

Exploiting Natural Resources

**Growth, Instability, and Conflict in the
Middle East and Asia**

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Editors

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The Political Economy of Forest Management in Pakistan

Babar Shahbaz and Abid Qaiyum Suleri

Forests play many roles in the development of a country, and especially in securing the livelihoods of people who live in and around them. Forest ecosystems are one of the greatest sources of biodiversity, but they are more fragile than many know. In particular, the natural forests of South and Southeast Asia, Africa, and Latin America are rapidly vanishing. Although the international community has issued policy responses for sustainable forest management, forest degradation has not been halted in most developing countries. This situation requires a comprehensive analysis of the political economy of forest governance and an examination of the underlying causes of deforestation.

Pakistan's forestry sector serves as an interesting case study for such an analysis in the South Asian context. Deforestation in Pakistan is one of the highest in the world, despite rigorous institutional changes in forest management paradigms. This paper attempts to provide an exploratory analysis of forest governance and deforestation and its consequences in Pakistan, to examine the interaction between forests and local livelihoods, and to identify the factors responsible for deforestation and the ineffectiveness of state forest management strategies. The paper argues that some of the main barriers to effective and sustainable forest management are a lack of understanding of local livelihood strategies, lack of political will on the part of state actors, lack of a sense of ownership of forests by the local communities, and the presence of powerful timber smugglers.

Global Context

Over the past few decades, the international community has discussed the global problem of deforestation and forest policy issues. In 1992, the United Nations Conference on Environment and Development in Rio de Janeiro served to catalyze debate and develop a vision of sustainable forest management. It is widely recognized that the forestry sector carries potential for achieving many of the Millennium Development Goals for poverty reduction. The World Summit on Sustainable Development, the Kyoto Protocol, and the Intergovernmental Panel on Climate Change all recognize that forests are imperative to

achieving overall sustainable development, reducing poverty, improving the environment, compensating for general biodiversity loss, mitigating the impacts of climate change, and ensuring food security.

Despite these positive developments and a policy climate that advocates sustainable forest management at global, national and local levels, deforestation continues. Development practitioners, donors, and policymakers must keep working to find sustainable solutions. Apprehensions about forest degradation and deforestation in many countries and regions throughout the world have given rise to numerous research studies about its causes and effects. There is a growing realization that unsustainable forest management strategies and insecure and conflicting land tenure and property rights are some of the main underlying problems of forest degradation.

Deforestation is one of the most significant global environmental problems. Patterns of forest degradation are particularly visible in many parts of Asia and Africa. According to the Food and Agriculture Organization of the United Nations, some South and Southeast Asian countries, including Cambodia, Indonesia, Nepal, Pakistan, the Philippines, and Sri Lanka are losing forests at rates exceeding 1.4 percent per year. These are among the highest rates of forest loss in the world. Within South Asia, the rate of forest depletion is highest in Pakistan, despite intensive support from international donor agencies and numerous global and local initiatives for forest conservation, policy formulation, and improved governance. In fact, most of the national governments of South Asia have launched major initiatives since the 1980s to decrease deforestation through structural reforms in the forestry sector, decentralization of governance, and community forestry initiatives, with a similar lack of success.

Deforestation always brings negative consequences. In September 1992, Pakistan experienced the worst floods in the country's history, and the vanished forests in the northern watersheds were regarded as one of the main possible causes. Therefore, the federal government imposed a complete ban on logging in 1993. But the ban did not take into account the country's own timber needs, and the ban not only triggered illegal logging there, but also led to smuggling of timber from Afghanistan into Pakistan, causing extensive deforestation in Afghanistan. On October 8, 2005, Pakistan suffered its worst disaster in history, when an earthquake of 7.6 on the Richter scale struck South Asia, causing enormous destruction in the mountainous areas of northwest Pakistan. Massive landslides caused further loss to the region's inhabitants. The landslides occurred mostly in the denuded hills, whereas places with good forest cover suffered less destruction.

