring options with partial cancellation in order to reprogram funds for other priorities of the country.	2018-2023 Suspended
Green Bonds Programme at Fransabank	IFC / EBRD	USD 60 million[22] (green bonds)	Issue green bonds in Lebanon to scale up lending to commercial energy-efficiency, renewable energy and green building projects. There is little transparency about investments under this programme and Fransabank faces ongoing legal proceedings related to insolvency.	2018-2025 Suspended
Green Economy Financing Facility (GEFF)	EBRD	USD 200 million (loan)[23]	Support programme for energy and resource efficiency, and renewable energy, which would have operated through on-lending by commercial banks.	Cancelled
Lebanon Energy Efficiency & Renewable Energy Finance Facility (LEEREFF)	EIB, AFD	Euro 80 million (credit line)[24]	Support for investments in energy efficiency, renewable energy and green building by private companies in Lebanon. Suspended.	2018-2020 Cancelled
National Energy Efficiency and Renewable Energy Action (NEEREA)	Banque du Liban	USD 560 million (loans)[25]	Credit line for projects presented by Lebanese companies in the field of renewable energy (especially solar PV) and energy efficiency.	2010-2019 Suspended

[20] The figures in this column show total project/programme size, unless otherwise stated.
[21] This total includes a World Bank loan commitment of USD 225 Million, which is currently suspended
[22] A first tranche of bonds were issued, with the IFC purchasing USD 45 Million and EBRD purchasing USD 15 Million . The IFC approved the purchase of up to USD 75 million in bonds, but further tranches appear not to have been issued. It is unclear what, if any, investments have been made as a result of the programme. Fransabank (like most large Lebanese commercial banks) is insolvent and has faced asset freezes in March 2022.
[23] The EBRD had committed US$190 Million towards this project prior to its cancellation.
[24] This included a €50 Million commitment from the EIB and €30 Million from AFD
[25] MoE/UNDP/GEF, 2019. Lebanon's 3rd Biennial Update Report. Donor support has included Italian Agency for Development Cooperation (US$5.9m, grant) and European Union (€5m, grant).

Country Energy Efficiency (EE) and Renewable Energy (RE) Demonstration Project for the Recovery of Lebanon (CEDRO IV and V)	European Union/ UNDP	USD 11.5 million (grant)[26]	Promote the use of EE/RE through the application of renewable energy and energy efficiency systems.	2013-2023 Ongoing
BUS Distribution	EBRD	USD 20 million (loan)	Install smart meters and upgrade the distribution network to reduce technical and commercial losses from their current level of 25% to 10-13%. Loan to BUTEC Utility Services, a private electricity distribution company.	2018-2021 Completed
Energy and Waste Solutions	Multi-Donor (UNHCR, NET, DFID, JAPAN)	USD 15.6 Million (grant)	Install renewable energy systems in schools, hospitals and wastewater treatment plants; solar home systems, and closure/rehabilitation of an existing dumpsite.	2014-2020 Completed
Promotion of Agricultural Livelihoods and Employment through Investment in Land Reclamation and Water Reservoirs	The Netherlands /FAO	USD 8.25 Million (grant)	Sustain the agriculture and rural livelihoods of small and medium scale farmers in Lebanon, while adapting to climate change, adopting sustainable natural resources management and conservation approaches.	2016-2020 Completed
Climate Smart Agriculture: Enhancing Adaptive Capacity of the Rural Communities in Lebanon (AgriCAL)	Adaptation Fund and Italian Agency for Development Cooperation / IFAD	USD 7.8 Million (grant)	Enhance the agricultural sector's adaptation capacity to climate change	2015-2022 Completed
Support to Host Communities in the WASH Sector	Multi-Donor (SDC, GoG, BPRM, JPN)/ UNDP	USD 21.2 Million (grant)	Construction or rehabilitation of water collection cisterns, irrigation infrastructure, and rainwater harvesting such mountain lakes and on-farm improved irrigation systems.	2014-2023 Ongoing

[26] MoE/UNDP/GEF, 2021. Lebanon's 4th Biennial Update Report

Smart Adaptation of Forest Landscapes in Mountain Areas (SALMA)	Global Environment Facility-Special Climate Change Fund (GEF-SCCF)/FAO	USD 34.8 Million (7.1 million in grant)[27]	Reduce soil erosion, fragmentation of forest resources and biodiversity losses for more resilient forest and rural mountain forest communities. Increase technical and institutional capacity at national level to replicate participatory climate proof forest management.	2016-2022 Completed

A number of smaller projects and programmes (< USD 5 Million), including capacity building and policy, are also ongoing or have recently been completed. These are listed in Lebanon's Fourth Biennial Update Report[28] and Fourth National communication on Climate Change[29].

Lebanon currently faces considerable challenges in terms of accessing and disbursing climate finance. The pipeline of new climate finance projects and programmes is largely blocked, with no new initiatives worth over USD 5 million approved since 2018. There are significant financial and non-financial barriers to accessing new financing opportunities, as shown in Table 6.

Table 6: Economic, financial and non-financial barriers to climate finance

Economic and financial barriers	
Access to climate finance	• Multilateral institutions have cut or suspended funding in the absence of IMF reform agreement • Limited scope for new activities remains through the restructuring and reallocation of resources approved for existing projects
Market barriers	• Foreign exchange barriers. Lenders expect repayment in dollars due to Lebanese Pound currency risk but borrowers lack access to dollars. Repayment capacity is limited given rapid devaluation of lira. Hedging is not possible until lira is stabilized • Liquidity constraints. Insolvency of the Lebanese banking sector has limited local lending. International capital perceives Lebanon as too high risk • High cost of equity and debt
Non-financial barriers	
Governance	• Political instability – e.g., Lebanon was without a government for much of 2020-2021and without a president since 2022. • Lack of coordination on climate and development finance between different ministries

[27] The GEF-SCCF grant component was USD 7.4 million.
[28] MoE/UNDP/GEF, 2021. Lebanon's 4th Biennial Update Report
[29] MoE/UNDP/GEF, 2022. Lebanon's 4th National Communication to the UNFCCC.

	• Resolution 1595 (2005) includes an asset freeze and travel ban. There are currently no individuals or entities designated under the so called 1636 sanction committee regime. Nonetheless, potential impact of the resolution needs to be considered when developing projects.
Policy and regulatory	• Lack of political consensus over effective policy initiatives • Uncertainty around renewable energy strategy and targets, including Power Purchase Agreement tendering process
Technical	• Most financial intermediaries, particularly commercial banks, lack the technical capacity to assess and manage climate-related investments
Information and awareness	• Data collection and distribution. • Limited capacity to monitor investments
Pipeline	• Lack of national direct access Accredited Entities • Underdeveloped project pipelines, due to lack of sectoral technical expertise, and perceived high risk in the current uncertain economic and political environment

Climate finance alone cannot overcome many of these barriers, which require political and economic reforms as outlined in the 3 national recovery plans highlighted in Section 1. However, new projects and programmes can address specific capacity building, technical assistance and information sharing needs, and build a platform for future investment. Two ongoing initiatives are particularly notable here.

- **NDC Partnership.** Lebanon became a member of the NDC Partnership in 2019. The Ministry of Environment, which serves as its focal point, has used this framework to coordinate with other ministries in developing Partnership Plans for the energy, transport, waste, water and wastewater, agriculture, and forestry sectors, which present priority climate change actions, identify technical and financial assistance needs, and facilitate results tracking.
- **Lebanon Green Investment Facility (LGIF).** The LGIF is a two-pronged structure: the Fund (LGIFund) and LGIF Technical Support Unit (by UNDP). The LGIFund has officially been established and registered in Luxembourg in March 2024 as a RAIF-SICAV fund and is dedicated to support the green transition of the Lebanese private sector. The fund is currently in the pre-marketing phase. It is designed to accommodate various types of financing instruments, including the possibility of blending concessional loans, guarantees, private capital as well as grants (by UNDP as performance-based co-payments). LGIF will support the accelerated implementation of Lebanon's NDC by providing technical assistance and accessible financial instruments to support measures that lower greenhouse gas emissions and increase resilience across various sectors. The LGIF would particularly target private sector investment, including through efforts to develop financial markets and capacity in "green" sectors. Initially, the World Bank (WB) and the Islamic Development Bank (IsdB) supported the initiative. The final steps in moving from design to establishment of the LGIF is has been undertaken through the UNDP's Climate Promise 2.0 project. The regional IsdB Readiness project "Leveraging the Private Sector for Increased Climate Investment and Strengthened Partnerships in the West Asia Region" which has a dedicated outputs on supporting the LGIF through the development of institutional arrangements and mechanisms and the development of a resource mobilization strategy will be complementing remaining activities. In common with other activities in Lebanon's current climate finance pipeline, initial operations of the

LGIF would have to be grant based or highly concessional, and as part of its remit may directly address capacity weaknesses in the financial sector. As the political and financial situation in Lebanon stabilizes, there would be more scope to incorporate other financing instruments.

Preliminary estimates of investment needs

Lebanon's updated NDC sets out seven adaptation priorities, which are intended to increase climate resilience alongside reducing the impact of economic shocks and other possible disasters. These priorities build on existing national development strategies and plans. They involve a number of mitigation co-benefits and cut across several GCF results areas. The updated NDC also lays out a broad commitment to policy and fiscal reforms that would enable the improvement of the energy and transport sectors through energy efficiency, the sustainable use of Lebanon's land and water resources, the reduction of polluting practices in agriculture, waste, and industry, and enhancing the resilience of communities and infrastructure. Detailed gaps and needs assessments have been identified and reported in Lebanon's Fourth National Communication (chapter 7) [30].

Table 7: Preliminary estimates of investment needs

Sector	Context	Investment Priorities	Investment Need
Industry	Most industries in Lebanon use in-house generators, which consume considerable amounts of Gas/Diesel Oil, as a result of the intermittent electricity supply by EDL and constant power shortages. Emissions reductions in this sector are closely tied to improvements in green energy supply. The cement industry is also a major source of industrial emissions.[31]	● "Greening" industrial expansion plans by meeting additional energy demand through renewable sources.[32] Aligned with LEDS objectives 3 and 7 Aligned with economy-wide, RE and EE targets of the NDC	N/A
Transport	Heavily dependent on high-polluting private vehicles and based on poorly maintained infrastructure.[33] This deficit was acknowledged in the 2018 Capital Investment Plan, which allocated almost one-third of funding to improvements in the transportation sector.[34]	● Infrastructure rehabilitation (including rail) ● Expanding mass transit and alternative transport options (e.g. Bus Rapid Transit) ● E-mobility or alternative fuels Aligned with LEDS objective 2 Aligned with economy-wide, target of the NDC	USD 5.6 billion[35]

[30] MoE/UNDP/GEF, 2022. Lebanon's 4th National Communication
[31] MoE, 2020. Lebanon's State of Environment report, p.406.
[32] MoE, 2020. Lebanon's State of Environment report, p.33
33 World bank, 2020. Lebanon economic monitor, the deliberate depression, p.30
[34] Ibid. ; see https://documents1.worldbank.org/curated/en/935141522688031167/pdf/124819-REVISED-CIP-Assessment-Final.pdf p.2
[35] LGIF, p.19 . USD 1.6 billion for infrastructure development; USD 3.7 billion to support the systematic change towards low-emissions vehicles

