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# A Review: Protected Areas of Pakistan Management and Current Issues

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## To cite this article:

Allah Nawaz Khan, Hamid Aziz Khan, Esraa El Saeed Ibrahim Ammar. A Review: Protected Areas of Pakistan Management and Current Issues. *American Journal of Biological and Environmental Statistics*. Vol. 8, No. 4, 2022, pp. 112-116. doi: 10.11648/j.ajbes.20220804.13

**Received:** November 7, 2022; **Accepted:** December 8, 2022; **Published:** December 29, 2022

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**Abstract:** Significant studies conducted over the past ten years have demonstrated the numerous advantages that protected areas, like the (Natura) 2000 network, and green infrastructure have for the economy and the welfare of people. Examples include the advantages of carbon storage, water supply and purification, flood control, soil retention, leisure and tourism, and the availability of fish and wood. These evaluations have aided in raising awareness of the value of protecting biodiversity, attracting funds for maintenance and restoration, and promoting responsible participation in protected areas. Protecting biodiversity is necessary for sustainable development. It provides us with possibilities for utilizing resources now and in the future. Pakistan has protected areas, including 14 national parks, 99 wildlife sanctuaries, 96 game reserves, 16 unclassified areas (private, proposed, or suggested), a biosphere reserve, and 9 wetlands designated by the Ramsar Convention. These groupings cover 9,170,121ha (10.4%) of the land. Pakistan's Protected Areas encompass most habitats. Size, distribution, and management don't satisfy ecosystem needs. Policy and legal frameworks, enforcement of laws, capacity building, incentives, and funding from federal and provincial governments are all mandated by various statutes aimed at protecting biodiversity. Preserving and using biological diversity requires federal policies and programs. Present review focus on importance of conservation and future assessment for inhibiting biodiversity loss.

**Keywords:** Protected Areas, Biodiversity Conservation, Habitat Loss

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## 1. Introduction

From the Arabian Sea to the Central Asian mountains, Pakistan's 803,944km<sup>2</sup> territory. To the west, north, east, and southeast, it has borders with Iran, Afghanistan, China, and India. The Arabian Sea has a 1,000-kilometre coastline [1].

Its biodiversity exhibits traits from the Palaeartic, Indomalayan, and Ethiopian regions. The Indus Basin in eastern Asia is home to Indomalayan species, whilst the Arctic and Pacific Oceans to the north and west are teeming with Palaeartic varieties. Eurasia, the Middle East, West Asia (Afghanistan and Iran), Central Asia, and Tibet all contribute species to what is known as the Palaeartic region. Ten percent for the scaly critters. Despite having low levels of endemism (5% for plants, 0% for birds, 4% for mammals,

and 11% for fish), the flora and fauna are unique and diverse due to the blending of components from many origins [2]. These results might understate Pakistan's biodiversity because so much primary fieldwork needs to be done. Pakistan is concerned about habitat loss, fragmentation, and degradation. The forest area, which is already decreased and fragmented, is facing further loss and degradation. Many freshwater and marine habitats have been destroyed or are in danger of extinction. In Pakistan, several natural plant and animal species are endangered on a global scale, and many more are of national concern. Loss of genetic diversity and deterioration of the agroecosystem are issues that affect Pakistan as well [3].

## 2. Legal Framework

In terms of protecting species, the law gives undue attention to animal species while leaving out threatened and endangered plant species. The majority of the laws that are now in place to restrict the hunting of game animals cannot be enforced. Few species are now protected by laws (such as falcons and cranes), but other notable threatened species may require further management strategies.

There are game reserves, sanctuaries for wildlife, and national parks in Pakistan. The management of wildlife is insufficient under current law. Provincial wildlife agencies are given authority over protected zones under the regulations, but not over neighboring regions. Conservation of biodiversity frequently conflicts with development near protected areas.

Local communities must use the protected area and be involved for effective management to occur. Community involvement is not permitted under any of the protected area classifications. Provincial governments are examining a draught model wildlife law that allows for cooperative wildlife management [4].

