

## Forest Enterprises in Pakistan: Past to Future

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### Abstract:

*The dominant economic theme in human-forest relationships over the past two millennia, but especially during the last two centuries, has been one of value abstraction and increasingly intensive management. Humans have depended on forests for a remarkable variety of enterprise products, services, and benefits. With rapid economic growth and technological changes, they have refined and added to the values forests make available. Pakistan suffers far more severe forest scarcities than most countries. Its natural forest asset is very small - covering less than five per cent of the total land area. Forest or woodland area per person is one of the world's lowest, at one-thirtieth of a hectare - and most forests are slow-growing. Yet Pakistan's demands on forests are high and getting higher: population is growing at 3 per cent per year, and industrial growth at about 6 per cent demands more and more construction wood, fuel wood, and water from forested watersheds. Pakistan's government now recognizes that there is a broad group of people who are affected by, and who have the power to influence, forestry decisions. The term "stakeholder" has recently become widely used. But policies to encourage responsible stakeholder forestry in natural forests are not well formulated, and are not integrated with policies for farm forestry and timber imports. This paper is a contribution to the Forestry Outlook for Pakistan. The expectation is that this would be used extensively in all areas of policy and strategic planning for forestry including development of the Pakistan Forestry Vision 2030, review and formulation of national, provincial and other sectoral policies, and legal and institutional*

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*frameworks of forestry. This paper will also help in prioritization for investment planning through development and implementation of forestry programmes and projects.*

**Key words:** Pakistan, forest, investment planning, economic development

## **INTRODUCTION**

### **Current State of Forests in Pakistan**

Most of the country falls in arid and semi-arid zones. Agriculture and livestock grazing are the major land uses in Pakistan. Both of these land uses compete with and impact forests and forestry in many ways. Pakistan has very low forest cover of 5.01% but its great variety reflects the country's great physiographic and climatic contrasts. Pakistan's forest and woodland types include: littoral and swamp forests; tropical dry deciduous forests; tropical thorn forests; sub-tropical broadleaved evergreen forests; sub-tropical pine forests; Himalayan moist temperate forests; Himalayan dry temperate forests; sub-alpine forests; and alpine scrub. Coniferous forests predominate. Man-made plantations are an important wood source in Pakistan. These fall into four categories: irrigated plantations; farmland trees; linear planting; and miscellaneous planting. The KPK which was previously named NWFP and around 42% of Pakistan's forests. More than 75% of which is found in arid and semi-arid areas as tropical thorn vegetation, mainly comprising bushes and small trees, while the rest is in sub-tropical and temperate zones in the foothills and high mountains respectively comprising predominantly coniferous forests with only 0.03 ha of forest per capita compared to the world average of 1 ha. The distribution of forests and tree cover in the country is shown in Figure.

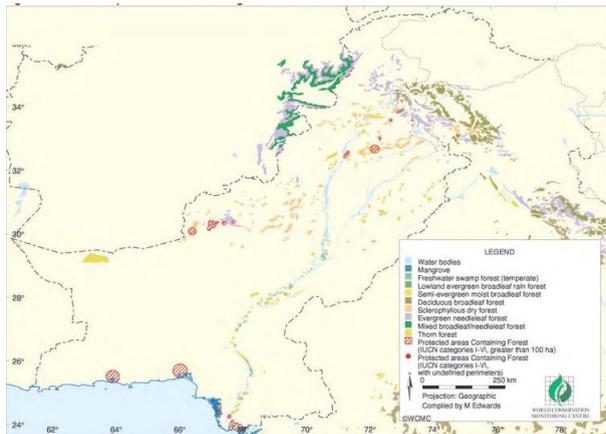


Figure 1. Forests and protected areas containing forest of Pakistan

Province-wise distribution of total forest area and the area of various forests types, plantations and farm tree cover are shown in Figures 2 (FSMP 1992) and 3 (FSMP 1992).

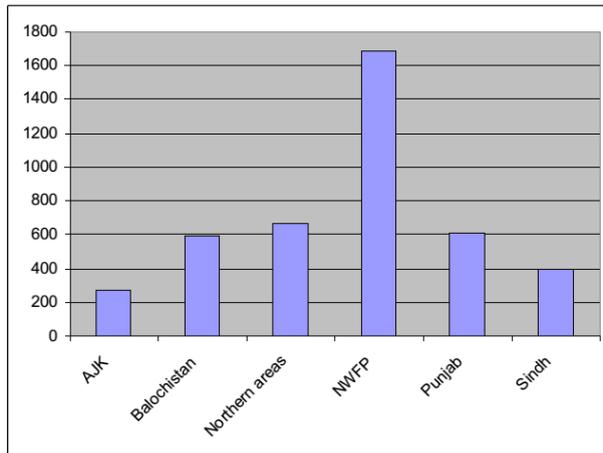
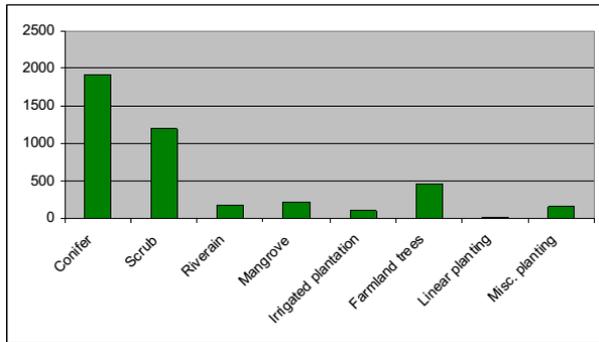