Sector	Context	Investment Priorities	Investment Need
Waste and wastewater	As set out in the 2017 Nationally Appropriate Mitigation Actions (NAMA) for the waste sector, there is an urgent need to find sustainable waste management solutions to reduce emissions from landfills.[36] A lack of treatment facilities sees large volumes of wastewater discharged into the environment.[37]	● Landfill gas management (LFG), with priority sites identified in 2017 NAMA for the waste sector ● Collection and utilization of gas from landfill sites and open dumps ● Improvements to wastewater collection and treatment, including technical assistance as outlined in NDC Partnership Plan for the water sector Aligned with LEDS objective 2 Aligned with economy-wide, target of the NDC Aligned with adaptation priority 3 in NDC	USD 830-1,400 million[38]
Energy generation and access	Energy generation shows the largest mitigation potential. The NDC sets an unconditional target of generating 18% of Lebanon's power demand (i.e. electricity demand) and 11% of its heat demand (in the building sector) from renewable energy sources by 2030.[39] This corresponds to a target of over 4,700 MW in additional RE capacity.[40] Moreover, Lebanon conditionally commits to generate 30% of its power and 16.5% of its heat demand from renewable energy sources in 2030.	● Utility-scale RE programmes ● Scaling up of distributed RE and EE (this requires policy and regulatory reforms, and capacity building)[41] Aligned with LEDS objective 1 Aligned with economy-wide and RE targets of the NDC	USD 2.2 billion[42]

[36] MoE (2017). "Nationally Appropriate Mitigation Action in Lebanon's Municipal Solid Waste Sector",
[37] MoE/UNDP/GEF, 2021. Lebanon's 4th Biennial Update Report
[38] LGIF, p.23. Estimated cost of implementing Waste Sector NAMA and related initiatives outlined in Lebanon's Capital Investment Plan (CIP).
[39] Lebanon's Nationally Determined Contribution, NDC, p.5
[40] https://documents1.worldbank.org/curated/en/500281593636676732/pdf/Lebanon-Power-Sector-Emergency-Action-Plan.pdf This figure is drawn from World Bank (2020) Lebanon Power Sector Emergency Action Plan
[41] Wolrd Bank, 2020. Lebanon Power Sector Emergency Action Plan, p .9-12
[42] IRENA 2020, p.xiv. This figure corresponds to the estimated investment need to mee the 30% target (compared to the reference case). IRENA has suggested a number of governance and subsidy reforms to help meet this goal, and there is further elaboration in the World Bank's Lebanon Power Sector Emergency Action Plan, also published in 2020.

Sector	Context	Investment Priorities	Investment Need
Agriculture	The most pressing priorities are on the adaptation side, although these present considerable scope for cross-cutting mitigation benefits.	● Greater resource efficiency (water, fertilizers, seeds and fuel). Aligned with LEDS objectives 7 and 8 Aligned with adaptation priorities1, 3 and 4 in NDC	USD 105 million[43]
Forests and land use	Lebanon is one of the most forested countries in the Middle East as a percentage of its land area, with forests and woodlands covering 23.4% of the country's surface. There are mitigation opportunities in reducing deforestation (including reducing emissions from land use interventions and fires), reforestation and sustainable forest management. Lebanon's NDC implementation plans include a National Forest Plan.	● Implementation of National Forest Plan ● Afforestation (target of 70,000 ha.) Aligned with LEDS objective 5 Aligned with economy-wide, target of the NDC Aligned with adaptation priorities 2 and 4 in NDC	USD 540 million[44]
Energy efficiency	Lebanon has sought to address energy efficiency via its National Energy Efficiency Action Plan (NEEAP),[45] which previously received financial support through the NEEREA initiative.[46] However, new regulations and financial incentives are needed.[47]	● End-use efficiency measures, which would target buildings, industry, SMEs, agriculture, public services and facilities ● Prioritization of EE in the reconstruction of buildings and infrastructure damaged by the Beirut port explosion Aligned with LEDS objective 1 Aligned with economy-wide and EE target of the NDC	USD 1.3 billion[48]

[43] Ministry of Agriculture, 2020. Lebanon National Agriculture Strategy (2020-2025). This figure for greening the agricultural sector includes mitigation and adaptation needs.
[44] USD140 million implementation of NFP; 400 million afforestation (the main output of the NARP).
[45] World Bank, 2020. Lebanon Power Sector Emergency Action Plan
[46] IRENA, 2020. Lebanon RE Outlook
[47] World Bank, 2020. "Lebanon Power Sector Emergency Action Plan", pp. 48-80
[48] This figure covers a 5-year period and is a costing for implementing policies suggested in the NEEAP. USD 840 million relates to end-use efficiency measures, with the remaining USD 470 million relating to energy saving measures in the power sector.

Tourism	In winter, the decrease in the number of snow days poses a direct threat to winter tourism. In the summer, the likely increase in the frequency of forest fires poses a threat to Lebanon's growing eco-tourism sector. Challenges facing ecotourism in Lebanon include overdevelopment, pollution, inadequate infrastructure, and limited support for small businesses.	● Conservation and enhancement of Lebanon's main elements of attraction, specifically its socio-cultural and natural resources, which are integral to its distinctive characteristics and identity. ● Boost the economic value of Lebanon's tourism industry while reducing emissions ● Create a brand image to position and differentiate Lebanon as a sustainable tourism destination Aligned with economy-wide target of the NDC Aligned with LEDS objective 5 Aligned with adaptation priorities 2, 4, 5 and 7 in NDC	N/A
Health	Climate change would exacerbate the challenges faced by Lebanon's healthcare system. In addition to the increased climate-related mortality and morbidity, health care facilities are expected to face increased challenges coping with climate-related risks, such as droughts, extreme temperatures, fires, and changed patterns of climate-sensitive diseases which will affect their physical and operational capacity.	● Implementation of the National Environmental health strategy ● Assessment of climate change impact on public health ● Increase climate resilience of health care institutions Aligned with LEDS objective 9 Aligned with adaptation priority 6 of the NDC	N/A

Section 3: Project and Programme Priorities for the GCF

Process for prioritization of projects and programmes

Lebanon's economic, financial system and political crises have resulted in an uncertain investment climate, significantly restricting both private investment and public climate financing from international partners and multilateral agencies. As such, Lebanon faces significant challenges in developing a robust project and programme pipeline, although the gap analysis identified several actions that would help to address this situation.

Lebanon's national climate priorities are set out in its revised NDC (see section 2). In 2022 and 2024, the NDA opened a call and arranged bilateral meetings with a number of Accredited Entities (AEs) that have the ability to operate in Lebanon to express their interest in submitting potential projects to the GCF in line with the priorities presented in the NDC. Three Structural Dialogues with the private sector have been undertaken in the presence of financiers and AEs, in addition to consultations with civil society and other ministries (see Stakeholder section). As a result, 9 potential projects and programmes and 2 readiness potential projects have been communicated to the NDA by the MoEW or directly by accredited entities and have been included in the current pipeline, in addition to the two approved multi-country programmes (FP151 and FP152) and the 3 readiness projects. It is worth noting that most project ideas are still at a conceptual phase and basic information has been provided by AEs, as reflected in the pipeline below.

The 9 concepts and 2 readiness proposal have been provisionally evaluated according to the completeness of the project idea, concept note or related documentation, their alignment with Lebanon's national priorities, and their paradigm shifting potential and climate rationale. The projects and programmes here should be considered part of a living document, with further evaluation to be undertaken under the concept note and the full proposal phases as necessary according to a multi-criteria analysis which would take into consideration the following criteria:

1. *Impact potential:* Size of beneficiary group(s) and/or mitigation potential (greenhouse gas saving/avoidance);
2. *Paradigm shift potential:* sustainability (policy, institutional, technical, financial, business, social); scalability and replicability; innovation;
3. *Sustainable development potential*, including a) economic co-benefits (e.g. job creation); b) social co-benefits (e.g. health/safety improvements, improved energy access); c) environmental co-benefits (e.g. improved air, water or soil quality; biodiversity), d) gender co-benefits (reducing gender inequalities);
4. *Country ownership:* alignment with national development and climate change plans; synergies with other initiatives; sensitivity to political risks and potential environmental risks;
5. *Stakeholder engagement:* a) governance b) institutional arrangements;
6. *Needs of the recipients:* extent to which proposal addresses needs of vulnerable groups and the project/programme supports recovery and enhanced resilience and micro, small to medium-sized enterprises;

7. *Difficulty/ease of implementation:* would the project/programme face considerable operational, economic, technological, social, cultural, regulatory or other risks? Does the requesting entity have a proven track record in Lebanon, and with the chosen financial instrument(s)? What potential is there for co-financing?
8. *Potential for co-financing*, including consideration of co financing partners, track record and risks;
9. *Clarity of focus and theory of change:* is there a clearly defined target group, region, technology, or logical mix of activities within a definitive timeline to enhance climate resilience or reduce GHG emissions? Do the objectives logically relate to a consistent theory of change? Are there details of adequate proposed institutional arrangements (eg. proposed AE, implementing partners)?
10. *Duplication:* does the project/programme duplicate on-going funded activities or other concept notes submitted to GCF.

Approved projects and programmes GCF1 (2020-2023)

Table 8 : Technical Assistance (TS) for the Global Subnational Climate Fund

Project Title	**Description**	**Accredited Entity**		**Submission timeframe**
FP151: Technical Assistance (TS) for the Global Subnational Climate Fund	(Multiple countries-42) The SnCF programme's main outcome is to enable the implementation of approximately 30-40 low carbon and resilient infrastructure projects. The TA programme will establish proof of concept for investment projects, develop tools to trace results (including co-benefits), and offer capacity building to ensure that relevant stakeholders can participate in trainings and outreach, to promote replicability and scalability.	IUCN		Approved at B.27
Fund level strategic impacts		**Total financing**		**Status**
Mitigation: Reduced emissions from: * Energy access and power generation * Buildings, cities and industries and appliances * Forestry and land use Adaptation: Increased resilience of: * Most vulnerable people and communities * Health and well-being, and food and water security * Infrastructure and built environment * Ecosystems		GCF: 18.5 M USD (grant)	Other: 9.5 M USD (grant/in kind)	Approved
Action	**Lead**	**Timeline**		
Under implementation	IUCN, R20 Regions of Climate Action (R20) and Gold Standard Foundation (GS)	Until 2040		

Table 9: Global Subnational Climate Fund

Project Title	**Description**	**Accredited Entity**		**Submission timeframe**
FP152: Global Subnational Climate Fund	(Multiple countries-42) The SnCF programme's goal is to catalyze subnational level mitigation and adaptation solutions. It will enable the implementation of approximately 30-40 low carbon and resilient infrastructure projects through direct equity investment via a dedicated blended investment vehicle, the SnCF Global. The Fund is designed to overcome private investment and project-level barriers, de-risking public and private investment, and promoting replicable solutions.	Pegasus Capital		Approved at B.27
Fund level strategic impacts		**Total financing**		**Status**
Mitigation: Reduced emissions from: * Energy access and power generation * Buildings, cities and industries and appliances * Forestry and land use Adaptation: Increased resilience of: * Most vulnerable people and communities * Health and well-being, and food and water security * Infrastructure and built environment * Ecosystems		GCF: 150 M USD (equity)	Private: Other: 600 M USD	Approved
Action	**Lead**	**Timeline**		
Under implementation	Pegasus Capital, R20 Regions of Climate Action (R20) and Gold Standard Foundation (GS)	Until 2040		

Completed and approved readiness projects

Table 10 : NDA strengthening and country programming support for Lebanon - South Centre

Project Title	**Description**	**Accredited Entity/delivery partner**	**Submission timeframe**
NDA strengthening and country programming support for Lebanon through South Centre	The Readiness Programme developed the capacity of the NDA to engage with government, civil society and private sector stakeholders with regard to the priorities of the Fund and enabled the NDA to recommend to the Board funding proposals in the context of national climate change and ensure consistency of funding proposals from various entities with national plans and strategies. Decision making and evaluation tools and a No-objection procedure were developed to assess readiness, identify agencies to manage finance, designate Direct Access Entities and other critical capacities. Training programmes and consultations were organized with the private sector, academic institutions, CSOs, community groups, women and youth organization, and gender focal points in line ministries involved with climate issues.	South Centre	Approved in 2019
Readiness outcomes		**Total financing**	**Status**
Outcome 1: NDA capacity to undertake fund-related responsibilities and engage national stakeholders strengthened Outcome 2: Lebanon Country programme developed through stakeholder engagement processes.		GCF: 828,159 USD Private Other:	Approved
Action	**Lead**	**Timeline**	
Completed	South Center Ministry of Environment	2019-2022	