Pakistan's PA categories are outdated. Most remaining places with high biodiversity are utilized and managed by local people. The most effective way to protect these areas is to set up cooperative management regimes. The category of protected areas for community involvement and sustainable use is absent from Pakistan's wildlife law [5].

The scope of the various law enforcement and respective jurisdictions should be clearly defined, and any gaps or other weaknesses in Pakistan's biodiversity conservation efforts should be found through an evaluation of the current legislation. Local legislation should be revised to encourage greater community involvement in efforts to preserve biodiversity. It is important to preserve and encourage indigenous natural resource management practices by updating the laws that control community ownership and access to biological resources.

## 3. Management Plans and Policies

In Pakistan, most protected areas do not have management plans and the few that do often go unenforced. Management plans are usually viewed as rigid, continuing procedures rather than adaptable blueprints. Recently, plans for the Federal Territory's Khunjerab National Park and Margalla Hills National Park were established (Northern Areas). The national parks of Kirthar in Sindh and HazarganjiChiltan in Balochistan both have management plans in place.

The policies and strategies about forestry, fisheries, agriculture, and wildlife all have a bearing on the preservation and sustainable use of biodiversity in Pakistan [6]. The National Council for Wildlife Conservation has been the unifying force behind federal wildlife policies and programs since 1974. (NCCW). Wildlife policy and planning is the responsibility of provincial wildlife agencies and/or Wildlife Management Boards. Game species, as well as

animals, are given higher priority than plant species in wildlife programs and plans in Pakistan. They relate to trade limitations for protected areas and listed species. The GOP has crafted a new national wildlife policy in consideration of the opinions of the provinces. Any non-domesticated animal, plant, or genetic material is exempt from this policy's purview; however, all wild species and their ecosystems are included [7].

Pakistan's Perspective Plan, Five Year Plan, and Annual Development mostly ignored environmental issues and biodiversity before the Cabinet ratified the NCS in 1992. The Eighth Five-Year Plan (1993-1998), which lists environmental protection as a "key challenge," exemplifies the NCS's influence. The plan's objective is the preservation and conservation of the natural environment. The plan prioritizes improving institutions, changing the law, and raising public awareness of environmental issues. Protected area growth and management, on-site plant preservation, and "action" for endangered species are all included. Efforts are being made to improve protected area management because that capacity is lacking.

A workshop on the effective management of protected areas was organized by WWF and the World Bank as a follow-up to previous workshops held in Bhutan (1999) and Bhopal, India, with the goals of raising awareness of the importance of management and highlighting the role of performance indicators in assessing the efficacy of protected areas (2000). Information used in the management of protected areas can be enhanced through such cooperation ventures. Pakistan needs to expand its network of protected areas to include all of its biologically significant land, river, sea, and coastal areas.

It is also important to implement policies and practices that encourage the conservation and responsible use of natural resources. Ecosystems that are especially vulnerable, such as those found in the ocean and along the shore, as well as other ecologically sensitive areas, need special attention. More parks are needed in Balochistan, the Northwest Frontier Province, and Southeast Pakistan. To fulfill their respective mandates, the Ramsar Convention, the Man, and the Biosphere Program, and the World Heritage Convention all require that priority areas be identified all over the world.

## 4. Capacity Building for Efficient Work

Building Capacity Provincial wildlife administrations lack the staff and resources to carry out their duties. Training is necessary for scientists, researchers, NGOs, decision-makers, and planners.

To preserve the survival of national parks, biosphere reserves, and wildlife sanctuaries, the public, the private sector, and the government must all collaborate [8]. Such backing is highly unlikely to materialize until society recognizes the worth of protected places to its rest and ensures that they are handled most efficiently and economically possible. When people and businesses want to flourish, they need to get specific.

Increased communication between managers of protected areas and other sectors is necessary. In-service training program resource managers, conservationists, and other concerned staff are essential to achieving this goal, as are efforts to increase the capacity of nongovernmental organizations and community institutions to play an effective role in biodiversity conservation by providing funding, staff, and equipment to existing training programs. Large overarching NGOs have established local networks [9].

