## **Protected Areas in Lebanon**

Subjects: Environmental Sciences Contributor: Sarah Karam

Protected areas (PA) play a significant role in the conservation of the world's habitats and the protection of biodiversity that have become highly threatened by devastating anthropocentric practices. In addition, protected areas, especially biosphere reserves (BR), are considered effective instruments for both nature conservation and rural development. However, their impact on rural communities constitutes the most controversial debate in conservation policy and practice.

Keywords: protected areas ; biosphere reserves ; rural development ; participation ; rural livelihoods

## **1. Debates over Protected Areas**

Protected areas (PA) play a significant role in the conservation of the world's habitats and the protection of biodiversity that have become highly threatened by devastating anthropocentric practices. According to the International Union for Conservation of Nature (IUCN), a protected area is "a clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values" <sup>[1][2]</sup>. There is no single approach to conservation; instead, the more than 100,000 PAs that now exist worldwide reflect a great variety of management objectives. They vary from firmly controlled reserves where only scientists are allowed to enter to cultural landscapes where biodiversity conservation is integrated with socioeconomic and cultural activities <sup>[2][3]</sup>.

PAs can increase the social capital, empower communities and enhance the social cohesion and self-esteem of locals through their participatory and collaborative approaches <sup>[1][2]</sup>. A protected area can offer local communities important economic benefits as it can endorse tourism, supply economic services and improve infrastructure in remote areas <sup>[3][4]</sup>. By engaging rural communities, PAs provide opportunities for local citizens to raise their concerns and be represented in decision-making bodies <sup>[2]</sup>.

On the other hand, critics argue that modernization processes and tourism development in conservation result in wrapping PAs and people in a modern market economy with capitalist relations, where profit-making and biodiversity conservation are prioritized over the concerns, needs and cultures of marginal displaced local people <sup>[5][6][7][8]</sup>. By affecting land use and land tenure, PAs impose considerable changes to local livelihood strategies, especially through confining agricultural development and exploitation of natural resources, which might further intensify rural poverty <sup>[9][10]</sup>. PAs in Nepal, for example, restricted traditional land access and land use rights, hence threatening the economic and social status of rural dwellers <sup>[11]</sup>. In many cases, poverty and the dependence on nature for survival led local communities to continue their gathering and hunting practices in areas designated for conservation which resulted in serious conflicts between the local communities and the management units of the PAs <sup>[9][10]</sup>.

In the 1970s, the social impact of PAs on local communities began to be acknowledged, and the socioeconomic inclusiveness of PAs became part of the mainstream conservation discourse <sup>[3][12][13]</sup>. Aiming to foster socioeconomic inclusiveness, the United Nations Educational, Scientific and Cultural Organization (UNESCO) launched the Man and the Biosphere Program from which the "biosphere reserve" concept emerged in 1970, and now more than 700 biosphere reserves have been established in 131 countries <sup>[14]</sup>. Biosphere reserves are unique types of PAs aiming at conserving species and ecosystems, monitoring and conducting scientific research and fostering sustainable development in the surrounding region. They do not have a single management model; instead, management systems are encouraged to be open to community concerns and flexible to changing environments <sup>[15][16]</sup>. Their management is based on a zoning pattern consisting of a strictly protected core where only scientists are allowed and a surrounding buffer zone where specific appropriate socioeconomic activities are endorsed. BR's management regime is associated with "sustainable development", "participatory" and "community-based" approaches—core paradigms in the rural development discourse. However, these principles on which BRs are based have been highly contentious, as described below.

Despite the tendency to shift towards local participation in BRs, the redistribution of power among stakeholders has been limited. Indeed, many critics point out the limited degree of allocation of real power and authority to the indigenous and local communities in such conservation practices <sup>[127][18][19][20]</sup>. Lack of political representativeness prevents indigenous communities from having an effective voice in land management and decision-making and prevents them from effectively addressing problems of corruption that limit the benefits they receive from such reserves <sup>[21]</sup>. In Pakistan, for example, the efforts of non-governmental organizations (NGOs) to assign a monetary value to the ibex for the sake of conservation removed the ibex from local management and placed it within the control of national and international organizations <sup>[22]</sup>. Community-based conservation is regarded by its advocates as a more equitable and more efficient alternative to the various types of PAs, in addition to being perceived as a way to ensure environmental conservation also ends up supporting a small group of people benefiting from conservation-oriented market opportunities, while the local communities, especially the most vulnerable, suffer the consequences of conservation initiatives without realizing any significant benefit, which further introduces different sets of power inequalities within PAs <sup>[22]</sup>.