Table 11: Leveraging the Private Sector for Increased Climate Investment and Strengthened Partnerships in the West Asia Region -Regional ISDB

Project Title	**Description**	**Accredited Entity/delivery partner**	**Submission timeframe**
Leveraging the Private Sector for Increased Climate Investment and Strengthened Partnerships in the West Asia Region (Regional)	The Regional readiness project aims at improving the enabling environment for private-sector partners in climate finance and support NDAs to develop effective public-private partnerships for stimulating greater engagement and increasing private investment in climate change mitigation and adaptation. For Lebanon, the Project will define a strategic engagement framework with the GCF to help strengthen climate preparedness and resilience at the institutional level. In addition, the project will develop a Resource Mobilization Strategy for the green investment facility with potential financial partners identified and engaged to finance bankable project pipelines	Islamic Development Bank (ISDB)	Approved in 2021
Readiness outcomes		**Total financing**	**Status**
Outcome 1.2: DAEs have established capacity to meet and maintain the GCF's accreditation standards; and accredited DAEs have the capacity to develop a pipeline of projects and effectively implement GCF-funded activities Outcome 1.3: Relevant country Stakeholders have established adequate capacity, systems and networks to support planning, programming and implementation of GCF-funded activities Outcome 2.4: Strategies for transforming and attracting private sector investment for low emissions and resilience developed and used. Outcome 4.1: An increase in the number and quality of project concept notes developed and submitted. Outcome 5.2: Partnerships established to foster development and dissemination of methods frameworks and information systems for enhanced climate finance programming at subnational, national, and regional level.		GCF: 2,625,412 USD Private Other:	Approved
Action	**Lead**	**Timeline**	
Under implementation	IsDB	2024-2026	

Table 12: Increased climate resilience planning for municipal water resources in Lebanon – NAP readiness UNDP

Project Title	**Description**	**Accredited Entity/delivery partner**		**Submission timeframe**
Increased climate resilience planning for municipal water resources in Lebanon (National Adaptation Plan – NAP)	The overall outcome is to increase climate resilience for urban water resource planning through strengthening adaptation planning governance and institutional coordination and assessing gaps and needs to inform the development of a NAP roadmap and strategy. In addition, the project support robust evidence and identifying solutions at the local level. This includes building capacity of two local communities on adaptation, and developing pipeline of prioritized adaptation projects for GCF.	UNDP		Approved in 2023
Readiness outcomes		**Total financing**		**Status**
Outcome 3.1 Adaptation planning governance and institutional coordination strengthened Outcome 3.2 Evidence basis produced to design adaptation solutions for maximum impact:		GCF: 2,101,602 USD	Private Other:	Approved
Action	**Lead**	**Timeline**		
Under implementation	UNDP Ministry of Environment	2023-2027		

Table 13: Development of Energy Efficiency Standards and Labelling program for electric motors, transformers, washing machines and TVs in Lebanon – UNEP/CTCN

Project Title	**Description**	**Accredited Entity/delivery partner**		**Submission timeframe**
Development of Energy Efficiency Standards and Labelling program for electric motors, transformers, washing machines and TVs in Lebanon	The project aims at developing a regulatory framework for Minimum Energy Performance Standards and labels, which will be legislated through a notification by the Ministry of Energy and Water in Lebanon under the proposed draft law. The framework will include Monitoring, Verification and Enforcement (MV&E) elements, and information sharing to track NDC actions. The project will also define the suitable minimum energy performance standards (MEPS) level for four technologies: electric motors, distribution transformers, washing machines and TVs. An awareness plan for three of the technologies (electric motors, washing machines and TVs) will be developed to reach end-users effectively.	UNEP/CTCN		Approved in 2020
Readiness outcomes		**Total financing**		**Status**
Outcome 2.2: GCF recipient countries have developed or enhanced strategic frameworks to address policy gaps, improve sectoral expertise, and enhance enabling environments for GCF programming in low-emission investment		GCF: 584,048 USD	Private Other:	Approved
Action	**Lead**	**Timeline**		
Under implementation	UNEP CTCN Ministry of Environment	2020-2024		

Pipeline Priority projects and programmes GCF (2024-2027)

Following extensive consultations with all accredited entities, 9 full project ideas and 2 readiness projects were presented to the Ministry of Environment, collectively seeking funding amounting to USD 327.5 million in grants, USD 50 Million in loans and USD 4 million for Readiness. Notably, the majority of these requests are proposed as grants, specifically targeting vulnerable sectors such as water and food security and health, with emission reduction potentials from the use of Renewable Energy and Energy efficiency measures across projects. The project proposed are aligned with NDC mitigation targets and adaptation priorities and the objectives of the LEDS, underscoring Lebanon's commitment to supporting the most affected communities, ensuring sustainable and resilient development in the face of a changing climate.

		Sector	Accredited entity	Title and overview	Estimated Budget
FULL PROJECTS	1	Early Waning systems	UNEP	**Enhancing Climate Information Services and Impact-Based Multi-Hazard Early Warning in Lebanon** Climate Services (NFCS), climate observation and hazard forecasting systems, improve warning dissemination systems, disaster preparedness and response.	USD 20 Million Grant
	2	Agriculture, Irrigation	WFP	**Building Climate Resilient Inclusive Food System (CRIFS) in Lebanon** Irrigation, rehabilitation/upgrade processing facilities, use Renewable Energy, promotion of hydroponics, soil and water conservation, hillakes, agribusiness planning, upgrade meteo/weather stations	USD 50 Million Grant
	3	Health	AFD	**Assessing and Enhancing the Climate Resilience of Lebanon's Healthcare System.** Develop vulnerability and adaptation plans for health care facilities, promote and implement green resilient health facilities , including waste management and energy efficiency	USD 65 Million Grant EUR 15 Million from AFD grant
	4	Finance	Cedar Oxygen (PSAA)	**Catalyzing Climate Finance through the Lebanon Green Investment Facility (LGIF)** Mobilize and improve availability and access to green investment and climate finance for various sectors	USD 7 Million grant USD 50 Million loan USD 65 M Private Sector
	5	Water	FAO	**Strengthening resilience to climate change risks through integrated watershed management in Lebanon** Develop watershed management plans for Beirut and EL Assi, Urban/ territorial master plans , implementation of adaptation such as solarization of water, hill lakes, industrial wastewater, circular economy, reforestation, agriculture	USD 76 Million Grant

	6	Agriculture, forestry	FAO	**Enhancing climate resilience in Lebanon through improved territorial development and landscape management** Institutional measures for climate-resilient productive ecosystems, territorial development and integrated landscape management in key areas	USD 40 Million Grant
	7	Energy	UNIDO	**Promoting renewable energy, energy efficiency and circular resource efficiency solutions for the sustainable recovery of Lebanon's industrial sector** Demonstration of suitable technologies and financial business models, demonstration of RE/EE projects and circular projects, Finance strategy, project pipeline	USD 19.5 Million Grant 1:2 to 2:3 co-financing
	8	Water	UNICEF	**Localized climate-appropriate full-cycle water systems in remote locations** Access to safe public water suppose and wastewater management services, , efficiency of service provision, Installation and maintenance of water supply and services	USD 30 Million Grant
	9	Energy	TBD	**Expanding the Beirut River Solar Snake to increase renewable energy integration in electricity provision** Build solar panels over Beirut River and rehabilitate the national control center of EDL	USD 20 Million Grant
		Sector	**Accredited entity**	**Title**	**Estimated Budget**
READINESS PROJECTS	1	Water and Energy	GWP	**Strengthening national technical and institutional capacities in planning and resource mobilization for water climate resilience and energy transition** Climate-resilient planning in the energy water and wastewater sectors, climate-proofing wastewater management plans, urban climate action, 3 concept notes for water and energy	USD 3 Million
	2	NDC	UNDP	**Support the Development of Lebanon's NDC 3.0 by strengthening implementation and financial investment strategies, and enhancing national climate governance framework.** Develop Lebanon's NDC 3.0 through enhancing institutional capacities, improving available information and providing tools for key public and private institutions to enhance planning processes and strategic frameworks for mobilizing climate investment for the country.	USD 1 Million

Table 14: Enhancing Climate Information Services and Impact-Based Multi-Hazard Early Warning in Lebanon UNEP

Project Title (provisional)	Entity name	Accredited Entity	Suggested partner(s)	Area(s) or Sector(s) of Intervention	Expected Project timeframe
Enhancing Climate Information Services and Impact-Based Multi-Hazard Early Warning in Lebanon	United Nations Environment Programme	Yes	Executing partners: CNRS-L - National Early Warning System Platform (NEWSP) Government entities: MoE	Forestry and land use Health and well-being food and water security Early warning System Climate adaptation Climate resilience	Project implementation period: 5 years Project lifespan: 10 years
Expected Budget/ Investment Requested	**Financing type**	**Source and amount of Co-financing if any**		**Intended Beneficiaries**	**Expected time for Concept Note submission.**
USD 17.3 Million	Grant	Indicative Co-financing: USD 2.7 Million in Grants		The proposed project will directly benefit 4,227,099 individuals and indirectly benefit 1,262,640 individuals, primarily via the enhancement of preparedness and adaptive capacities.	Submitted in May 2024
Project Objective	**Alignment with the Country's priorities and strategies**			**Expected Key Outcomes**	
This project will address the urgent need for a people-centered, impact-based multi-hazard early warning system (MHEWS) for improving Lebanon's national and local capacities to monitor, predict, prevent, and respond to climate-related extreme events.	Lebanon has integrated climate change into national strategies in several sectors, and remains committed to addressing the climate crisis. Lebanon takes part of several climate change-related multilateral environmental agreements (including UNFCCC, Kyoto protocol, Paris Agreement, Montreal Protocol, etc.). Lebanon's primary climate change adaptation activities include conducting a multi-hazard risk assessment and updating flood, fire and drought risk maps. Over the years, several agreements, laws and regulations have been approved with the main goal of enhancing Lebanese capacities in DRR. Despite the presence of the aforementioned laws, a lack of proper execution, monitoring, and control in Lebanon is still present and a budget specifically allocated for DRR does not exist. Therefore, the institutional commitment is attained, but achievements are neither comprehensive nor substantial. Enhancing community resilience to			Outcome 1: National Framework for Climate Services (NFCS) established and priority sector resilience increased through enhanced disaster risk responsive adaptation planning. • Output 1.1. A centralized national observational network established. • Output 1.2. Sectoral policies, strategies and planning aligned with and responsive to disaster risk assessments and hazard forecasts. Outcome 2: Climate observation and hazard forecasting systems strengthened for enhanced resilience. • Output 2.1: Lebanon's national observational network strengthened through collaboration and technical alignment. • Output 2.2. Improved impact-based hazard modelling and forecasting.	

	various risks requires the development of new policies and updates to existing ones, aligning them with current risk trends (under output 1.2). Lebanon prioritizes establishing an Early Warning System (EWS) for climatic conditions in its NDC, as part of weather-related hazards and of the forestry and agriculture sectors. In fact, establishing a MHEWS (under outcome 1) is a national priority under Lebanon's Nationally Determined Contribution (NDC) (2020), Lebanon's Fourth Biennial Update Report to the United Nations Framework Convention on Climate Change (UNFCCC) (2021); and Lebanon's Third National Communication to the UNFCCC (2016).	Outcome 3: Warning dissemination systems and communication networks strengthened. • Output 3.1. A coordinated communication strategy and a supporting online platform for accessing Multi-Hazard Early Warning System (MHEWS) information across multiple media platforms in Lebanon developed. Outcome 4: Disaster preparedness and response strengthened through enhanced Multi-Hazard Early Warning System (MHEWS) integration. • Output 4.1. Enhance climate and disaster risk preparedness and response strategies at the regional, national and local levels.
Suggested Activities/Components		
• Climate Services (NFCS) and increase priority sector resilience through enhanced disaster risk responsive adaptation planning. • Enhance resilience by strengthening climate observation and hazard forecasting systems. • Improve warning dissemination systems and communication networks. • Strengthen disaster preparedness and response by enhancing MHEWS integration.		

