



Unleashing multifunctionality: How policy support and good governance are key to sustainable land management.

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Abstract

This paper examines how policy and legal frameworks in Morocco and Lebanon are evolving to promote sustainable silvopastoralism in dryland forests. In Morocco, a participatory approach led to the development of a national silvopastoral strategy in 2016, building on earlier initiatives that offered financial incentives to communities for protecting reforestation sites. This approach has resulted in improved forest restoration, better livestock management, and socioeconomic benefits for local communities. Lebanon, facing challenges posed by its outdated Forestry Code, initiated a comprehensive review process in 2015 with support from the Food and Agriculture Organization of the United Nations (FAO). Alongside the development of a national agricultural strategy and rangeland management guidelines, this process aims to modernize forest and rangeland governance, promote community engagement, and ensure the sustainable use of natural resources. Both case studies highlight the importance of adaptive policy frameworks, stakeholder collaboration, and community engagement in achieving sustainable forest and rangeland management in dryland ecosystems.

Introduction

Rangelands play a crucial role in rural development by producing goods and ecosystem services, including supporting, provisioning, regulating, and cultural services. In several middle eastern countries, dryland forests and silvopastoral systems are vital for the livelihoods of rural communities, significantly contributing to national livestock production. However, forest and rangeland policies often consider pastoralism and pastoralist communities as a driver of degradation, favouring afforestation and reforestation policies that marginalize pastoralists instead of considering silvopastoralism as a true asset for enhanced ecosystem management. This paper examines how an enabling environment, brought on through enhanced policies and legal instruments, is helping to restore and sustain the pastoral areas in Morocco and Lebanon.

Towards enabling policies

In Morocco, customary laws permit people living near forests to graze their livestock within forest domains, making silvopastoralism an integral part of the ecosystem. However, socioeconomic changes and environmental factors have led to overgrazing, threatening the sustainability of these ecosystems (Moukrim et al., 2019). To address these challenges, the Forestry Department developed a national silvopastoral strategy in 2016 aimed at restoring and sustainably managing forest resources. The strategy emerged as a response to the pressing issue of overgrazing in dryland forests, which contributes to vegetation loss, land degradation, and soil erosion. The strategy, developed through a participatory approach, represents a legal instrument to achieve sustainable forest management by addressing ecological, social, and economic factors. The strategy focuses on long-term restoration and sustainable management of silvopastoral resources through good governance,

ensuring socioeconomic well-being of the population, biodiversity conservation, and climate change mitigation. The development process involved five key phases: 1) **Diagnosis**: A silvopastoral diagnosis of existing conditions and challenges was conducted; 2) **Capacity building**: Strategic planning capacity was built among stakeholders to ensure institutional anchoring; 3) **Interactive workshops**: Workshops with partners and civil society facilitated strategy formulation; 4) **Sharing workshop results**: Results from workshops were shared with managers to ensure a uniform understanding of the strategy's direction; and, 5) **Formulation and restitution**: The strategy was formulated and presented in a simplified format to ensure visibility and readability (FAO, 2022).

This strategy builds on Morocco's previous policies to support pastoralists. In 2002, the government initiated a compensation programme for forest areas closed to grazing. This sought to facilitate long-lasting and viable solutions, reduce the heavy grazing pressure on forest ecosystems, and support reforestation initiatives. Financial incentives were offered to forest users organized into grazing associations, provided they adhered to grazing restrictions in designated reforestation sites. These communities were made responsible for protecting their lands and organizing grazing schedules to prevent overgrazing and allow the land to recover (FAO, 2022).