Forests of Pakistan: An Overview

According to statistics issued in 2006 by the Ministry of Finance and Economic Affairs, forests cover about 4.22 million hectares in Pakistan, only 4.8 percent of the total land

area. However, there is considerable controversy over the precise forest area in Pakistan, as different national and international agencies have published statistics based on different definitions of what comprises a forest. Areas designated as “forest areas” are merely lands under the administrative control of the provincial forest department. Thus, officially designated forests may be devoid of trees while considerable tree cover may be found in areas other than the designated forests.

There is a large variety of tree species because of the country’s diverse physical geography and climatic contrasts. The important forest types are hill coniferous forests (46 percent of the total forests), scrub or foot hill forests (28 percent), irrigated plantations, farmland trees, and mangroves in the delta of the Indus River.

Most of the forests are found in the northern part of the country, with 40 percent in the Northwest Frontier Province (NWFP), 15.8 percent in northern areas, and 6 percent in Azad Kashmir.¹ Eighty percent of the forests in Pakistan are naturally distributed in the Himalayan, Karakoram, and Hindu Kush mountain ranges. Although Pakistan’s forest resources are scarce, they contribute significantly to its economy. These forests are imperative for the protection of the natural environment, production of various goods and services (such as timber, firewood, and medicinal plants), and the protection of land and water resources, particularly in prolonging the lives of dams, reservoirs, and the irrigation network of canals in the lowlands, where intensive agriculture is practiced.

Legal Classification of Forests

The provincial forest departments are charged with governing the forests, while the federal government is mainly responsible for policy formulation and international matters. The natural forests are managed according to their legal classification and tenure rather than according to species. These forests are divided between state and nonstate forests. More than two-thirds of the total forests are state-owned and are generally divided into reserved forests and protected forests. In reserved forests, the local people have very limited rights. They are only allowed to collect wood for fuel and extract timber for their personal needs. The main category of nonstate forests is the subsistence (*guzara*) forests in which the owners or holders of exclusive rights are entitled to use the forest wood for domestic purposes. Others may be given permission by the owners for certain uses, such as grazing animals and collecting firewood. Provincial forest departments are responsible for management and planning of all types of state- and nonstate-owned forests, except farm forest areas.

¹ The total forest areas of the Pakistani provinces and territories of Punjab, the NWFP, Sindh, Baluchistan, Azad Kashmir, and the northern areas are 608,000, 1,684,000, 40,000, 59,000, 275,000, and 666,000 hectares, respectively.

Forest Tenure as a Source of Conflict

There is a wide gap between the legal status of forests and the actual practice of forest management. In some areas, state control of the forests is never accepted by the locals, particularly in those forests where traditional rights have long been recognized. In some cases, local communities still claim ownership of these lands. An especially interesting case is that of the protected state forests. Based on traditional institutions such as customary land titles, many local people are of the opinion that they themselves own the forest. They do not accept legal ownership by the state, even as state authorities strive to assert their legally designated control. Such conflicting interests between the state and local communities have placed forests under continuous strain. Uncertainties and inequalities regarding tenure are a major cause of forest depletion. The local communities perceive the state to be in competition with their interests rather than being a mandated caretaker of the forests. Recent empirical studies have indicated a marked communication gap and distrust between the state and local stakeholders.^[1]

Illegal Logging

Timber harvesting from the mountain forests of northwest Pakistan has been banned since 1993, following the destructive floods of 1992, but illegal logging continued after the ban because of high demand for timber in the cities. Timber prices in Pakistan escalated after the ban, making illegal timber harvesting and smuggling from the highlands to the lowlands a very profitable business.^[2] The term “timber mafia,” which came into common use after the ban, refers to a network of timber dealers, corrupt politicians, officials of the forest department, influential tribal leaders, and others who make money by illegally harvesting and smuggling trees from the highlands to the lowland cities. They rely on bribing, bullying, political networking, and blackmailing. Powerful politicians, including members of Parliament, are believed to support or be part of the timber mafia. It is widely believed that these individuals can manipulate legislation to serve their interests and resist changes in forest law that would make forest management more participatory and sustainable. The civil society and media in Pakistan often accuse the forest department of being involved in illegal logging.