Table 15: Building Climate Resilient Inclusive Food System (CRIFS) in Lebanon – WFP

Project Title (provisional)	**Entity name**	**Accredited Entity**	**Suggested partner(s)**	**Area(s) or Sector(s) of Intervention**	**Expected Project timeframe**
Building Climate Resilient Inclusive Food System (CRIFS) in Lebanon	United Nations World Food Programme (WFP)	Yes	Executing Partners: WFP Government Entities: MoA, MoE	Food System	2027-2031
Expected Budget/ Investment Requested	**Financing type**	**Source and amount of Co-financing if any**		**Intended Beneficiaries**	**Expected time for Concept Note submission.**
USD 50 Million	Grant	To be determined		Food System actors including producers, processor, distributors and consumers	August 2024
Project Objective	**Alignment with the Country's priorities and strategies**			**Expected Key Outcomes**	
Agri-food systems in vulnerable communities are made resilient to climate change through critical investments and proactive climate resilience measures	The Climate-Resilient Agri-Food Project seamlessly aligns with Lebanon national climate priorities, encompassing key documents like the NAP, NDCs, National Communications to the UNFCCC, and the National Agricultural Strategy: Aligned with the NAP, the project addresses climate change impacts on agriculture, emphasizing adaptive measures for sustainable development. In support of Lebanon NDCs, it promotes climate resilience, contributing to sustainable land use, food security, and adaptive capacity building. Addressing concerns in National Communications to the UNFCCC, the project enhances adaptive capacity and aligns with broader mitigation and adaptation strategies. Aligned with the National Agricultural Strategy, the project tackles key challenges in agriculture, including water resource management and resilient production technologies. Investment in training and early warning systems complements Lebanon's priority for enhanced climate knowledge, reinforcing NDC goals. This project will contribute in the mobilization of investments related to the agriculture and water sectors (table 7).			- Enhancing critical agribusiness value chain infrastructure for climate resilience - Promotion of climate-smart agriculture and restoring degraded landscapes to support food security. - Strengthening the enabling environment for effective climate-risk management	

Suggested Activities/Components
- Rehabilitation of irrigation and water management infrastructure - Construction, rehabilitation and upgrading of value addition and processing facilities. - Promoting renewable energy for value chain improvement. - Deploying climate-resilient varieties and CSA practices. - Promoting adoption of hydroponic and aquaponic farming techniques. - Implementing soil and water conservation to restore degraded areas. - Build capacity in post-harvest management, value addition & climate risk management. - Build capacity in agricultural business planning and management. - Expand the observation network by installing automated weather stations

Table 16: Assessing and Enhancing the Climate Resilience of Lebanon's Healthcare System – AFD

Project Title (provisional)	Entity name	Accredited Entity	Suggested partner(s)	Area(s) or Sector(s) of Intervention	Expected Project timeframe
Assessing and Enhancing the Climate Resilience of Lebanon's Healthcare System.	Agence Française de Développement (AFD)	Yes	Executing partners: - UN agencies to be determined Academia and Lebanese universities MoPH and MoE	Primary, secondary, and tertiary healthcare facilities and related stakeholders	2027-2031
Expected Budget/ Investment Requested	**Financing type**	**Source and amount of Co-financing if any**		**Intended Beneficiaries**	**Expected time for Concept Note submission.**
USD 65 million	Grants	AFD: Euro 15 million (Grant)		-Healthcare facilities -Healthcare staff -Communities benefiting from the service -Vulnerable groups -MoPH/MoE by adopting a pro-active approach	2024
Project Objective	**Alignment with the Country's priorities and strategies**			**Expected Key Outcomes**	
The aim of the project is to increase the climate resilience of healthcare system in Lebanon through 3 specific objectives: - Specific Objective 1: Contribute to moving towards a climate-resilient healthcare system in Lebanon through the production of knowledge, national strategies and plans; - Specific Objective 2: Promote the implementation of green climate resilient health facilities including waste management and energy efficiency; - Specific Objective 3: Encourage the inclusion of knowledge regarding health threats related to contamination and climate change;	The Ministry of Public Health has undertaken numerous initiatives addressing various aspects of climate change. The MoPH is part of the Alliance on transformative Actions for Climate Change and Health ATACH. At COP28 the Minister of Public Health signed the Declaration on climate change and health. The team at the MoPH in collaboration with experts in the field are developing a roadmap for climate change and health in Lebanon. A steering committee for climate change and health will be announced soon to lead on initiatives related to climate change and heath. All the initiatives are conducted in close collaboration and coordination with the Ministry of Environment. This project will contribute in the mobilization of investments related to the health sector, as well as those related to energy efficiency and energy generation and access measures (table 7).			**Objective 1:** Contribute to moving towards a climate-resilient healthcare system in Lebanon through the production of knowledge, national strategies and plans; - Vulnerability and Adaptation Assessment (VA) Plan - On-site VA assessment report for healthcare facilities in Lebanon - GIS-based vulnerability assessment models highlighting high-risk areas/populations in Lebanon. - Comprehensive assessment report, detailing climate vulnerabilities in Lebanon's healthcare system and recommendations - Health National Adaptation Plan (HNAP) aligned with the UNFCCC/Paris Agreement Framework **Objective 2**: Promote the implementation of green climate resilient health facilities including waste management and energy efficiency;	

- Increased number of health workers with healthy and safe working conditions and sufficient capacities and skills to address the health risks of climate change.
- Enhanced infrastructure resilience of healthcare facilities to withstand climate-related hazards in order for health facilities to be less emissive, and to reduce health vulnerability of communities.
- Integrated climate resilience plans into healthcare infrastructure projects and preparedness to mitigate the impact of extreme weather events on healthcare facilities. Advanced waste tracking system to monitor the generation, collection, transportation, and disposal of healthcare waste, ensuring compliance with regulations.

Objective 3: Encourage the inclusion of knowledge regarding health threats related to contamination and climate change; Enhanced health monitoring systems for tracking health vulnerability and system resilience.

Suggested Activities/Components

Objective 1 – Contribute to moving towards a climate-resilient healthcare system in Lebanon through the production of knowledge, national strategies and plans.

- Gain a comprehensive understanding of Lebanon's current and future vulnerability to health risks related climate change: implement a climate change and health vulnerability and adaptation assessment (V&A) permitting to develop a mitigation plan;
- Develop, evaluate and partly fund a health national adaptation plan (HNAP) for Lebanon.
- Develop a national strategy regarding disaster and emergency preparedness/response in relation (but not only) to climate change in Lebanon, integrating a close cooperation between several ministries (health, defense and security).

Objective 2 – Promote the implementation of green climate resilient health facilities including waste management and energy efficiency;

- Conduct and updates GHG emissions inventory of health structures with priorities, funding and action plan;
- Improve the infrastructure and technology of healthcare facilities : enhancing healthcare access (adaptation) and reducing GHG footprint (mitigation) with energy efficiency measures and taking climate risks into account;
- Optimize the healthcare waste management including pharmaceutical and cytotoxic waste, and a cleaner conception of healthcare organization by implementing a sustainable climate resilient system including innovative ways of reusing medical supplies;
- Develop a clear roadmap to increase the capacity of communities to reduce disaster risk;
- Enhance health workforce climate resilience: capacity building regarding climate-sensitive illness management, eco-sensitive organization, One Health approach.

Objective 3 - Encourage the inclusion of knowledge regarding health threats related to contamination and climate change

- Capacity building regarding One Health approach;
- Strengthen monitoring and evaluation systems of the integration of climate-resilient measures in health facilities;
- Strengthen the implementation of gender-sensitive measures

Table 17: Catalyzing Climate Finance through the Lebanon Green Investment Facility (LGIF) – UNDP & Cedar Oxygen

Project Title (provisional)	Entity name	Accredited Entity	Suggested partner(s)	Area(s) or Sector(s) of Intervention	Expected Project timeframe
Catalyzing Climate Finance through the Lebanon Green Investment Facility (LGIF)	Cedar Oxygen and UNDP	Yes for UNDP (Cedar Oxygen to undergo PSAA)	Executing partners: UNDP & Cedar Oxygen Government entities: MoE	The LGIF Program is a cross-cutting intervention, where mobilized financing (climate blended finance) will support climate action (e.g., renewable, energy efficiency, wastewater treatment, water conservation, etc.) in economic sectors such as commercial, agricultural, industrial, healthcare, education, etc. as well as SMEs and MSMEs.	Grant 5 years Loan 12-18 years
Expected Budget/ Investment Requested	**Financing type**	**Source and amount of Co-financing if any**		**Intended Beneficiaries**	**Expected time for Concept Note submission.**
USD 57 Million in total (Excluding agency fees and project management costs) 7 Million grant 50 Million loan	Grant/Loans	USD 65 Million Private Sector Investment		Private Sector in Lebanon	June 2024
Project Objective	**Alignment with the Country's priorities and strategies**			**Expected Key Outcomes**	
Availability and access to climate-related financing, for both climate change mitigation and adaptation is currently very challenging for Lebanon and Lebanese institutions at a time when such financing is imperative for Lebanon to achieve sustainable recovery, achieve Lebanon's nationally determined contribution targets and ensure climate-related resilience. The Catalyzing Climate Mitigation Finance through the Lebanon Green Investment Facility (LGIF) Program intends to overcome these challenges and utilize the LGIF to provide financial instruments to support various Lebanese sectors in	The LGIF Program aims to break the stop-go cycles of climate finance provided to Lebanon over the past years, which incur opportunity costs. For the first time Lebanon will have a dedicated climate finance institution to support Lebanese economic sectors in lowering their GHG emissions and benefit from adaptation co-benefits in the form of increased adaptive capacities. This will positively transform the supply and demand of climate finance. LGIF support will enable the expansion of opportunities to decarbonize the Lebanese economy. The LGIF Program aligns closely with Lebanon's priorities and strategies related to climate change mitigation, adaptation, and sustainable development. It represents a critical step towards			1- Reduced targeted sectors' GHG emissions over lifetime by 3.33 million tons $CO_{2e.}$ 2- Reduced targeted sectors GHG emissions from energy efficiency by 15- 20% on average per site. 3- Green job creation, improved access to healthcare, education, & water & enhanced adaptive capacities 4- Mobilize climate financing from private investors (initial target of USD 65 Million), with a total envelop (with GCF) of USD 115 Million	

distributed renewable energy and energy efficiency technologies and services, with adaptation co-benefits and other sectors included in the Lebanon's nationally determined contribution. The proposed project aims to: - Improve availability and access to climate-related financing for Lebanon and Lebanese institutions. - Facilitate Lebanon's sustainable recovery through enhanced access to climate financing. - Assist Lebanon in achieving its nationally determined contribution (NDC) targets. - Enhance climate-related resilience in Lebanon through the LGIF Program.	achieving Lebanon's climate goals and building a more resilient and sustainable future in: Addressing Climate Change Impacts: The LGIF Program aligns with Lebanon's 4th National Communication on Climate Change, which highlights the urgent need for climate action. By focusing on energy efficiency and renewable energy, the program addresses key sectors contributing to Lebanon's greenhouse gas emissions, such as energy and transport. Meeting NDC Targets: Lebanon has committed to reducing its greenhouse gas emissions by 31% by 2030. The LGIF Program aims to support Lebanon in achieving this target by providing financing for projects that reduce emissions and promote sustainable practices. Building Climate Resilience: The program's focus on adaptation co-benefits, such as improving energy access and efficiency, will help Lebanon build resilience to climate change impacts. This is crucial, especially in sectors like agriculture, where climate change is expected to have significant negative effects. Government Support: The establishment of the LGIF is supported by the Lebanese Council of Ministers' Government Reform Plan and has received endorsement from the Ministry of Environment. This demonstrates the government's commitment to addressing climate change and promoting sustainable development. Economic Recovery: The LGIF Program aims to support Lebanon's sustainable recovery by providing financing for projects that contribute to economic growth while reducing greenhouse gas emissions. This is crucial, given Lebanon's economic challenges and the need for sustainable development. This project will contribute in the mobilization of investments related to all the investment priorities identified in table 7.

