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

Project Fact Sheet

Improve forest management to reduce wildfires and strengthen resiliency in Nahr Al Kabir 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
The fire risk map shows relatively large areas of high risk of fires within the basin, mostly in upper part where most of the dense forests are present (Mitri et al., 2015). Fire risk management is linked with the water sector: • Fire suppression necessitates large volume of water often not available during the fire season, • Fire affected areas are increasingly impacted by flash floods and soil erosion, and • Removal of vegetation cover by fires affects both the quality and quantity of water in the basin. Fire risk would be reduced mostly through silviculture treatment. The national guidelines for forest management serve as an important toolbox for use in developing local forest management plans based on forest inventories and forest harvesting plans (UNDP, 2019). As a result, managed forests are expected to be less prone to intense and severe fires, thus reducing impact on soil, water quality and water quantity.
The project is aligned with the MoE Fire Emergency Plan for 2022, the National Strategy for Fire Management (2022 update), NDC Partnership plans, and 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 6. Substantially reduce the risk of climate and non-climate related disasters to protect lives, the economy and physical and natural assets}, and falls under the following adaptation priorities presented in Lebanon's NDC 2021: **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 **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 to adequately respond to anthropogenic and natural pressures and to ensure Lebanese citizens equal access to ecosystem goods and services **Adaptation priority 7.** Reduce disaster risk and minimize damages by mitigating and adapting to climate-related natural hazards and extreme weather
Beneficiaries
Villages/towns with largest areas of 'hotspots' in forest lands especially in the upper part of the basin (e.g., Monjez, Qoubayat, Akroum, Aandqet)
Climate rationale
Uncontrolled and frequent wildfires can have severe negative impacts on human health, livelihoods, natural assets, air and water quality and biodiversity. Increasing temperatures and drought due to climate change are expected to lead to more severe, frequent and large fires.

There is an increasing recognition that fire management should involve an integrated fire management (IFM) approach with five key elements (also known as the five Rs): Review (monitoring and analysis); Risk reduction (prevention); Readiness (preparedness); Response (suppression); and Recovery. The five Rs approach was also adopted in Lebanon's National Strategy for forest Fire Management (Decision no.52/2009). Often, wildfires do not stop at the edges of forests, and they may also originate outside forests. IFM, therefore, should encompass other, non-forest land uses and vegetation types, such as agriculture and rangelands.

Expected outcomes

- Update existing forest management plans (i.e., for Aandqet and Monjez) and complete the development of additional forest management plans (i.e., for Qoubayat and Akroum)
- Undertake preventive silviculture practices including fuel management actions (i.e. grubbing, tree thinning and pruning, brushwood crushing, prescribed burning and controlled grazing) as part of existing forest management plans.
- Reduce tree density to minimize tree competition for soil water, dieback processes and dry biomass in addition to speed up tree growth as well as break continuity between forest layers.
- Break landscape homogeneity (i.e., large scrubland territories after agriculture land abandonment) in fire-prone landscapes and facilitate ecological succession processes.
- In selected high priority areas, undertake active post-fire restoration procedures in soil erosion protection, treatment of burnt trees, and assisted recovery.
- Apply best practices of sylvo-pastoral systems to reduce fire risk on private and public forest lands.
- Assess the establishment of additional strategic hill lakes or water ponds to be used for fire extinguishing
- Strengthen the capacity of local authorities especially through technical training on fire prevention

Outcomes contribute to SDG 2, 6, 13 and 15

GHG reduction target

N/A

Project implementation period

36 months

Total Project Cost

Amount in US$ equivalent (per 1 August 2022 exchange rate): USD 2,650,000

Financing requirement

Amount in US$ equivalent (per 1 August 2022 exchange rate): USD 2,650,000

Expected Tenor / Duration of financing: 36 months

Project Status: Pre-feasibility

Contractual Structure: Government ownership

Project proponents

Ministry of Environment

Contact persons

Mrs. Samar Malek, UNFCCC Focal Point, Ministry of Environment, Email: samar@moe.gov.lb

Mrs. Léa Kai, Climate Change Project Manager, Ministry of Environment, Email: l.kai@moe.gov.lb

Emblem	Photo, chart or another visual asset
REPUBLIC OF LEBANON MINISTRY OF ENVIRONMENT