Political Economy of Forest Management

Traditional Forest Management Practices

Historically, forest ownership in most South Asian countries (Bangladesh, India, Nepal, Pakistan, and Sri Lanka) was mainly communal, and the forests were generally managed by indigenous customary practices that varied from region to region.^[3] For example, in Pakistan, decisions related to access to resources and sharing of benefits and responsibilities were deeply rooted in sociocultural mechanisms such as customary practices (*riwaj*)

and the council of tribal elders (*jirga*) system. Forest ownership in most of the regions was held by the concerned landowners. Others in the community, including non-owners and the landless, held some privileges. They held free access to the forests of the concerned village for livestock grazing, cutting timber and collecting firewood for household purposes, cutting grass and lopping of trees for feeding cattle, and collecting minor forest products, such as mushrooms, honey, and medicinal plants. The owners rarely interfered with the exercise of these rights.^[4] The local forest dwellers lived in harmony with the natural environment. Relatively small populations and the subsistence economy put limited pressure on the natural forests.

Colonial and Post-Colonial Forest Management Strategies

In South Asia, including in Pakistan, the forest management paradigms have been heavily influenced by the British colonial administration. After 1850, when the British came to rule this part of the globe, forest management became a centralized state function. The Indian Forest Act of 1878 brought the major part of the forests under government control and, as such, nationalized one-fifth of India's land area, while giving limited rights to the local people. Local people, who had once enjoyed customary rights over forest resources, were resentful. Although communities were granted some rights in 1923, and a new Forest Act was promulgated in 1927, local residents could no longer exercise their customary rights with the same freedom. In the case of reserved forests, for example, they could no longer cut trees, and they had to seek permission from the state authorities for subsistence and other access to protected forests.

Most of the forest policies and land regulations that were promulgated in colonial South Asia during the 19th century were retained by newly independent nations of the region. Pakistan was no exception. In 1947, at the time of independence, the policies, regulations, and hierarchies that administered the new nation's forests were largely left intact. The Indian Forest Act of 1927, which became the Pakistan Forest Act of 1927, introduced punitive sanctions against transgressors. The top-down, colonial approach of governance was also reflected in most of the national forest policies announced from time to time.^[5] Such nonparticipatory approaches failed to stop forest depletion, and Pakistan's deforestation rate became one of the highest in the world. The policing efforts of the state forest department have hardly ever succeeded in protecting the forests; rather they have earned mistrust and provoked confrontation with local forest dwellers. This forced development practitioners, donors, and policymakers to push for a paradigm change, toward community participation.

Institutional Changes—Toward a Participatory Approach

In the last several decades, decentralized and participatory or joint forest management have become major policy trends in the forestry sector of many South and Southeast Asian

countries, including Bangladesh, India, Indonesia, Nepal, and Vietnam. In the forest-rich mountain areas of Pakistan, several participatory forest management programs and projects have been implemented since the 1980s. Although most of the interventions were on a pilot scale, they opened the doors for institutional change on a larger scale.^[6]

The process of institutional change in the forestry sector was initiated in 1996 by the Forestry Sector Project (FSP) in the NWFP, funded by the Asian Development Bank. The FSP, together with the Institutional Transformation Cell, a joint Dutch–Swiss-assisted project, devised a setup to improve decision making and participatory ownership of the institutional reforms in the forest department of the NWFP, making use of existing experiences and proposals generated by other projects.^[7] The project commenced under a loan agreement between the Asian Development Bank and the government of Pakistan. The Dutch government, the German federally owned development company GTZ (Deutsche Gesellschaft für Technische Zusammenarbeit), and the Swiss Agency for Development and Cooperation also contributed to the project. It aims to protect and improve the hilly and mountainous environment of the NWFP. Doing so would raise the productivity of private, community, and government lands that are suitable for trees, fodder, and other crops through active participation of beneficiaries in the design, planning, and execution of project-related activities.