## 5. Community Involvement for Better Results

Since local communities are the end users of biological diversity, it is incumbent upon them to preserve and make use of its resources. Preventing biodiversity loss in Pakistan may depend on local communities taking on the role of protectors and beneficiaries.

Communities often bear the environmental costs of corporations' wasteful resource consumption, with few tangible benefits. Since there is no national system for pricing and valuing biodiversity, the government does not calculate and assess the true costs of using biodiversity.

Nearby activities may be essential to the sustainability of protected areas. The long-term viability of the protected area may be enhanced if residents are involved in managing it and appropriate development is encouraged in neighboring [7].

Under the new strategy, locals must be a part of the solution, not the problem. The UNDP's "Maintaining GEF's Biodiversity with Rural Community Development" is one of many innovative programs "This tactic is being tested in Pakistan. The early results are promising and show that local communities can effectively manage biological resources. New biosphere reserves (Palas Valley, Indus Delta) can be created, existing ones can be better managed (Lal Suhanra), and relationships with communities in protected areas can be strengthened using this approach [10].

## 6. Disproportionate Distribution of Costs and Benefits

The loss of biodiversity in Pakistan is largely attributable to the unfair allocation of the benefits and costs of conservation and exploitation. Those who get the benefits of biodiversity loss do not pay for it; rather, the burden is placed on other groups in society.

Communities are unable to ensure the long-term sustainability of their natural resources as a result of the state's control of these resources and the resulting centralized systems. As a result, this threatens Pakistan's unique biodiversity. rewards and punishments [11].

Several governments are increasing their efforts to use a mix of incentives and disincentives to promote conservation and sustainable use. Pakistan hasn't employed this tactic very often. Few incentives have been put in place to support the

conservation vacation or sustainable use of biodiversity since its advantages are not well appreciated or considered. Similar to appropriate incentives, inadequate enforcement characterizes incentives. Additionally, there are many "perverse" incentives, particularly in agriculture; for example, irrigation subsidies promote water waste and harm freshwater and coastal environments [10].

To promote biodiversity protection and sustainable usage, it is necessary to adopt national and local incentives and disincentives. Tax reductions for importing equipment for conservation, tax exemptions for gifts to conservation non-profits, and tax deductions for habitat or species protection are a few examples of these laws. Programs for public education, technical assistance in agriculture, forestry, and other disciplines, and social incentives to improve quality of life could be prioritized for communities located near protected areas. Establishing new institutions for biodiversity management and settling land ownership are two examples [12].

## 7. Education and Awareness in the People

Sensitization Protected places in Pakistan are rarely overseen by residents. The promotion of public education and awareness regarding protected areas, providing local people with support for environmentally friendly and sustainable development, and developing appropriate incentive and disincentive programs have all received little attention. Local communities either disobey protected area rules, which causes deterioration or rules are enforced against their interests, which results in conflict. Locals and park officials have clashed over the loss of grazing rights in Khunjerab National Park [13].

A plan for environmental education and awareness is included in Pakistan's National Conservation Strategy; provincial conservation strategies provide further information (e.g., SPCS, BCS, NACS). But in an overall "greening" of public education and awareness, the needs of biodiversity cannot be disregarded [14].

## 8. Research and Training Programs

Pakistan's biodiversity is documented, and ecological health is monitored by research and training institutions. Professionals in conservation and sustainable usage are developed through training institutions. There is still a lot to learn about conserving biodiversity sustainably. A multidisciplinary field called conservation biology researches and oversees interactions between people and biological resources [15].

Because conservation and wise use of natural resources depends on a strong foundation in the natural, social, and humanities, protected areas and biosphere reserves demand greater scientific investigation, monitoring, training, and instruction. This is crucial in countries whose biosphere

reserves lack the necessary financial and human resources [16].

## 9. Financial Resources

There isn't any money available for conservation in a developing nation like Pakistan. To increase money and awareness, the public must be made aware of biodiversity's rapid decline and the necessity to safeguard it [17].