## 2. Protected Areas in Lebanon

Protected areas in the Middle East are on the rise. There are more than 230 PAs in the Arabian Peninsula region covering around 15% of the land area <sup>[24]</sup>. However, research on political ecology and the impact of conservation on local communities—their livelihoods, perceptions, socioeconomic growth and decision-making power—in the Middle East is limited, lacking exploration of the impact of conservation on local livelihoods and the locals' perceptions.

Lebanon's topography, its altitudinal diversity and its location at the far eastern end of the Mediterranean Sea have resulted in unique ecosystems and rich biological diversity <sup>[25]</sup>. Despite its small area covering 0.007% of the world's land surface, Lebanon hosts about 0.8% of the world's recorded species and includes a high percentage of endemic terrestrial and marine plant species (12%) <sup>[26][27]</sup>. However, this diversity has been highly threatened; forests currently constitute 13% of the country's area as opposed to 70% a hundred years ago <sup>[28][29]</sup>. Economic development and political and social instability have been pushing for unsustainable exploitation of natural resources <sup>[28]</sup>. As a response to these environmental threats, PAs have been allocated throughout Lebanon since the 1930s for the aim of conserving what is left of Lebanon's biodiversity <sup>[30]</sup>. Many of the natural sites in Lebanon are protected by Lebanese laws, decrees, ministerial decisions and resolutions. These sites are classified and protected as nature reserves, protected forests, natural sites and Himas (local community-based conservation practice) <sup>[31]</sup>. Today, Lebanon features at least 15 nature reserves, 18 protected natural sites of natural and ecological importance in need of protection <sup>[31][32][33]</sup>. Nature reserves alone occupy around 2.4% of the country's area <sup>[33]</sup>. The national biodiversity targets developed as part of the ongoing NBSAP (National Biodiversity Strategies and Action Plans) state that "by 2030, the total area of nature reserves is increased to reach at least 5% of Lebanon's area." <sup>[34][35]</sup>.

The Department of Ecosystems at the Ministry of Environment (MoE) is accountable for everything related to PAs, nature reserves and nature sites; it develops the policies, regulations and governance's structure related to the nature reserves and nature sites under the MoE's protection. The Protected Area Project (1996–2002) established the framework for the management of PAs in Lebanon. The management of the PAs involves three main entities: (1) the Ministry of Environment (MoE), (2) a government-appointed committee (GAC) and (3) the management team (MT). This MoE–GAC–MT model has a vertical structure since the MoE holds the major decision-making power by approving the management plans, the budget, the annual work plans and the major activities on sites. Annual reports on management development must be presented to the MoE. The MT implements management plans under the supervision of the GAC <sup>[36]</sup>. According to a graduate study <sup>[37]</sup> on stakeholder involvement in the collaborative management of two PAs in Lebanon, this MoE–GAC–MT model removes some stakeholders from the decision-making platform, specifically resource users such as herders, fishermen and farmers. Hence, this model permits powerful holders to impose control over sites.

Studies exploring conservation dynamics and policies in Lebanon in particular and the Middle East in general are scant. Although conservation in Lebanon has witnessed a growing trend, the perception of people towards conservation and the socioeconomic impact of PAs on rural livelihoods have been poorly investigated. Considering the contentious character of the establishment of PAs in the Global South and the contrasting analytical perspectives which have underpinned the analyses of these and other conservation initiatives, this study interrogates: (a) the perceptions of rural communities about conservation practices and about the making of Jabal Moussa in Lebanon into a protected area, (b) the extent and form of their involvement and participation in this conservation and rural development project and (c) the implications for reproduction of the existing rural livelihoods.

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