In Lebanon, the Forestry Code of 1949 has been the cornerstone of forest management in the country. It grants the Ministry of Agriculture (MoA) authority over the use, protection, and management of forest resources. However, the 1949 Forestry Code faced increased fragmentation, lack of clarity on rangeland management and insufficient community engagement. Recognizing these limitations, the Lebanese government, with support from FAO, undertook efforts to enhance forest and rangeland management policies. Since 2015, the MoA and FAO have collaborated **to review and amend the Forestry Code**. The review process was divided into three phases: 1) Detailed review of the existing forest code to identify its strengths and weaknesses; 2) Consultations with a wide range of stakeholders, including government agencies, NGOs, and the private sector to gather feedback on the proposed revisions to the forestry code; and, 3) Drafting of the revised forestry code, integrating the feedback from the consultations. Regarding rangeland and silvopastoralism, the revised law aimed to address the specific challenges of rangeland management, regulate grazing practices, promote sustainable livestock production, and minimize conflicts between pastoralists and other stakeholders (FAO, 2024). In addition to the review of the forestry code, the Ministry of Agriculture developed the **Agricultural Strategy** (2020 - 2025), which emphasizes the importance of community engagement and sustainable management of rangelands, within and outside forests. This strategy aims to improve food security and the livelihoods of pastoral communities, promote climate change adaptation, and ensure the sustainable use of natural resources (MoA, 2020). Furthermore, in 2018-2019, the UNDP, through its project "Sustainable Management of the Qaroun Watershed", developed **National Guidelines for the Management of Rangelands** within and outside of forests.

Preliminary positive changes

The Moroccan Forest Department realized the importance of piloting initiatives to ensure the effective implementation of the strategy and evaluate its effectiveness. This led to the development of a regional silvopastoral strategy and a territorialized action plan, involving communities and stakeholders to ensure adaptation to local contexts and climate change considerations. The regional plans aimed to enhance silvopastoral ecosystems, improve the organization of pastoralists, support socioeconomic development of areas, improve the governance of resources, and promote holistic research (FAO, 2022).

The number of grazing associations and their members participating in the incentives programme has steadily increased. By 2019, more than 175 beneficiary associations were managing over 101 000 hectares of dryland forests. This growth in grazing associations has been directly linked to improved reforestation success rates and a significant reduction in grazing offences. A fundamental aspect of the programme's success is its participatory approach. Stakeholders embraced community involvement in forest resource management, and local communities agreed that this mechanism had improved collaboration with the forest administration. The policy changes, co-created with local communities and pastoralist groups, have resulted in better livestock

management, effective forest restoration, enhanced land and forest management, and economic and environmental benefits for all involved.

Despite the challenging economic and security conditions Lebanon has faced in recent years, the country successfully completed the revision of its Forestry Code and submitted the revised law for official endorsement by the Council of Ministers. This revised law is a major national milestone that will provide a solid foundation for the sustainable management of Lebanon's forests and rangelands while improving the livelihoods of the people that depend on them (FAO, personal communication). The Agricultural Strategy, which integrates rangeland priorities, has increased national interest in rangeland management and encouraged more local actors and development agencies to integrate rangeland management within their strategies. Additionally, the National Guidelines for Rangeland Management were applied in a pioneering project implemented by FAO, in collaboration with the MoA, to prepare a comprehensive management plan for the Tannourine community in North Lebanon, balancing environmental conservation with social needs.

Discussion

Policy reform is essential for advancing rangeland management and recognizing pastoralist communities' rights to access and benefit from range resources. Policy bottlenecks have been identified as significant barriers to effective rangeland management in various parts of the world. Misunderstanding of pastoralist communities has resulted in policies that harm rather than help these communities. This outdated view creates tension, marginalization, and instability within pastoral communities (Nori and Scoones, 2023). The process Morocco followed to update its policy framework reflects the importance of formulating adaptive, locally contextualized strategies that incorporate the latest scientific advancements (Dong et al., 2016). Moreover, financial incentives, when implemented correctly, can significantly increase the adoption of sustainable practices. Evidence suggests that these incentives are a more effective alternative to state subsidies for fodder purchases and barley cultivation (Louhaichi et al., 2016).

Conclusion

Effective management of silvopastoral systems is essential for preserving the ecological integrity and socioeconomic well-being of Morocco and Lebanon. Ongoing efforts to enhance policies and legal frameworks highlight the importance of a shared vision and collaborative effort among stakeholders. Further, they provide a crucial opportunity to address existing challenges and promote sustainable forest and rangeland management practices. Successful implementation depends on fostering community engagement and strengthening the capacity of stakeholders. Continuous monitoring, evaluation, and adaptive management will be crucial to ensure an enabling framework for the sustainable management of Morocco and Lebanon's valuable dryland forests and rangeland ecosystems.

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