Suggested Activities/Components

The LGIF Program herein have two major activities targeted;

1- Provision of a 115 million USD loan (50 million USD from GCF leveraging 65 million USD private financing from other sources) targeting the up-scaling of distributed sustainable energy sector

2- Provision of a 7 million USD grant component to the UNDP as the official TAF of LGIF, to support the LGIF in the technical, environmental, and social evaluation and monitoring of the funded projects, as well as support the applicant beneficiaries and the enabling environment.

Table 18: Strengthening resilience to climate change risks through integrated watershed management in Lebanon– FAO

Project Title (provisional)	Entity name	Accredited Entity	Suggested partner(s)	Area(s) or Sector(s) of Intervention	Expected Project timeframe
Strengthening resilience to climate change risks through integrated watershed management in Lebanon	Food and Agriculture Organization of the UN	Yes	Executing partners: FAO, UN-Habitat, UNIDO Government entities: MoE, MoEW, MoA, MoI, Municipalities, Unions of Municipalities, Water establishments	Areas of action: Health, food and water security; Livelihoods of people and communities, Energy generation and access, Infrastructure and built environment, Ecosystems and ecosystem services. Sector: Water security	5 years

Expected Budget/ Investment Requested	Financing type	Source and amount of Co-financing if any	Intended Beneficiaries	Expected time for Concept Note submission.
USD 76 Million	Grant	None	Local communities in target areas, national and subnational governmental authorities, Lebanon population	2024

Project Objective	Alignment with the Country's priorities and strategies	Expected Key Outcomes
The objective of the proposed project is to promote integrated watershed management approaches across the country through: - Developing and demonstrating integrated watershed management strategies within two not-yet-studied watersheds in Lebanon, namely the Beirut and Arqa Rivers' watersheds. The former exhibits a combination of urban and natural land uses while the latter is predominantly used for agricultural purposes. The strategies will use innovative GIS-based approaches to watershed profiling and integrated climate risk assessment and will maximize the use of ecosystem- and nature - based solutions. - Implementing priority interventions identified by a completed study within Al Assi River watershed.	The proposed project aligns with the general guiding adaptation principles and with priorities 2, 3 and 4 of Lebanon's updated NDCs report This project will contribute in the mobilization of investments related to the water and agriculture priorities identified in table 7.	The following key outcomes are expected: - Safeguarded freshwater resources in study areas through mitigation of domestic, industrial and agricultural pollution. - Organized and guided territorial planning and use of water and other natural resources in the targeted watersheds to provide the appropriate goods and services all while mitigating the impact on watershed resources, taking into account climate change consideration as well natural / biophysical and socioeconomic connections and interrelationships between upland and downstream areas. - Balanced human and environmental needs in the targeted watersheds while simultaneously ensuring sustainable water resources whereby water withdrawals and losses due to climate change do not exceed freshwater replenishment rates. - Strengthened national capacity in the field of climate sensitive, integrated watershed management

- Strengthening national capacity in the context of the application of climate sensitive, integrated watershed management approaches through a combination of stakeholder engagement, knowledge management, and institutionalization efforts.	
Suggested Activities/Components	

Component 1: Watershed profiling and integrated climate risk assessment
- Mapping and engagement with stakeholders including MoE, MoEW, MoA, Beirut and Mount Lebanon Water Establishment (BMLWE), Bekaa Water Establishment (BWE), Ministry of Industry (MoI), Ministry of Interior and Municipalities (MoIM), UoMs and Municipalities in targeted watersheds, Directorate General of Urban Planning, and the general community.
- Watershed profiling: baseline assessment at the scale of two watersheds, the Beirut and Arqa Rivers' watersheds including the following among others:
  - Rapid Water Accounting
  - Climate change, urbanization, agricultural and industrial dynamics mapping and analysis.
  - Identification of anthropogenic pollution sources
  - Assessment of current land use and land cover
  - Assessment of integrated climate risks considering both hazards' and vulnerabilities' dimensions
 	
Component 2: Development of climate sensitive integrated watershed management plans for Beirut and Arqa Rivers:
- Use of findings from watershed profiling and integrated climate risk assessment exercises to develop climate sensitive, integrated watershed management plans for the Beirut and Arqa Rivers.The plans will include the following among others:
  - Urban/ territorial master plans
  - Multi-sectoral sustainable management / development strategies (water, agriculture ,industry, energy, tourism)
  - Identification of needed concrete interventions maximizing the use of ecosystem- and nature-based solutions.
  - Prioritization of interventions based on extent of climate risks.
 	
Component 3: Implementation of priority concrete interventions, including the following:
A number of 'expected' and 'identified' priorities were proposed for implementation under the project for watersheds which will be studied or have already been studied, respectively. The specific watersheds to be targeted have been determined based on the advice of the MoEW, and the selection of priorities was made in consultation with relevant local authorities and with the consultant officially appointed to provide technical assistance to the MoEW. The prioritized concrete interventions encompass a range of relevant activities targeting the urban infrastructure and the agricultural and industrial sectors and will be located in the Beirut and Bekaa governorates.
 	
Expected priorities in Beirut River Watershed:
- Water sensitive urban planning interventions (Recreational parks, agrivoltaics farming projects, biomimicry on river banks, etc.)
- Solarization of most appropriate water supply options
- Development of hill lakes
- Resource efficiency interventions in industrial companies with focus on water and materials efficiency and implementation of cleaner production measures with the aim of reducing water consumption and lowering both wastewater volumes and pollution loads
- Water monitoring interventions in industrial companies	

- Industrial wastewater treatment interventions including installation of PV panels for the stations
- Solarization of industrial wastewater treatment plants
- Application of circular economy solutions for the valorization of specific industrial effluents
- Development and installation of a water resources monitoring system
- Development of urban and peri-urban agriculture
- Reforestation interventions in arid areas

Identified priorities in Al Assi River Watershed will focus on achieving savings in water withdrawals for the agricultural sector and on the control of floods and will encompass the following:

- It is proposed to focus on Ras Baalbek, Al Kaa and Al Fekha areas which are relatively more secure and constitute flood prone areas based on historical data.
- Irrigation network modernization and maintenance projects, together with subsidies for change in irrigation systems at farm level (5 M for Labboue and Ras Baalbeck schemes)
- Natural water retention measures for flood control and provision of irrigation water (hill and flash flood retention lakes, Gabion wall/Check dam/contour ridge, afforestation and agroforestry interventions)
- Development and installation of a water resources monitoring system
- Decentralized nature-based systems for wastewater treatment and reuse
- Implementation of Climate Smart Agriculture interventions
- Installation of solar powered irrigation systems for vulnerable farmers
- Reforestation of arid areas

Component 4: Stakeholder engagement, knowledge management and institutionalization

- Implementation of a bottom-up approach whereby public input is incorporated to the science and policy table throughout all project phases.
- Implementation of a knowledge management and replication strategy to share knowledge and promote project replication.
- Institutionalization of project findings through capacity building activities and policy recommendations
- Strengthening formal and informal role of farmers and water users under water users' associations

Table 19: Enhancing climate resilience in Lebanon through improved territorial development and landscape management– FAO

Project Title (provisional)	Entity name	Accredited Entity	Suggested partner(s)	Area(s) or Sector(s) of Intervention	Expected Project timeframe
Enhancing climate resilience in Lebanon through improved territorial development and landscape management	Food and Agriculture Organization of the United Nations (FAO)	Yes	Executing partner: FAO Government entities: MoA, MoE	Territorial development; integrated landscape management; agriculture; food security	4 years
Expected Budget/ Investment Requested	**Financing type**	**Source and amount of Co-financing if any**		**Intended Beneficiaries**	**Expected time for Concept Note submission.**
USD 40 Million	Grant	None		MoA, MoE, the district and governorates managers, union of municipalities, municipalities and local committees, SMEs, farmers	2024
Project Objective	**Alignment with the Country's priorities and strategies**			**Expected Key Outcomes**	
The proposed GCF project will contribute to the national efforts for climate-resilient territorial development by implementing integrated landscape management approaches for adaptation to climate change. Through this approach, implemented globally by FAO, the project will help transition key productive sectors (agriculture, forests and rangelands) to climate resilient, low-emission and green development pathways that have clear long-term socio-economic and environmental benefits. As such, the project's overarching objective is to promote transformational and productive ecosystem management and responds well to Lebanon's climate risks as articulated in its NDCs and national plans and strategies. It aims to strengthen the food security, livelihood and landscape adaptation elements of existing local models of land management enhancement developed by key stakeholders and partner agencies.	The proposed GCF investment plan is aligned with Lebanon's commitment to transition to a low carbon, sustainable development path, as detailed in its Nationally Determined Contribution (NDC). In addition, the proposed activities reflect the country's mitigation and adaptation needs outlined in the Nationally Appropriate Mitigation Actions (NAMA), the National Adaptation Programme of Action (NAPA), the Agricultural Strategy (2020-2025), the Lebanon Green Plan, the National Forest Program (2015- 2025), and the 40 million Trees Program. All these aim at addressing climate change, promoting resilience, improving rural livelihoods, and diversifying the economy through sustainable agriculture and land use. Moreover, Lebanon aims to reach land degradation neutrality by 2030 as part of its action plan to the UNCCD. The GCF project will examine the opportunities to implement concrete climate change actions and to build resilience in the agriculture, forestry, and rangelands sectors.			**Outcome 1: Strengthened institutional measures and capacities for climate-resilient, productive ecosystems.** Under this outcome, the project would ensure strengthened institutional measures and capacities for planning and implementation of climate-resilient productive ecosystems at local and central governance levels. The ability to plan, develop transparent and inclusive strategies, formulate policies, and implement and monitor activities will be consolidated. A decision-support system will be developed to aid in developing the appropriate local and regional sustainable development plans. **Outcome 2: Climate-resilient territorial development and integrated landscape management plans developed in key areas of Lebanon.** Under this outcome, the project would ensure that Lebanon plans and implements landscape-level interventions that increase resilience to climate change while enhancing ecosystem-derived socioeconomic benefits. Territorial approaches to development specifically depend on multi-stakeholder initiatives applied within defined spatial boundaries. Building on the knowledge acquired under	

	This project will contribute in the mobilization of investments related to the agriculture and Forests and Land use sectors (table 7).	outcome one, on national expertise in the matter and on FAO's accumulated knowledge in the matter, the project will initiate regional and participatory landscape-level planning with key stakeholders in specific areas of Lebanon. The selection of the sites will be initiated during the project's inception phase and respect a set of economic, environmental, and social criteria among other considerations. **Outcome 3: Climate-resilient territorial development and integrated landscape management plans operationalized.** Under this outcome the project would ensure that the implementation of the prepared plans is initiated through the active participation of all the identified stakeholders. Indicative activities will be implemented that assist the local communities in carrying on their "territorial development and integrated landscape management" plans beyond the project's timeframe.