This project brought major reforms to the provincial forest department based on these principles and objectives:

- Institutionalization of the participatory forestry approach in the department
- Social organization and capacity building of local communities' organizations
- Creation of specialized management and enforcement units in important areas
- Increasing coordination, cooperation, and promotion of team-based management in the department
- Decentralization of planning and authority
- Redefining and reorienting the role of the forest department toward advisory functions
- Addressing gender concerns in the department
- Improving the training and education system of the department

These reforms provided considerable space for village-level institutions and joint forest management committees (JFMCs) to manage forest resources at the village level. The improvement of village infrastructure was also an objective of the FSP, in addition to the core objective of forest management.^[8] Within the provincial forest department, a new structure was developed to decentralize planning and authority (i.e., by backstopping the JFMCs) and to increase coordination and cooperation within the department, thus enabling the department to actually implement the new participatory forestry approach.

A positive outcome of the participatory approach was the increase in awareness among the residents regarding forest protection, as indicated by the significant difference in the responses of residents of the project villages (i.e., those villages where FSP had interventions and joint forest management was in practice) versus those in nonproject villages (no interventions by the FSP). A 5-point Likert scale was used to record perceptions of the respondents regarding the change of forest cover and illegal cutting (by the concerned villagers and outsiders) during the last five years. The Likert scale (5 = increased, 1 = decreased) is shown in table 1.

Table 1: Perceived Change in Forest Cover and Illegal Logging during the Past 5 Years

	Village	N	Mean	t-test T
Change in forest cover	Project	200	2.22	
	Nonproject	200	1.66	
	Both	400	1.94	7.081
Illegal cutting (by outsiders)	Project	200	2.65	
	Nonproject	200	3.66	
	Both	400	3.16	-10.09
Illegal cutting (by villagers)	Project	200	2.97	
	Nonproject	200	3.97	
	Both	400	3.47	-10.48

Source: Shahbaz 2007.

The data in the table reveal that, although forest cover decreased in both the project and nonproject cases, the rate of forest depletion was significantly higher in the nonproject villages. Illegal cutting by outsiders of the project villages decreased, whereas it increased significantly in the nonproject villages. Similarly, illegal cutting by the villagers concerned increased in the nonproject villages, while it decreased in the project villages. These trends indicate the positive impact of participatory forest management. One of the reasons for this progress can be traced to the joint forest management process, in which the forest department used participatory rural appraisal tools, such as transect walks and group meetings, to inform local people of the forest's importance to their livelihoods and to future generations.^[9] The negative consequences of forest degradation were also highlighted. For the majority of participants, such meetings were the first of their kind, and they understood that

they would benefit from organized forest protection. In most cases, the JFMCs imposed fines on the transgressors, and the JFMC members themselves guarded the forests.

The Failure of Participatory Forest Management

In most developing countries, including those in South Asia, participatory forestry policies emerged as a response to rapid deforestation and institutional failure in the sustainable management of forest resources. Although the data shown in table 1 suggests a positive breakthrough is possible, empirical research suggests that there are still some weaknesses in the new paradigm of forest management. With the qualified exception of India, the rate of forest depletion in most South Asian countries has continued or actually increased since participatory policies were adopted. The rate of increase in Pakistan is alarming. Between 2000 and 2005, Food and Agriculture Organization data show that the annual rate of forest loss in Pakistan, Sri Lanka, Nepal, and Bangladesh was 2.1, 1.5, 1.4, and 0.3 percent, respectively. Studies based on remote sensing show that the rates of decline in forest cover in the NWFP will lead to a complete disappearance of forests from most areas within 30 years.