Figure 2. Province-wise forest area in Pakistan ('000 ha)



**Figure 3. Area of forests/plantations/farm tree cover in Pakistan ('000 ha)**

Administratively, 4.2 million ha of lands (or 4.8%) are allocated to natural forests, under the jurisdiction of provincial forest departments.

**The guiding principles of the Pakistan Forest Policy are:**

- Forests and rangelands together with the biodiversity that inhabit these ecosystems are part of the ecology and economy of Pakistan, and an important national heritage that we need to conserve for present and future generations
- Sustainable management of the natural resources through active partnership with communities and various stakeholders for goods and services to support livelihood systems of communities
- Revenue generation shall not be the principal motive for forest management
- Ecosystems and habitats that are unique in their biodiversity and face threats for their extinction need to be conserved through a well-managed protected area system and legislation
- Alleviation of poverty in fragile ecosystems and watersheds through small income generating schemes like cultivation of medicinal plants and NWFPs
- Promotion of and support to NGOs to educate the public and create public awareness for environmental improvement
- Strengthening existing institutions in Natural Resource Management (NRM), particularly in participatory NRM, and

encouraging private sector participation in forestry through establishment of multi-stakeholder forums at various levels

- Regular monitoring of the health and condition of forest and grassland ecosystems
- Management of RNR with their associated biodiversity in accordance with international standards and local requirements as well multilateral conservation conventions and treaties

The Draft Forest Policy is a good achievement but the Forest Act, 1927 is almost 80 years old. The KPK Forest Department pioneered to have a new provincial forest policy and provincial forest law enacted in 2001. Balochistan Forest Department is currently formulating its new Forest Act and Biodiversity Act. Other provinces are expected to follow suit. Wildlife has always been treated with forests in policy documents. Other sectoral policies and plans that have most impact and links pertinent to conservation and sustainable use of biodiversity are those relating to fisheries and agriculture and/or the Wildlife Management Boards, wherever they exist. Current wildlife policies and plans tend to place heavy emphasis on fauna to the relegation of flora, and on game animals as opposed to all wild animal species. They relate almost exclusively to the establishment of protected areas, and hunting and trade controls for the listed species. The draft policy is more comprehensive. Other sectoral policies dealing with biological resources tend not to address biodiversity or at the most marginally. Integration in sectorial policies is also lacking.

### **Key issues and an overview of the overall state of forests and forestry**

Most parts of the country with the exception of a small wet temperate zone in KPK and AJK are arid and semi-arid, and can support mainly thorny scrub vegetation. Growing plantations, as commercial entities, without irrigation is not viable. It is technically difficult, if not impossible. Growth of

trees is slow and incidence of livestock grazing is high. Deforestation and degradation of natural forests, retrogression, fragmentation and loss of wildlife habitats as well as decline in populations of forest-dependent species continues unabatedly due to many direct and underlying causes. While tree density in natural forests is declining, forest area is not decreasing and tree cover on farmlands is increasing. Forest cover per capita is declining not only due to increase in human population but also because of deforestation. The major direct causes include:

1. Overexploitation of forests for fuel wood, timber, grazing of livestock and NWFPs due to imbalance in the demand and the production capacity of forests as well as without investing in and ensuring regeneration.
2. Conversion of forests (even on steep hill slopes) into agricultural lands: unplanned developments, especially for housing and communication infrastructure

**The main underlying causes include:**

1. Rapid increase in population and change in lifestyles
2. Poverty of rural communities due to lack of sustainable livelihoods and their high dependence on forests not only for meeting subsistence needs for wood products but also for income generation
3. Lack of alternate means of energy, especially for rural households
4. Weak capacities of the public sector agencies and the local communities to manage their forests sustainably
5. Lack of advanced technology to manage and regenerate the forests sustainably
6. Lack of recognition of environmental services including regulation of yield of water, biodiversity conservation, carbon fixing and amelioration of climate, countryside recreation and ecotourism and control of soil erosion
7. Lack of involvement of stakeholders in forest management and open and transparent benefit sharing