Suggested Activities/Components
Outcome 1: Strengthened institutional measures and capacities for climate-resilient, productive ecosystems. Activity 1.1: Assess the national, sub-national and community-level legal and institutional mechanisms for better ecosystem management at various levels (e.g., Ministry of Agriculture, Council for Development and Reconstruction, Green Plan, and local government among others). Activity 1.2: Build the strategic planning capacities of involved stakeholders, namely, the MoA, the MoE, the district and governorates managers, union of municipalities, municipalities and local committees. Activity 1.3: Build national consensus on the typology of land management activities and their sustainability attributes. *Divergent interests, priorities and expertise often lead to disagreement on what is sustainable and suitable to local and national contexts.* **Outcome 2: Climate-resilient territorial development and integrated landscape management plans developed in key areas of Lebanon.** Activity 2.1: Conduct a comprehensive stakeholder analysis for initiating an inclusive and representative landscape planning process to promote adaptive capacity. Activity 2.2: Develop and populate a data clearinghouse for relevant demographic, social, land use, climate change and other natural resource-related data Activity 2.3: Engage local and national stakeholders to identify appropriate development and land management opportunities and practices. **Outcome 3: Climate-resilient territorial development and integrated landscape management plans operationalized.** Activity 3.1: Implement pioneering agroecological interventions that focus on: 1) soil enrichment through biological processes, 2) farm-level diversification of crops, 3) biological measures of pest and diseases control, 4) integrating livestock (sheep, cattle) and poultry (chicken, quail, ducks) rearing on and around farms and 5) water harvesting techniques through micro-catchments schemes. FAO's Tool for Agroecological Performance Evaluation (TAPE) will be adapted to enable performance analysis, evaluation, enhancement of operations and elaborating policy recommendations for various climate change planning scenarios. Activity 3.2: Implement Forest management interventions including biomass management through thinning and pruning, enrichment planting, and biodiversity assessment. Activity 3.3: Implement rangeland management interventions including the assessment of range resources in specific areas of the landscape, the establishment of the sustainable stocking rate per ha, and the regeneration of degraded rangeland areas through enrichment planting and re-seeding. Activity 3.4: Favor green investments that build on the region's natural, agricultural and cultural assets. A microfinancing scheme will allow local SMEs to develop investment plans that revitalize the local productive sectors and create new job opportunities. The SMEs will develop investment opportunities that fall within the themes identified in the plan but have the flexibility to propose their unique approaches to implementation.

Table 20: Promoting renewable energy, energy efficiency and circular resource efficiency solutions for the sustainable recovery of Lebanon's industrial sector– UNIDO for Simplified Approval Process

Project Title (provisional)	Entity name	Accredited Entity	Suggested partner(s)	Area(s) or Sector(s) of Intervention	Expected Project timeframe
Promoting renewable energy, energy efficiency and circular resource efficiency solutions for the sustainable recovery of Lebanon's industrial sector	United Nations Industrial Development Organization	Yes	Executing partners: MoI Government entities: MoE, MoEW, EDL	Industrial establishments in Lebanon answering critical needs of the Lebanese people and having the highest potential for economic recovery.	4 years
Expected Budget/ Investment Requested	**Financing type**	**Source and amount of Co-financing if any**		**Intended Beneficiaries**	**Expected time for Concept Note submission.**
USD 19.5 Million (GCF grants)	Grants	1:2 to 2:3 co-financing will be expected from the beneficiary of the grant.		Industrial sites, communities, energy service providers, etc.	March 2025
Project Objective	**Alignment with the Country's priorities and strategies**			**Expected Key Outcomes**	
To reduce GHG emissions and supporting economic recovery by accelerating the promotion of sustainable energy solutions, focusing on distributed Renewable Energy (RE) and Energy Efficiency (EE) and circular resource efficiency solutions, through the development of effective financial models and enhanced access to national and international finance for selected industrial sectors	The Electricity Policy Paper released by the Ministry of Energy and Water (MoEW) in 2010, which was later updated in May 2019, pursues the aim to reduce EDL's financial deficit, to improve the national electricity supply and to achieve the target of 30% renewable energies of all consumed energy by 2030. In line with the policy paper, the National Renewable Energy Action Plan (NREAP) and the National Energy Efficiency Action Plan (NEEAP) were developed by the Lebanese Centre for Energy Conservation (LCEC) as Lebanon's most important energy strategies. The first of the action plans, the NREAP and NEEAP 2011–2015, introduced 14 initiatives related to EE and RE. The NREAP (2016–2020) was based on 12% target for RE in 2020, and proposed contribution from different technologies to achieve the target. As one the RE technologies identified by the LCEC, distributed solar PV was to contribute 100 MW by 2020, with 30 MW installations in the industrial sector and 10 MW in the agriculture sector. Another overall target of 150 GW was specified for 2030.			Outcome 1: Sustainable energy solutions and viable business models are implemented and demonstrated by service providers on RE, EE, and resource efficiency solutions and industrial off-taker. Outcome 2: Industrial establishments undertake investments in sustainable distributed energy solutions due to increased supply, de-risked financial environment, and enhanced access to national and international finance.	

	The NEEAP (2016–2020) includes sector specific initiatives and targets. The plan was estimated to achieve 4.83% savings of the total electric power demand in 2020, in line with the target of the MoEW. For the industrial sector, it includes two energy saving measures. The first aims at mandating the 36 large industrial facilities consuming over 400toe (2,500 kVA) to conduct energy audits and implement no to low-cost measures, as well as, providing incentives covering 50% of the cost of energy audits for 800 industrial facilities. The other aims at implementing seven EE measures in 800 industrial facilities (i.e., 20% of industries). In addition, the new Distributed Renewable Energy Law ratified in 2023 provides the legal and regulatory basis for renewables investments by allowing net metering, the wheeling of power across networks and point-to-point sales of electricity. The Distributed Renewable Energy Law focuses on small-scale renewables of under 10 MW. The project would be mitigating climate change impact and would contribute to Lebanon's Nationally Determined Contributions (NDCs) updated in 2020 according to which Lebanon unconditionally commits to increasing GHG reduction target from 15% to 20% relative to Business as Usual Scenario (BAU scenario); generate 18% of power demand and 11% of heat demand from renewable energy sources by 2030, compared to 15% in 2015 and achieve a 3% reduction in power demand through energy-efficiency measures in 2030 compared to demand under the BAU scenario. Moreover, Lebanon would conditionally commit to increase its GHG emission reduction target relative to the BAU scenario from 30% to 31%; generate 30% of power demand and 16.5% of heat demand from renewable sources in 2030, compared to 20% in 2015 and achieve a 10% reduction in power demand through energy- efficiency in 2030 compared to the demand under the BAU scenario.	

	Finally, the proposed interventions are in line with the National Action Plan for Sustainable Consumption and Production of the Industrial Sector dated 2015. This project will contribute in the mobilization of investments related to the industrial sector, as well as those related to energy efficiency and energy generation and access measures (table 7).	
Suggested Activities/Components		
Component 1: Establishment and demonstration of suitable technologies and financial/operational models for sustainable energy and resource efficiency projects in the Lebanese market. Output 1.1: Suitable business models are identified and/or developed that fit the Lebanese industrial market in terms of financial and operational needs. Output 1.2: Pilot RE, EE, and circular resource efficiency projects are implemented that test and demonstrate the functionality of up to date/innovative technologies and identified business models. Output 1.3: The operation of pilot projects is assessed, and a scale-up strategy is defined. **Component 2:** Creation of demand for distributed energy solutions in key industrial applications by de-risking industrial sustainable energy projects. Output 2.1: Awareness of key identified sectors and industries is raised and capacities among key users are strengthened. Output 2.2: Existing national and international financing schemes suitable for distributed sustainable energy investments are identified and awareness of industry and RE and EE service providers on financing opportunities is strengthened. Output 2.3: A project pipeline for investments in RE, EE, and resource efficiency solutions at relevant industrial sites is developed for implementation. Output 2.4: Matchmaking activities for RE and EE service providers and potential users are conducted		

Table 21: Localized climate-appropriate full-cycle water systems in remote locations– UNICEF

Project Title (provisional)	Entity name	Accredited Entity	Suggested partner(s)	Area(s) or Sector(s) of Intervention	Expected Project timeframe
Localized climate-appropriate full-cycle water systems in remote locations	United Nations Children's Fund (UNICEF)	No (in process)	Executing partners: UNICEF Government Entities: MoEW, MoE, MoA (TBC)	WASH, Environment, Energy, Livelihoods, Public Health	3 years
Expected Budget/ Investment Requested	**Financing type**	**Source and amount of Co-financing if any**		**Intended Beneficiaries**	**Expected time for Concept Note submission.**
USD 30 million	Grant	None		Primary beneficiaries: Populations in selected locations Secondary beneficiaries: Municipalities, water establishments, ministries and other relevant institutions	2025
Project Objective	**Alignment with the Country's priorities and strategies**			**Expected Key Outcomes**	
Installation, operation and maintenance of sustainable climate-appropriate water supply and sanitation services in remote underserved communities in Lebanon, through the development of suitable localized management models using Just Transition approach that can be scaled up and replicated.	The project will align with the National Water Sector Strategy 2024-2035 (about to be published by MoEW). It will also confirm to relevant national policies and strategies including under the Ministry of Environment, Ministry of Public Health, etc. Particular reference is made to the Nationally Determined Contributions (NDCs) to the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP21) in Paris in December 2015 (NDC | Climate Change Lebanon (moe.gov.lb), outlining commitments and targets for several sectors. This includes measures to use scarce water resources more efficiently, e.g. increasing surface water storage, increasing wastewater collection and treatment, and improving water distribution efficiency and decrease water loss in irrigation, etc., mainstreaming climate change adaptation into electricity infrastructure, human settlements and infrastructure, and public health			- Improved access to clean and safe public water supplies and wastewater management services in targeted communities - Greater efficiency of service provision with reduced impact on climate change (based on green energy solutions and optimized water management) - Enhanced management of systems and resources with responsibilities at appropriate levels, including community, municipality, and water establishment. - Development of local skills and capacities in all stages of project design, implementation, operation and management - Enhanced sense of ownership and commitment to project sustainability amongst all stakeholders	

	sectors, reducing greenhouse gas emissions by reducing power-demand through energy-efficiency measures, and other initiatives.
Suggested Activities/Components	
- Assessment of potential locations for projects (at least one per water establishment), including current challenges for water supply and wastewater management, climate change issues including energy assessment, community dynamics and engagement of key stakeholders (water establishment, municipality, etc.) - Development of solutions using community-based approach, with full stakeholder engagement (water supply options, wastewater management options, energy supplies, metering of water flows, operation, maintenance and management of systems, community and stakeholder engagement mechanisms, related environmental improvements) - Adoption/adaptation of models for implementation, operation, management and sustainability, with clear designation of roles and responsibilities of stakeholders - Construction of infrastructure, implementation of environmental improvements - Training of stakeholders based on roles and responsibilities as per models adopted - Implementation of management systems - Monitoring and evaluation	

Table 22: Expanding the Beirut River Solar Snake to increase renewable energy integration in electricity provision - MoEW

Project Title (provisional)	Entity name	Accredited Entity	Suggested partner(s)	Area(s) or Sector(s) of Intervention	Expected Project timeframe
Expanding the Beirut River Solar Snake to increase renewable energy integration in electricity provision	TBD	TBD	Government Entities: MoEW, EDL, LCEC	Energy generation and access	2026-2028
Expected Budget/ Investment Requested	**Financing type**	**Source and amount of Co-financing if any**		**Intended Beneficiaries**	**Expected time for Concept Note submission.**
USD 20 million	Grant	None		Beirut inhabitants	2025
Project Objective	**Alignment with the Country's priorities and strategies**			**Expected Key Outcomes**	
Increase access to energy generated from Renewable sources.	The project contributes to the country's goal of providing 30% of the total electricity by 2030 from renewable energy.			Increase the share of renewables in the country Integrate the renewable energy produced and manage the energy mix	
Suggested Activities/Components					
• Building 6km of solar Panels to generate 7 MW • Rehabilitation of the National Control Center at EDL • Market analysis and enhancement of private sector participation • Capacity building activities					

Pipeline for Readiness projects GCF (2024-2027)

Table 22: Strengthening national technical and institutional capacities in planning and resource mobilization for water climate resilience and energy transition – MOEW with GWP