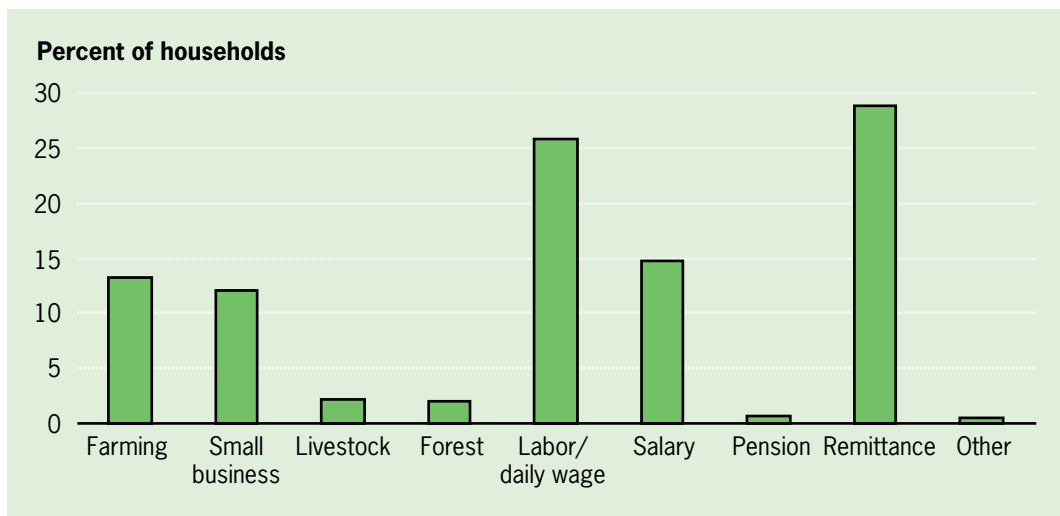
Institutions such as the JFMCs that are charged with the enhancement of trust between state officials and local communities have proven weaker than the state forest department and the timber mafia, and unequal to the impact of population growth. Some causes of forest depletion in the mountainous regions of Pakistan include the removal of forest tracts for crop production and road construction, overgrazing of land by cattle, population explosion and growing urbanization, the dependence of rural populations on wood for fuel, lack of awareness, and illegal logging by the timber mafia. Although significant progress has been made in tree planting, notably on farmland, it does not compensate for the loss of natural forests. The failure of the state forest department to reduce deforestation through participatory approaches and continued conflicts between the department and local populations both indicate a general ineffectiveness of Pakistan's new forest management paradigm.

The Forests-Livelihoods Nexus

In contemporary literature on the linkages between rural livelihood security and forest management, two overarching issues stand out: (1) how and to what extent forest resources can contribute to poverty alleviation, and (2) how and to what extent poverty alleviation and forest conservation can be made convergent rather than divergent goals. The role of forest resources in meeting human needs has caused intense debate, but there has not been adequate consideration given locally and globally to the serious threats to the security of local people who depend on forests for their livelihoods. Devolution of forest management authority to local communities in the mountain regions does provide a good opportunity to improve the living standards of the poor. However, it may also lead to increased exploitation of resources in order to raise the incomes of local people.

Forests are an important part of the daily lives of those living near them in Pakistan. However, in-depth, empirical studies reveal that the majority of those living in and near the forests of northwest Pakistan are not dependent on natural resources, including forests and water, for their cash income. Rather, they have migrated or adopted activities that do not rely on natural resources, such as labor and small businesses. Figure 1 shows the primary source of cash income of 400 randomly selected households in the mountainous regions of the NWFP. Remittance and labor/daily wage are the main sources of income for the majority of households. Cash income from forests is insignificant.

Figure 1: Sources of Cash Income of Respondents' Households



Source: Shahbaz 2007.

Nevertheless, forest use patterns by the local communities show that a majority of people are dependent on forest wood for household needs, as well as forests and forest areas for firewood, timber, forest soil, pastures, and medicinal or edible plants. The intensive use of wood as fuel for cooking and heating houses during harsh winters is due to a lack of alternative energy sources.^[10] Natural gas is not available in the mountain villages of Pakistan, and the higher cost of electricity limits its use for cooking and heating purposes. Similarly, most people cannot afford kerosene oil and liquid petroleum gas cylinders.