Sustainable forest management is not practiced in its complete form and true sense as its parameters are not yet understood by the forest managers. Forestry resources have been overexploited throughout Pakistan without ensuring regeneration. The threats to forests, rangelands and biodiversity include expanding settlements, drainage schemes, increasing salinity and water-logging of soils due to extensive surface irrigation, the construction of dams and barrages, energy-generating development, logging and other forms of deforestation, expanding agriculture and livestock grazing with associated overgrazing and soil erosion, pollution by fertilizers, pesticides and industrial pollutants, increasing pressure on biodiversity from alien species, hunting, transportation, and other activities. However conversion of forest land to agriculture, settlements, mining and communication infrastructure on a large scale has been the major threat. Large tracts of tropical thorn scrub and riverine forests in the Indus plains have disappeared due to the pressures stemming from irrigated agriculture. Economic policies have also widened income disparities and forced people to exploit biodiversity at rates that are no longer sustainable.

## **KEY FACTORS INFLUENCING THE FUTURE STATE OF FORESTS AND FORESTRY IN PAKISTAN**

### **An overview of the changing characteristics of society**

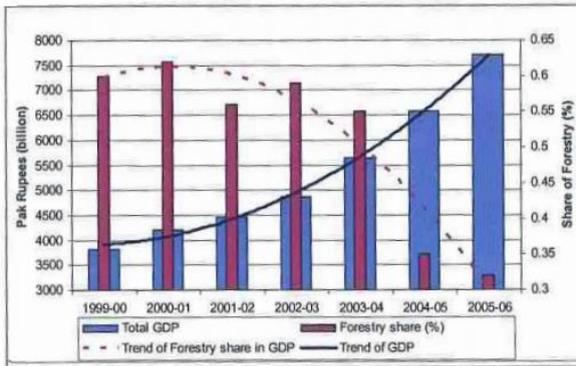
The changing characteristics of the society in Pakistan include the following:

- High human population growth and migration of people from rural areas to urban centres
- Reduction in annual population growth rate
- Growing use of wood alternatives
- Reduction in poverty from the 30s to 20s in percent terms
- Increase in mobility for employment, work, and trade
- Easy transport of wood and wood products, even from long distances

- Reduced disparity in availability of merchandise and services and their prices at the various markets and consumption centres in the country
- Reduced nomadic grazing
- Growing energy crises
- High prices of wood and wood products
- Improvement in rate of literacy and education and awareness levels
- Flood of information due to vibrant media, especially in the urban and semi-urban areas
- Lack of proactive readiness for payment of user charges for community services
- Preference to pursue individual's interest as against common national interest as well as short-term benefits against long-term sustainable gains

**The following will influence the forestry sector positively:**

- Implementation of MEAs i.e. the CBD, UNCCD, UNFCCC and UNFF Non-Legal Binding Instrument
- Development of carbon sinks on state and private lands by using the CDM
- Integrating forestry with the programmes and projects of other sectors, e.g. development of dams, canals, highways, tourism, agriculture, livestock etc.
- Meeting of MDG commitments by providing higher allocations: US\$800 million equivalent already committed for 2005-2010
- Legal and institutional (forest service) reforms to adopt and monitor SFM



**Figure 4. Share of forestry in GDP of Pakistan (1999-2000 to 2005-2006)**

### **Summary of key factors that are likely to impact forestry in the next 20 years**

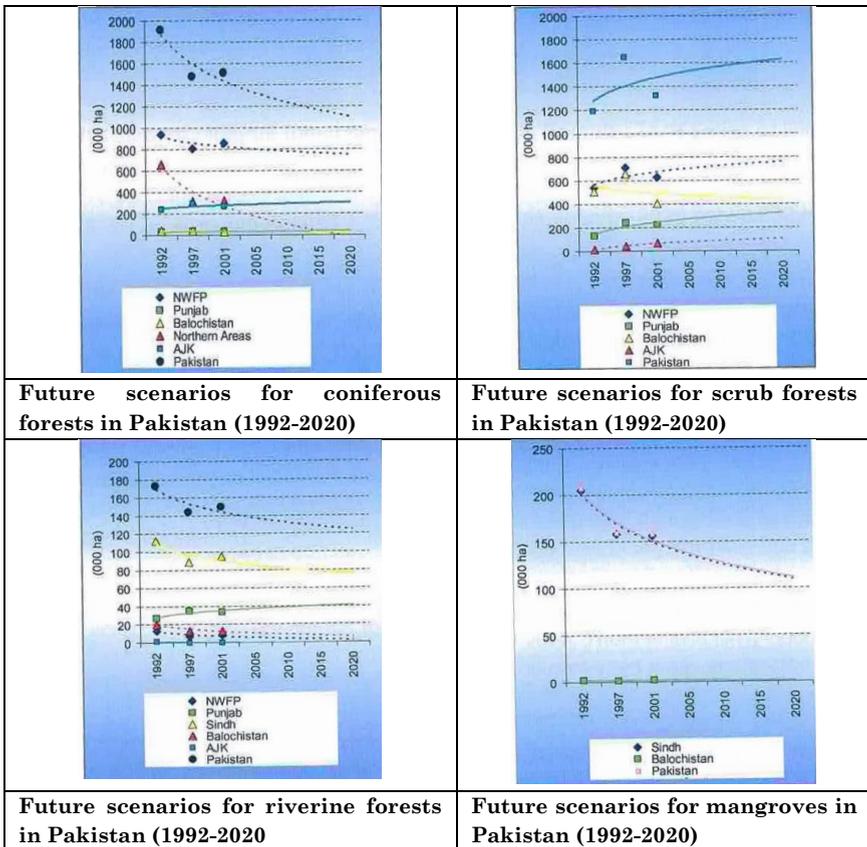
Currently, the forestry sector is confronted with many challenges including deforestation; massive degradation of forests, watersheds and rangelands; decline in their productivity; loss of biodiversity; soil erosion and desertification; reduction in environmental and recreational values; The main factor responsible for this situation is the heavy dependence of the ever-increasing population, in particular the rural population, on forests for biomass energy and subsistence.

