

Forestry

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This policy brief is part of a series of nine sectoral studies developed by the Lebanese Center for Policy Studies (LCPS). The lead author of this series is Senior Economic Researcher Lina Maddah, with the contribution of Executive Magazine. The aim of this series of briefs is to examine the impact of Lebanon's economic crises on key economic sectors and present recommendations that can assist with private sector recovery. This series was developed with the support and contribution of the Lebanese Private Sector Network (LPSN) and in collaboration with Executive Magazine.

Sector Overview

Forestry, while vital for environmental integrity as well as environmental justice and livelihoods in Lebanon, is not a low-hanging fruit in the economic mix. As with so much in this country, the story of Lebanese forests and their human contemporaries' is long, complex and sated with economic value but also fraught with ecological and societal disruptions.

The modern country's mystifying national tree, *Cedrus Libani*, has made an appearance as deforestation victim in the Gilgamesh epic. In the Pentateuch, ritual use of cedar wood is mandated on several occasions and in later scriptures, both economic and symbolic references to the cedar make appearances. Overuse of Lebanese cedarwood as natural resource has been reflected upon literally millennia ago, as lyricized in a famed poem by the Roman empire's literary celebrity, Ovid.

Closer to modernity, forestry constituted an important factor of social and economic development under Ottoman hegemony since at least the 17th century. In the 19th century, one species of tree, the mulberry tree, became the base of sericulture as silk spinneries rose from the mid-19th century as both income generators and catalysts of trade and finance in the transition of the territory's subsistence agro-economy to marginally industrial activities in the trans-Mediterranean supply chain of the luxury fabric, silk.

However, cultivation of forest resources and extractive forestry were concurring developments throughout. On the down-side of the use of forest resources in the Ottoman era, silk producers relied on wood for heating water in the silk industry's processes up to the early 20th century. Other drivers of deforestation in the past two centuries were the competition between conflicting uses of both scarce natural assets and land as a scarce resource in the densely populated territory. Albeit interspersed with periods where reforestation and responsible use were pursued, persistent factors contributing to deforestation included consumption of forestry assets as firewood by private households and illegal logging by local communities, urbanization and construction activities, wildfires and sub-national armed conflicts but also World War I.

Later in the 20th century, responsible forestry was impeded by what the Food and Agriculture Organization of the United Nations described in a 2016 study as 'two decades of civil war and the subsequent rapid economic and population growth that placed increasing demands on the country's natural resources. The population, in fact, continuously exploited trees and forests and inflicted serious damage to the country's fragile environment.' Pests affecting *Cedrus libani* and other trees as well as ecologically imbalanced reforestation activities were further detriments.

Still, a first-ever assessment of forestry and arboreal wealth of Lebanon carried out by the FAO showed in the early 2000s that Lebanon's forests and tree resources were covering over 13 percent of the small country, about double what had been previously estimated. Reflecting the increased interest in natural preservation elsewhere, reforestation initiatives in Lebanon's post-conflict period of the 1990s and up until the 2010s, were motivated by diverse environmental and social ambitions, with focuses from preservation of the 'Cedars of God' copse of trees to environmental youth activities by Lebanese student volunteers and corporate social responsibility drives with additional aims of female empowerment, national inclusion and expatriate identification with the homeland. Over recent years, reforestation activists and conservationists have increasingly wized up to the importance of responsible forestry in addition to the primary concerns over forests as environmental treasures.

This led to a widening regard for forestry under aspects of circular and sustainable economic use. Yet, at the same time, the stress of the Lebanese economic and social crisis in the 2020s has exacerbated the detrimental impacts of climate factors and human interference at large. A 2021 study by the Lebanese Reforestation Initiative (LRI) estimated the total economic value of circular and responsible forestry in Lebanon as being in excess of USD 100 million across four specific forest ecosystems. The value propositions are \$53 million from production of forest honey, followed by \$15.5 million through forest tourism: \$13 million to 17 million from carbon sequestration and storage under two scenarios, and 2.3 million as enhancement of air quality.¹

Concurrent with optimistic projections, entrepreneurship and formation of micro-and-small enterprises (MSMs) with innovative foraging and forestry-related products has been notable in the past three years but cannot be described as anything other than a niche activity. The challenges to activation of such economic potentials in the context of a revitalized and sustainable economic development drive by Lebanese private sector stakeholders range from the historically undervalued role of forestry in the overall agro-economy and a small number of internationally supported programs to crowding out of viable forestry jobs and absence of tertiary education programs and research in the sector.

Challenges

- Lack of awareness and public participation
- Forest fires and illegal logging
- Limited financial resources allocated to this sector; this restricts the scale and scope of reforestation efforts and impact of the long-term sustainability of projects
- High ramification within the value chain actors
- Private sector may face challenges in accessing and acquiring the necessary expertise.

¹ Charbel, E. and Rahal, L., 2021. Mapping and Valuing Forest Ecosystem Services in Lebanon. Study completed under the USAID-funded Livelihoods in Forestry Project. Lebanon Reforestation Initiative (LRI), Beirut.

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LRI (2022). Guidelines for Implementing Agroforestry in Lebanon, p. 140.

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About the Policy Brief

A Policy Brief is a short piece regularly published by LCPS that analyzes key political, economic, and social issues and provides policy recommendations to a wide audience of decision makers and the public at large.

About LCPS

Founded in 1989, the Lebanese Center for Policy Studies is an independently managed, non-partisan, non-profit, non-governmental think tank whose mission is to produce and advocate for policies that improve governance in Lebanon and the Arab region. LCPS's current research agenda focuses on: enhancing governance, informing the process of economic growth and sustainable development, promoting inclusive and effective social policies, and informing the development of policies for a sustainable environment. Four themes cut across the above areas of focus, including gender, youth, conflict resolution, and technology.

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Opportunities

- Jobs for qualified professionals in forestry and agroforestry.
- Livelihoods in ecotourism
- Sustainable reforestation activities that generate jobs and in-comes as they contribute to carbon sequestration and storage in alignment with national targets for greenhouse gas emissions
- Ecological niche developments with economic potentials in five agroforestry verticals (according to LRI²):
 - mushroom production
 - beekeeping
 - sericulture
 - aquiculture
 - herbs, and medicinal plants

Policy Recommendations

1. Develop reforestation incentives: implement financial incentives and subsidies to encourage private companies, NGOs, and local communities to engage in reforestation activities.
2. Create a national forestry database and a proper reporting system for all forestry stakeholders to generate data that can: 1) showcase the actual sector's contributions to the GDP; and 2) guide decision making processes on gaps and improvements.
3. Establish training programs, higher education programs in forestry, and vocational courses focused on reforestation and sustainable forest management.
4. Foster collaborations between the public and private sectors to leverage resources, expertise and networks.
5. Encourage the growth of 'green' jobs by supporting the development of sustainable enterprises related to eco-tourism, such as nature guides, ecotour operators, forest rangers and land handicraft productions.
6. Implement resource management by bridging science and practice to ensure that practices are based on scientific research and studies and incorporate sustainable management of natural resources into national policies and budgets.
7. Enhance the regulatory environment to encourage the private sector involvement in reforestation (facilitate access to permits, licenses, and compliance requirements). Streamlining regulatory procedures and providing clearer guidelines can encourage private sector participation in reforestation.
8. Emphasis on ways to improve the value chain for small-holders to encourage their participation in reforestation practices.