It can therefore be argued that forest resources continue to contribute to subsistence-oriented (or noncash) livelihoods of people living in and around these forest regions. Thus, the issue of participatory forest management becomes quite complicated in the sense that the NWFP model emphasizes institutional restructuring of the forest department, forest protection, and the regeneration of new trees. By contrast, local resident stakeholders are primarily concerned with meeting their subsistence needs with forest resources.

Discussion and Outlook

Although many factors are responsible for the ineffectiveness of forest management strategies in Pakistan, some stand out more than others. One of the most important has been the unwillingness or inability at various levels of government to involve local communities in meaningful ways. Empirical research reveals that some forest department actors have tried to create obstacles to the working of the JFMCs. These actors fear the loss of informal income (that comes in the form of bribes for extraction of timber and firewood) that would result from the implementation of a more participatory approach. The strong political will that is critical to effective decentralized forest management has not been present.

The general absence of political will has encouraged the smugglers and mafia to expand their illegal activities in the timber trade. Local people, if given sufficient powers and state support, can effectively combat illegal logging, but a sense of ownership is critical. Similarly, an analysis of forest sector changes in India shows what has been vaunted as “decentralization” has actually increased state power at the village level because village organizations still have to depend on state forest department officials for the utilization and management of natural resources.

Another key factor that hinders the effectiveness of participatory forest management in northwest Pakistan is the ignorance of local livelihood realities in the state-led forest management initiative. The main livelihood strategies of people who live closer to the forests are based on remittances generated by labor migration. Forest dwellers often make their incomes in areas other than where they live, and are not invested in their local forests as sources of livelihoods. Thus, community forestry in South Asian countries often suffers from the lack of meaningful economic incentives. Nevertheless, there are some success stories in the region. The participatory approach adopted in Nepal’s Kanchanjunga Conservation Area succeeded primarily because it made exceptional provisions to include local stakeholders in the planning, implementation, monitoring, and benefit sharing of the project.

The results regarding the positive impacts of participatory forest management on the sustainability of forest resources (less decrease in forest cover and reduction of illegal cutting) indicate that participatory forest management has the potential to positively affect the natural capital (forests) of the local people. The results also show that the participation by local people in forest management raised their awareness of the need for forest protection and conservation. This substantiates the findings of some previous researchers, that the problems that frequently occur in the implementation of participatory or decentralization processes and policies are not flaws inherent in decentralization. Rather, they are a result of poor design of decentralization policies, procedural weaknesses, and a lack of pragmatic implementation strategies.

Recommendations and Way Forward

Deeply rooted mistrust between the state actors and local stakeholders, lack of a sense of ownership in local communities, and the state's ignorance of local livelihood realities are some of the major causes of the ineffectiveness of Pakistan's current forest management paradigm. Below are some recommendations for improving the effectiveness of forestry-related interventions and the livelihood security of the forest dwellers:

- Trust can be strengthened if local institutions are given more authority, and if the state's support for the management of natural resources is in harmony with traditional practices and customary regulations. A continuing dialogue between state and local actors, moderated by independent groups, may be effective in overcoming the current gap among main stakeholders.
- One of the main causes of deforestation is the dependence of local people on firewood. Providing alternative energy sources such as natural gas at subsidized rates may ease the pressure on forests.
- An efficient procedure of giving incentives to the local communities for joint forest management should be introduced.
- Employees of the forest department should be continually educated and trained in the new paradigm of forest management.
- A systematic, periodic, external evaluation system should be adopted to ensure the proper implementation of joint forest management initiatives.
- The interventions made by either the state or donor agencies should incorporate sensitivity toward livelihood strategies, local resource use patterns, and the power relations of local stakeholders. Integrating national resource management initiatives with livelihood-related interventions could ensure the sustainability and effectiveness of such initiatives.

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