The money invested in the preservation and management of biodiversity is not a waste; rather, it is an investment in the political, social, and economic stability of a country. Investments that are advantageous to nearly all socioeconomic levels and areas. These benefits are not acknowledged or valued in national income accounting. Financing for bilateral and multinational biodiversity projects has to increase [18].

## 10. Mountain Protected Areas in Pakistan: The Case of the National Parks

Pakistan has created three national parks in the past 20 years. The Chitral District of the NWFP is home to Chitral National Park, which protects a 7,750-hectare watershed known as Chitral Gol. The Gilgit District of the Northern Areas is home to Khunjerab National Park, which spans 2,269 square kilometers from Dish to the Pakistan-China border at Khunjerab Pass. Central Karakoram National Park, which also covers Gilgit, consists primarily of Skardu. The Baltoro, Panmah, Biafo, and Hispar glaciers, along with their tributaries, are located in the unmapped park region. Despite the parks' diverse history, each one has a usage-control gap. The difficulties in each park are caused by this discrepancy. The influence of each party over resources is diminished by separating ownership and use. Effective management is hampered by this dispute [19].

Now that resorts, adventure tourists, big game hunters, mountaineers, conservation groups, and the military have easier access to formerly cherished alpine pastures, valleys, and animal habitats, their value has increased. Every organization seeks to utilize its space to the fullest. Traditional usage by the villagers also plays a role. Each user group has its management philosophies and seeks to impose dominance over the regions. All user groups' desires must be considered while developing cooperative management strategies. There is a strong conservationist ethos in Pakistan's parks. Protected area managers in less developed nations understand the importance of integrating biodiversity conservation with broader social and economic goals. Pakistan is just now starting to employ this management strategy. [10]

Locals are prevented from planning and carrying out by the national parks of Pakistan's strict prescriptive framework. The law governing national parks prohibits many uses. The 1978 definition of the IUCN is like Pakistan's 1975 national

park statute. While Pakistan's definition has not changed, the IUCN definition must reflect contemporary park management concepts. The court cases in Chitral Gol and Khunjerab show how Pakistan's parks are designed in a way that fosters conflict. Twenty years have passed since the former Mehtar Saiful Mulk Nasir appeared in court in Chitral. The government does not accept previous Mehtar's claim that Chitral Gol is his personal property. For Chitral Gol, locals are suing. The case was still open in June 1995. The authorities in Khunjerab outlawed people's traditional grazing without offering compensation. The villagers were granted a court injunction to continue grazing in October 1990. The Khunjerab Security Force (KSF) drove them out in 1991. These disagreements and countermeasures highlight the gap between protected spaces and the decision-makers in Islamabad, as well as the difference between usage and control.

Hope may be found in Khunjerab developments. Co-management is used in the management plan of the federal government. Co-management entails equal participation from all parties in the decision-making and execution processes. Local communities and user groups must be given equal management authority and responsibility by the government. Utilization and control might coexist under this plan. Authorities must protect and strengthen local communities, aspirations, knowledge, skills, and resources for practice while also delegating decision-making to all user groups, including local communities [20].

This does not mean that they must relinquish their legal authority. Users are also accountable. They must take ownership of their actions, contribute to area administration, and collaborate with others; they cannot just be users.

The Central Karakoram National Park, created in 1993, tries to avoid the challenges of Chitral Gol and Khunjerab. Locals constitute the park's "heart," according to IUCN, a supporter.

It is unlikely that government control over mountain parks will address user issues. Private control doesn't seem likely to settle disputes or supply the necessary tools and abilities to run these places. Traditional village-based common property regimes face difficulties due to competing user groups. It indicates that a co-managed plan that combines development and conservation is the best way to manage these places now [21]. The loss of endangered species and ecosystems is a loss for Pakistan and the rest of the globe, and it is a terrible consequence of a refusal or inability to act. Pakistan and the rest of the world will suffer if rare species and habitats disappear.

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