Project Title (provisional)	**Entity name**	**Type of readiness**	**Suggested partner(s)**	**Area(s) or Sector(s) of Intervention**	**Expected Project timeframe**
Strengthening national technical and institutional capacities in planning and resource mobilization for water climate resilience and energy transition	Global Water Partnership as Delivery Partner UNICEF UNHABITAT	Regular readiness support	Executing partners: Lebanese Center for Energy Conservation, UNICEF , UNHABITAT Other partners: MoE, MoEW, Regional Water Establishments	Water and energy Sector	48 months
Expected Budget/ Investment Requested	**Financing type**	**Source and amount of Co-financing if any**		**Intended Beneficiaries**	**Expected time for Concept Note submission.**
USD 3 million	Readiness Grant	None		MoEW Water Establishments Litani River Authority Electricity of Lebanon Lebanese Center for Energy Conservation Municipalities and Unions of municipalities Private Sector Local consulting companies and experts Civil Society	TBD
Project Objective	**Alignment with the Country's priorities and strategies**			**Expected Key Outcomes**	
Support the technical and institutional capacities of the Ministry of Energy and Water cross-sectoral (or integrated) climate investment programming, in the context of the National Water Strategy 2024-2035, and prepare high quality concept notes to access climate finance	-			Strengthened governance, institutional and technical capacity within the MEW Enhanced climate investment planning Comprehensive wastewater management strategy and related project funding proposals High-quality concept notes development	

	Knowledge development and management enhanced
Suggested Activities/Components	
- Strengthening governance/coordination and institutional mechanisms to mainstream climate change in energy & water/wastewater planning and investment programming, in the context of the National Water Strategy 2024-2035. Different options will be explored, including the creation and training of a national technical cell specialized in climate-resilient planning in the energy and water/wastewater sectors, embedding a climate focus group in existing committees, etc. - Climate proofing of wastewater management and related strategic documents in Lebanon, assessment of climate and environmental challenges, analysis of options and development into a comprehensive climate-resilient wastewater management strategy for Lebanon. - Supporting urban climate action through the identification of a series of interventions / projects particularly targeting urban and peri-urban settings, maximizing the use of ecosystem-based approaches, nature-based solutions as well as water-sensitive urban designs; given that almost 89% of the Lebanese population lives in urban areas. - Development of projects pipeline for adaptation, mitigation and co-benefits in the water & energy sectors. - Development of 3 Concept Notes for water and energy projects to be submitted to GCF. - Capacity building on GCF procedures and development of bankable projects targeting water and energy stakeholders including ministry officials, private sector, local consulting companies, and civil society. - Develop a gender mainstreaming framework. - Preparation of vulnerability studies. - Knowledge management and exchange of best practices. - Development of sub-sectoral plans (flood management, wastewater reuse, renewable energy, etc.) - The suggested activities will be implemented in complementarity with the ongoing GCF Readiness NAP being implemented by the Ministry of Environment with the support of UNDP	

Table 23: Support the Development of Lebanon's NDC 3.0 by strengthening implementation and financial investment strategies, and enhancing national climate governance framework – MoE UNDP

Project Title (provisional)	**Entity name**	**Type of readiness**	**Suggested partner(s)**	**Area(s) or Sector(s) of Intervention**	**Expected Project timeframe**
Support the Development of Lebanon's NDC 3.0 by strengthening implementation and financial investment strategies, and enhancing national climate governance framework	UNDP	Regular readiness support	Executing partners: MoE	NDC priorities	36 months
Expected Budget/ Investment Requested	**Financing type**	**Source and amount of Co-financing if any**		**Intended Beneficiaries**	**Expected time for Concept Note submission.**
USD 1 million	Readiness Grant	None		MoE as NDC coordinator Key stakeholders across the energy, agriculture, transport, and water sectors	December 2024

		Local communities, civil society organizations, the private sector, and vulnerable populations , with particular emphasis on gender and youth inclusion
Project Objective	**Alignment with the Country's priorities and strategies**	**Expected Key Outcomes**
The goal of this project is to develop Lebanon's NDC 3.0, strengthening the country's climate action framework and its capacity to adapt to and mitigate climate change impacts	Alignment with the Paris Agreement and Lebanon's NDC	- Relevant country stakeholders) have established adequate capacity, systems and networks to support the planning, programming and implementation of GCF funded activities - GCF recipient countries have developed or enhanced strategic frameworks to address policy gaps, improve sectoral expertise, and enhance enabling environments for GCF Programming in low-emission investment. - Strategies for transforming and attracting private sector investment for low emissions and resilience developed and being used.

Suggested Activities/Components

- To assess the progress made in implementing Lebanon's current NDC (2020 update) and conduct a comprehensive stocktake of greenhouse gas emissions and climate risk and vulnerabilities to inform evidence-based climate action planning.
- To develop or improve sector-specific mitigation and adaptation targets and projections aligned with LT-LEDS/NAP/NBSAP and other relevant sectoral plans and strategies considering Lebanon's unique geographic, socio-economic, and environmental context.
- To develop a robust financial and investment strategy to support NDC 3.0 implementation.
- To develop a private sector engagement strategy and climate-oriented project pipeline
- To establish an inclusive climate governance system with clear roles and responsibilities across relevant sectors for NDC implementation.

Section 4: Multi Stakeholder Engagement Process

The Government of Lebanon recognizes that country ownership is neither a static process, nor is it restricted to this document and extends beyond government ownership. Country ownership in its true form, includes the engagement of a diverse range of non-state actors such as the private sector and civil society. Multi Stakeholder engagement processes do however take on a different form in times where social tensions are high, as is the case in Lebanon. Whilst some civil society organizations seek to genuinely engage in such processes to make a meaningful contribution, others may seek to disrupt the process for political reasons and to cause further destabilization. Being aware of these dynamics has been an important part of the process.

Development of the Country Programme

As a prerequisite for meaningful stakeholder engagement, identifying and mapping stakeholders is instrumental to facilitate and enable country ownership. Through an extensive analytical mapping exercise across the public and private sectors (including financial entities), as well as civil society (including environmental, gender and community organizations), academia, independent experts and international organisations, 134 entities and experts have been identified, and categorised according to their level of interest and potential for collaboration to support the implementation of mitigation and adaptation projects and programmes in Lebanon (See Figure 6).

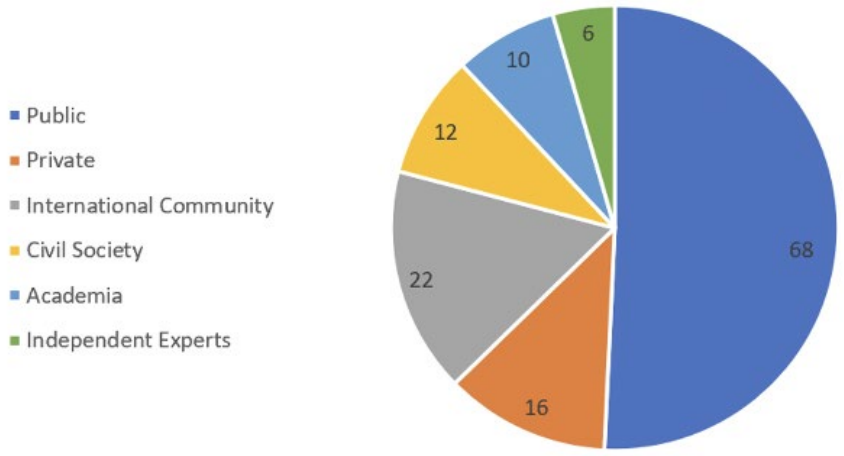

Figure 6: Stakeholder representation

The process started with the identification and mapping of potential stakeholders with an interest in the GCF and how they might engage directly through participation in GCF project development as well as those stakeholders who may participate in NDA and GCF related processes, for example consultations and

communications. Stakeholders were considered across a range of criteria, including their scope of current work and overlaps and relevance to GCF-related activities; their interest in GCF-related initiatives (high/low); and their potential roles and responsibilities during the Country Programme, No Objection Procedure and Post-readiness projects.

The first group included those expected to be most engaged in potential GCF project and programme development, including international Accredited Entities operating within Lebanon, private sector companies working within the climate change space and civil society organisations (CSOs) with a history of engagement in matters related to climate change, including renewable energy and the energy transition, agriculture and forestry and biodiversity conservation, including related to oceans.

The second group included those stakeholders less likely to be directly involved, but are likely to take an interest in the issues under discussion.

Bilateral meetings were held with selected prioritized stakeholders in the first group whereby the level of interest was further discussed, especially in relation to support to the Government of Lebanon in the preparation of GCF project concept notes.

In addition to the bilateral meetings held with the most interested stakeholders, a first consultation was held on August 3rd, 2022 with 71 attendees including the NDA and other Government representatives, the private sector, CSOs and accredited entities. The Draft of the Country Programme was presented, and opportunities provided for questions and comments. A second stakeholder consultation was organized on 6-8 March 2024 in the presence of the GCF MENA regional manager to update and align Lebanon's Country Programme with the GCF strategic plan 2024-2027. The meetings were followed by an official call sent by the NDA to all AEs and some ministries requesting to submit project idea notes for their inclusion in the country programme. All comments provided during the consultation have been subsequently taken into consideration in the finalization of the Country Programme. (see Annex 1).

National Climate Change Engagements with other International Partners

Table 24 lists GCF Accredited Entities that are currently eligible to operate in Lebanon. There are a number of other private sector accredited entities that formally have the scope to work in Lebanon,[49] but these international commercial and investment banks are not currently seeking new business in the country and have reduced any existing interests in Lebanon.

[49] BNP Paribas, Credit Agricole, Deutsche Bank, HSBC, Macquarie, MUFG, SMBC

Table 24: Accredited entities with scope to work in Lebanon

Accredited Entity	Area(s) of Focus	Engagements with country
AFD	Water/wastewater, health ,multi-sector	Supports water sector reform programme; one of the funders of the Lebanon Finance Facility.
EBRD	Energy-efficiency, Renewable energy, green buildings, MSMEs	Purchased green bonds; created aGreen Economy Financing Facility (now canceled).
EIB	Water/wastewater, MSMEs	Financing greater Tripoli basin wastewater networks project; also (non-climate finance) credit lines for MSMEs to foster "sustainable economic growth."
FAO	Agriculture	Supported development of Lebanon National Agriculture Strategy, 2020-2025, and is developing adaptation projects, including via Adaptation Fund.
FMO	MSMEs	No climate finance projects, but has supported MSMEs.
GIZ	Multi-sector	No direct climate finance projects, but has supported a number of water-treatment facilities, as well as urban infrastructure and economic development.
IBRD	Transport, MSMEs, Multi-sector	Loan support for Greater Beirut Public Transport Project (now cancelled); outside of climate finance, is coordinating Lebanon Financing Facility multi-donor trust fund to support MSMEs, rehabilitate urban infrastructure in Beirut, support governance reforms.
IFC	Renewable energy, energy efficiency, green buildings, MSMEs	Purchased green bonds; has supported green buildings sector; outside of climate finance, is supporting women-led MSMEs.
IFAD	Agriculture	Support for climate-smart agriculture via Adaptation Fund, and has supported other livestock, agriculture and irrigation projects in the past.
IUCN	Agriculture, ecosystems	Implemented GEF project for marine and coastal ecosystem valuation; administers technical assistance facility of GCF sub-national climate fund (FP151).
JICA	Water/wastewater, multi-sector	No current climate finance projects, but has supported water/wastewater services in the past.
PCA	Multi-sector	Coordinates GCF's Global Sub-National Climate Fund, a multi-country programme that includes Lebanon amongst potential recipients.
PROPARCO	MSMEs	No climate finance projects, but offers microfinancing to support MSMEs and young entrepreneurs.
UNDP	Multi-sector	Ongoing projects addressing land degradation, low emissions transport, sustainable energy security, renewable energy and industrial energy audits.
UNEP	Multi-sector	Provide support to Lebanon on environment; particularly natural resource management, climate change, biodiversity conservation, waste management and abatement of pollution.
UNIDO	Industrial efficiency	Renewable energy and resource efficiency in industry projects
WFP	Agriculture, food security	Engaged in capacity building projects to enhance resilience, including reforestation, water and agriculture initiatives.
WWF	Forests and land use, ecosystems	No current climate finance projects. Has been involved in forest restoration and sustainable forest management projects in the past.

