


Towards COP27: Arab Regional Forum on Climate Initiatives to Finance Climate Action and the SDGs
Project Fact Sheet

Apply a Set of Mitigation and Adaptation Strategies to Combat Land Degradation and Drought

LEBANON

Climate finance purpose
Adaptation
Sector
Agriculture
Geographic coverage
Sub-national
Nahr el Kabir Basin, Villages/towns with largest areas of ‘hotspots’ in cropland especially in Nabaa el Ghzaile, Darine, Tell Hmaira, Chir Hmairine, El Bire, Aaidamoun, El Barde, Rmah, Cheikhlar, Chadra, Machta Hassan and Akroum, among others
Description
<p>Frequent drought and water scarcity in the Nahr El Kabir basin is expected to severely disrupt water supply, agricultural production and pose a substantial threat to farmers' livelihoods. Rural land use management proved to be efficient in mitigating drought risk, ensuring food security and improving farmers' livelihoods. Improving water management in agriculture requires that land degradation be mitigated or prevented, especially when taking into account linkages between land and water productivity. It is possible to conserve water resources while simultaneously boosting agricultural production and using resource-conserving farming technologies among others. In this context, the main directions of this intervention are to:</p> <ul style="list-style-type: none"> • Afforest and reclaim lands in process of degradation • Conserve soil to encourage practices to prevent or reduce physical loss of soil • Regenerate pastures oriented to obtain a permanent vegetation cover on degraded soils • Rehabilitate soil by eliminating and reducing physical/chemical impediments for agriculture • Facilitate the conversion of deficient irrigation systems to more efficient ones. <p>The project is aligned with the MoE Fire Emergency Plan for 2022, National Strategy for Fire Management (2022 update), NDC Partnership plans, NDC Adaptation Guiding Principles {4. Incorporate Nature-Based Solutions as a first line of defence from adverse impacts of climate change; 5. Combat desertification and land degradation by achieving Land Degradation Neutrality} and Lebanon’s NDC 2021 adaptation priorities:</p> <p>Adaptation priority 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</p> <p>Adaptation priority 3. Structure and develop sustainable water services, including irrigation, in order to improve people's living conditions</p> <p>Adaptation priority 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 harbour in order to adequately respond to anthropogenic and natural pressures and to ensure Lebanese citizens equal access to ecosystem goods and services.</p>
Beneficiaries
Municipalities in areas of high risk, Unions of municipalities in high-risk areas, Local NGOs
Climate rationale
In general, high temperatures and low precipitation in the dry lands lead to poor organic matter production. In turn, low organic matter leads to poor aggregation and low aggregate stability leading to a high potential for

<p>wind and water erosion. Overall, the severity, frequency and extent of erosion are likely to be altered by changes in rainfall amount and intensity. The impacts of extreme events such as droughts, floods, heat waves, wildfires, on land degradation are also significant. In the Nahr El Kabir basin, climate change is likely to add further complexity to the above challenges as greater increases in heavy rainfalls induce floods, whereas greater decreases in precipitation can contribute toward drought. The projected increase in the number of consecutive dry days as well as the projected decrease in the number of precipitation days and in the number of consecutive wet days are expected to significantly contribute toward increasing drought conditions. Therefore, addressing land degradation is expected to improve land and water productivity.</p>	
<p>Expected outcomes</p> <ul style="list-style-type: none"> • Introduce/promote organic farming to avoid artificial additives to the farming system (e.g., inorganic fertilizers and agrochemicals), and to ensure increase in soil organic matter • Introduce crop varieties that are resistant to the impact of climate change. • Promote conservation agriculture by combining non-inversion tillage (e.g., minimum or zero tillage) with mulching or cover cropping and crop rotation. • Undertake agroforestry by incorporating trees into agricultural systems and stressing the multifunctional value of trees within those systems. • Use an integrated pest management building on ecosystem resilience and diversity for pest, disease, and weed control and while seeking to use pesticides only when other options are ineffective. • Work towards integrated nutrient management to balance the need to fix nitrogen within farm systems with the need to import inorganic/organic nutrient sources and reduce nutrient losses through erosion control. • Adopt integrated livestock systems with the objective of raising overall productivity, diversifying production, using crop by-products, and producing manure. • Promote irrigation efficiency by properly designing and implementing pilot drip irrigation network projects to show farmers how small modifications could allow up to 40% increase in irrigation efficiency. <p>Outcomes contribute to SDG 2, 6, 13 and 15</p>	
<p>GHG reduction target</p> <p>N/A</p>	
<p>Project implementation period</p> <p>48 months</p>	
<p>Total Project Cost</p> <p>Amount in US\$ equivalent (per 1 August 2022 exchange rate): 690,000 USD</p>	
<p>Financing requirement</p> <p>Amount in US\$ equivalent (per 1 August 2022 exchange rate): 690,000 USD</p>	
<p>Expected Tenor / Duration of financing: 48 months</p>	
<p>Project Status: Pre-feasibility</p>	
<p>Contractual Structure: Government ownership</p>	
<p>Project proponents</p> <p>Ministry of Environment</p>	
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<p>Emblem</p> 	<p>Photo, chart or another visual asset</p> 