#### **The underlying causes for this situation are:**

- Rapid growth in human and livestock populations
- Heavy dependence of local communities on forest and other natural resources
- Conversion and degradation of forests into unsustainable forms of land use
- Imbalance in supply and demand of timber and other wood products, in particular for household energy
- Reduced environmental flows in rivers
- Ambiguous, complex and retrogressive land tenure systems
- Prolonged droughts, forest fires, floods, earthquakes, pests and diseases and climate change
- Lack of participation among and economic incentives for

communities

- Transfer of forest lands for non-forestry purposes and forest land encroachment
- Shortage and inefficient use of irrigation water
- Lack of an SFM approach
- Weak institutions and weak enforcement or non-compliance with policies and laws
- Lack of intra and inter-sectoral coordination
- Lack of technologies
- Unsustainable development
- Lack of alternatives for wood and efficient wood use practices
- Lack of awareness on benefits of forests beyond wood and non-wood products



## **CONCLUSION**

Pakistan is a forest-poor country. The overall area of natural forests has decreased. The area allocated to forest use and range lands, as on the books of the provincial forest departments, has not decreased, rather it has registered a small increase in certain provinces. This area is expected to remain static. However, the overall forest cover in Pakistan inclusive of irrigated forest plantations has increased and this trend will continue. The forest biodiversity, especially in the case of species of wild animals and their habitats, has suffered irreversible loss of great magnitude. The forests and rangelands cannot be managed sustainably due to overexploitation and lack of regeneration. Currently, the management approach is on extraction of resources with almost no management input and investment in production. Forests and rangelands are not managed on sound SFM principles due mainly to insufficient technical competencies and inadequate financial resources. Conversion of forest lands in the steep hilly areas is likely to slow down or even stop due to low production with high inputs. High increase in the prices of livestock products offers incentive for raising more livestock. This would mean increased pressure of livestock on forests and rangelands for grazing. Pakistan imports timber, paper pulp, paper, certain other wood products and dry milk to meet the gap in supply and demand. This must continue to avoid further unsustainable forest management. Weak institutional framework, non-compliance or weak enforcement of laws, lack of an enabling environment for the forest staff and other stakeholders including communities and the private sector are also contributing to the current unhealthy situation. This situation is likely to improve - Education and research in forests, rangelands, and biodiversity is not at an optimum level currently both in content and quality. This situation is likely to improve; Participation of local communities and other stakeholders in forestry, rangeland management and biodiversity conservation is at an initial stage

and requires serious efforts and institutionalization in policies and laws for success. NWFPs have not received due attention so far. Their importance is going to be enhanced in the future, which would require focused attention on sustainable harvesting, value addition and marketing for ensuring long-term benefits to the local communities. Forest service functions have not received any recognition and appreciation so far in Pakistan but the time is just ripe to take the concept forward for input in the national accounts, and compensating the forest owner communities and individuals as well right holders who are deprived of monetary benefits on account of the ban on felling of timber since 1992. The use of alternatives for timber, firewood and other forest products is becoming vital in Pakistan to reduce pressure on forest and rangeland resources but the current number and quantities of alternatives in use is limited. This is likely to increase gradually but conscious efforts and support may promote their use manifoldly and quickly. Issues external to the forestry sector are important but are complex and require enhanced attention of forest policy makers, planners and managers in Pakistan; discussions have started and inter-sectoral interaction is expected to grow in the future.

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