Monitoring and Updating the Country Programme

The process of preparing the Country Programme has assisted to maintain commitments to addressing climate change within the Government of Lebanon, especially throughout recent times in crisis, and has ensured ongoing coordination both within the government and with relevant Stakeholders. The experience gained throughout the process has begun to lay foundations for ongoing exchanges between the NDA, civil society, the private sector, the public sector, and other relevant stakeholders involved with the GCF, especially GCF Accredited Entities.

The projects presented in the pipeline will be monitored on an ongoing basis by the NDA, in coordination with the relevant Accredited Entities, while the inclusion of new projects will be informed to the GCF Secretariat in a timely manner. As projects will continuously be at different development stages, the pipeline will require continuous monitoring.

Monitoring system will be put in place and will be flexible in changing and complex circumstances, and will track performance against key performance indicators (KPIs) and the Country Programme. It will ensure learning from experience to inform focus, design and management and provide evidence of impact and progress around adaptation and mitigation NDC implementation. The system will utilize practical tools and approaches already being used by the Government of Lebanon to define and monitor outcomes, assess impacts and foster learning.

The Country Programme is expected to be reviewed by 2027 (or as soon as thereafter), together with a reassessment of the guidelines provided in Section 4 and based on the implementation and development status of GCF projects in the country and the implementation of the NDC. The process of reviewing the guidelines will be directly informed by results and experiences obtained from the implementation of GCF projects in Lebanon.

The Country Programme reviewing process will be carried out through a consultation process with relevant stakeholders through dialogue processes, similar to those held for the preparation of this document.

Section 5: Policy Strategy, Planning and Institutional Needs

Direct Access Entities

There are currently no DAEs at the national level, with one candidate interested for accreditation to the GCF through the PSAA modality. Other national entities are interested in delivery partner accreditation, in view of scaling up their GCF accreditation level. They have engaged with the NDA for guidance, but no formal nomination by the NDA has been issued to date. The potential of the entity undergoing PSAA might lead to a full DAE accreditation for the private sector.
The ISDB GCF regional project "Leveraging the Private Sector for Increased Climate Investment and Strengthened Partnerships in the West Asia Region" has included outputs related to identifying and supporting potential private-sector Direct Access applicants for the participating countries, including Lebanon.

Needs concerning Identification, design and implementation of transformational projects and programmes

As part of the country programming process, a gap assessment was conducted to evaluate the capacity of the Lebanon NDA (i.e., the Ministry of Environment) to carry out its roles (1) according to GCF requirements, and (2) in the context of project and programme priorities identified so far. The gap assessment was also informed by other assessments and activities carried out as part of the broader readiness project, including stakeholder mapping, gender analysis, assessment of the MoE, and development of the NOP. Lebanon's NDC Partnership Plans have also been used to supplement the gap assessment.

As a result of the assessment, key intervention areas have been identified that would enable and support effective programming of climate actions in Lebanon. These include needs in relation to **policies and strategies, and institutional and human capacity**.

Policies and Strategies

Mitigation and Adaptation

Lebanon's NDC sets out the country's mitigation and adaptation priorities, with further structure and detail provided for adaptation. While mitigation co-benefits are identified for many of the adaptation priorities, additional elaboration is needed to **formulate strategic investments in mitigation** and to **enhance synergies between mitigation and adaptation**.

Gender and Environmental and Social Safeguards

The GCF asks countries to pay particular attention to gender, environmental, and social issues in the development of their Readiness Programmes. The GCF Gender Policy is "applied throughout all activities, including all funding activities in mitigation and adaptation undertaken by both the public and private

sector,"[50] while the Fund's Environmental and Social (ES) Policy expects the NDA to be actively involved in monitoring and reporting on ES-related issues.[51]

A comprehensive gender analysis[52] of climate policies in Lebanon has been completed under the UNDP NDC Support Programme in 2021, which provided a general picture of the ability of women to participate in and influence climate-related decision-making. A set of Standard Operating Procedures (SOPs) has also been drafted, detailing methodologies to improve gender responsiveness and mainstreaming.[53] A **gender policy, strategy or procedure** is needed to institutionalize these operating procedures and a cross-cutting approach to gender in climate change planning, implementation, monitoring and evaluation, and reporting. The development and establishment of this policy, strategy or procedure must be done in parallel with **building capacity for the NDA** and relevant national entities to assess and address gender considerations.

In contrast to gender issues, there has been very little done in relation to environmental and social safeguards (ESS) for climate actions in Lebanon. An **ES gap analysis** is needed first to understand the ES landscape in the country in relation with the AEs and potential DAEs, in line with principles and requirements in the GCF ES Policy and the Fund's interim ESS standards (i.e., the International Finance Corporation ESS standards). Based on the results of the analysis, an **ES policy or strategy** may also be needed, which would integrate an *ES risk assessment/management mechanism, stakeholder communication and engagement procedure, and grievance and redress*. Similar to gender sensitivity and mainstreaming, ES risk management must also tie in with **capacity-building for the NDA** and other relevant entities to monitor and report on ES performance effectively.

The ES gap analysis, and the development of a policy, strategy or procedure for ES and gender, require robust **multi-stakeholder engagement** to ensure country ownership and stakeholder buy-in and collaboration.

Institutional and human capacity

Although the NDA is actively engaged in readiness processes for the GCF, there is a need to strengthen its capacity and that of other implementers and stakeholders, starting from foundational knowledge on the GCF and climate finance more broadly. Information sessions may be designed for different audiences, including both state and non-state actors, to raise awareness around the GCF and activities under the Country Programme. These would broaden and increase stakeholder engagement in Lebanon's climate plans and programs and support multi-stakeholder engagement processes.

In order to further **empower the NDA, a series of trainings** may be conducted to strengthen its ability to fulfill its roles, and increase its authority to lead GCF-related plans and programs. Capacity-building areas may include:

- Training of NDA staff on mandates and requirements under the GCF

[50] https://www.greenclimate.fund/sites/default/files/document/gcf-gender-policy.pdf
[51] https://www.greenclimate.fund/sites/default/files/document/revised-environmental-and-social-policy.pdf
[52] UNDP, 2021. Gender analysis of Climate Change policies in Lebanon
[53] See MoE/UNDP (2019). SOPs to integrate gender in climate reporting and planning.

- Engaging and holding dialogues with potential DAEs
- Extracting lessons learned from other countries for application to national setting
- Facilitating stakeholder engagement
- Awareness-raising for other agencies and stakeholders on the GCF, programs and priorities
- Evaluating GCF investment criteria
- Implementing the No-Objection Procedure
- Gender responsiveness and mainstreaming
- Environmental and social risk assessment and management

This capacity-building programme should help the NDA carry out country programming and other mandates and strategic roles under the GCF. It should also increase Lebanon's ability to access climate finance while ensuring the integration of gender considerations and environmental and social safeguards in climate actions.

In addition to building the institutional and human capacity of the NDA, there is a need to strengthen the capacity of other implementers and stakeholders, including non-state actors. There is a need to coordinate the efforts of non-state actors to better capture and guide such activities and ensure a targeted implementation that would simultaneously serve national climate targets including the NDC and international reporting requirements. Some of the support needed include:

- Establishing a strategy with objectives, targets and indicators that would form the framework of non-state actors initiatives.
- Organizing communication and awareness campaign on how non-state actors can design and implement climate change projects.
- Revising feasibility of existing funding mechanisms and establishing new procedures to mobilize funds to non-state actors
- Improving communication on the availability and technical feasibility of RE and other technologies
- Defining links among non-state actors related initiatives and platforms in Lebanon, with a focus on the Paris Agreement and the NDC.
- Setting institutional arrangements that anchor the linkages among the various non-state actors and systematically capture their achievements.

Annex 1: stakeholders consultations

Date: 19-October 2020		
Name	**Company**	**Position**
Jessica Obeid	-	Independent energy policy consultant
Maher Ezzeddine	Ideanco	CEO
Eliane Charbel	Lebanese Reforestation Initiative (LRI)	Climate Change & Ecosystem Services Senior Specialist
Leticia Rahal	Lebanese Reforestation Initiative (LRI)	Ecosystem Services Junior Specialist
Carol Ayyat	Head of Energy	Bank Audi
Nicolas Farhat	Berytech	Investment Manager
Ramy Boujawde	Berytech	Deputy General Manager
Patil Mesrobian	Lebanese Center for Energy Conservation (LCEC)	Programme Development Officer
Rani Achkar	Lebanese Center for Energy Conservation (LCEC)	Director of Energy and Planning
Marc Ayyoub	Issam Fares Institute for Public Policy & International Affairs (IFI)	Energy Researcher
Nadim Farajalla	Issam Fares Institute for Public Policy & International Affairs (IFI)	Director – Climate Change and Environment
Nancy Boueiri	Fondation Diane - RayMondo	Operations Manager
Ahmed Yehya	The Other Dada	Architect
Vahakn Kabakian	Ministry of Environment / United Nations Development Programme	Climate Change Portfolio Manager
Lea Kai	Ministry of Environment / UNDP	Project Manager – Climate Change
Yara Daou	Ministry of Environment / South Centre	National Technical Coordinator of the GCF Readiness Project
Nay Karam	Ministry of Environment / South Centre	Project Research Assistant of the GCF Readiness Project
Mariama Williams	South Centre	Programme Coordinator - Sustainable Development, Climate Change & Gender

Date: 02 August 2022		
Name	**Organization**	**Position**
Adel Yacoub	Ministry of Environment	Service of Natural Resources
Bassam Sabbagh	Ministry of Environment	Service of Urban Environment
Nancy Khoury	Ministry of Environment	Department of Public Relations & External Affairs
Georges Akl	Ministry of Environment	Service of regional departments and environmental police
Minerva Andrea	Ministry of Environment	Gender Focal point
Bassem Ali	Ministry of Environment	Department of natural resources protection

Rasha Kanj	Ministry of Environment	South regional department
Jamila Al Hadi	Ministry of Environment	Department of Urban Environmental Protection
Amal Merhi	Ministry of Environment	Department of Environmental Pollution control
Manal Moussallem	Ministry of Environment	Minister's office
Hajar Zein	Ministry of Environment	Service of environmental guidance
Patty Farah	Ministry of Environment	Department of information technology systems

Official request Letters -2022	**Official request Letters -2024**	**Entities met with in 2024**
Agence Française de Développement (AFD)	Agence Française de Développement (AFD)	Agence Française de Développement (AFD)
		Berytech
		CEDAR oxygen
European Bank for Reconstruction and Development (EBRD)	European Bank for Reconstruction and Development (EBRD)	European Bank for Reconstruction and Development (EBRD)
European Investment Bank (EIB)	European Investment Bank (EIB)	
Food and Agriculture Organization (FAO)	Food and Agriculture Organization (FAO)	Food and Agriculture Organization (FAO)
GIZ	GIZ	
	GWP-MED	GWP-MED
UNDP	UNDP	UNDP
UNEP	UNEP	UNEP
UNIDO	UNIDO	UNIDO
	UNHABITAT	UNHABITAT
	UNICEF	UNICEF
World Food Programme (WFP)	World Food Programme (WFP)	
World Bank	World Bank	World Bank
KfW	KfW	
WMO		
FMO		
WWF		
ICARDA		
IFAD		
IFC		
IsDB		
IUCN		
JICA		
PCA		
POPARCO		