FORESTRY'S ECONOMIC CONTRIBUTION IS BEYOND JUST WOOD

Comprehensive National Level Assessment of Demand and Supply of Forest Products and Services in Pakistan

Ministry of Climate Change
Government of Pakistan

REDD+
Pakistan

PIDE
Pakistan Institute of Development Economics

Executive Summary

Human species' dependence on forests is as old as the beginning of the times. Thus, the conservation of forests is important both for the existence of human beings and the protection of renewable natural resources. The forest ecosystem has an extended value-chain in the economy by providing a range of direct and indirect goods and services that benefit humankind in numerous ways. Hence, forests play a significant but often unrecognized role at multiple scales of human organization. For this very reason, Ministry of Climate Change and REDD+ Pakistan joined hands with Pakistan Institute of Development Economics (PIDE) to undertake a "Comprehensive National Level Assessment of Demand and Supply of Forest Products and Services in Pakistan".

The key findings of the study give a robust picture of forestry landscape in Pakistan. The reveals that the total wood supply in the country is estimated at 52 million m3, out of which timber is 29% (15 million m3) and fuelwood is 71% (37 million m3). Government-managed forests provide 12% of the total wood and private land supplies 88% of the total wood. Likewise, public forests provide 2% of timber and 16% of the fuelwood requirements in the country. On the other hand, plantations on private lands provide 98% of the timber demand and 84% of fuelwood demand. The average annual out-turn of timber from the government-managed forests has been estimated as 0.289 million m3 for the period 2017-2021.

The total wood supply from private land has been assessed as 45.34 million m3, out of which timber is 14.34 and fuelwood is 31 million m3. Farmlands provide 32. 59 million m3 and wasteland supply 12.75 million m3. Wood production on farmlands has increased from 7.7 million m3 per year in 1992-93 to 32.6 million m3 in 2021. Apart from this, the total wood demand in the country has been estimated at 69 million m3. Out of this, total timber demand is 19 million m3 and fuelwood demand is 50 million m3. About 65% of the timber is used by major industries and 35% is consumed by small industry. The household sector consumes 90%, the commercial sector use 7% and the industrial sector 3 % of the total fuelwood. Per capita consumption of timber is estimated at 0.084 m3 per year and fuelwood consumption is 0.240 m3.

Currently, there is a gap of 17 million m3 which is met from import and un-recorded supply from urban settings, roadside plantations, homesteads and illegal cutting of forests. However, due to the launching of mega plantation projects, such as Billion Tree Afforestation Project in KP and Ten Billion Trees Afforestation Project in the country, the gap will narrow down in the future and the country will become self-sufficient till 2035.

Regarding, industrial utilization of wood, it is estimated that the timber consumption within the industry across Pakistan is 19.122 million m3 with per capita 0.084 m3, showing an increase of 56% over the last 20 years vis-à-vis a population increase of 47% during the same time period. The study shows that there are around 293,439 small industries within the country. The analysis reveals that overall the consumption of wood in the small industry is around PKR 825 billion and the total value of products generated by small rural industries is around PKR 1,421 billion.

In parallel, Non-Timber Forest Products (NTFPs) meet the traditional income, livelihoods, health and nutritional needs of local communities as well as the raw material requirements of herbal, pharmaceutical and cosmetic industries in the country. Development of appropriate mechanisms so that these resources are not over-exploited and are conserved, enhanced and managed on a sustainable basis is important. Additionally, vast chunks of land which include rangelands, shrub and bushlands, forest lands, riverbeds and vegetated roadsides areas which are managed by the respective provincial forest departments are suffering from neglect and lack of investment. As a result, their current production levels are only 30-50 % of their production potential. This is a big loss to the economy.
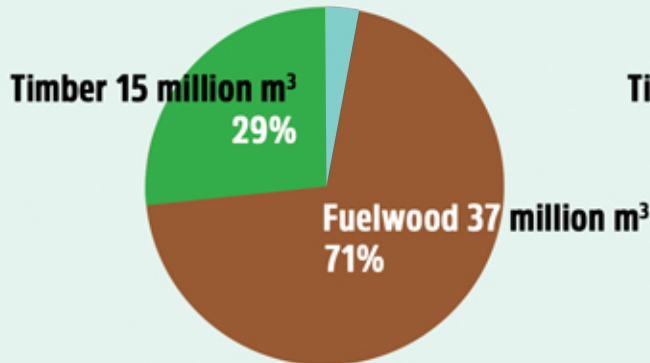
The availability of complete and authentic data is a big issue in the forestry sector. This aspect will have to be paid attention to a proper assessment of forest products' demand and supply situation as well as the contribution of forestry to the GDP. As assessed by this study, the contribution of forest (products and services) to the GDP is 14.09%.

Forests and forestry sector are important for overall jobs creation, livelihoods improvement, achievement of SDGs, promotion of green economy, low-carbon economic development and contribution to GDP. Lastly, a number of policy and institutional aspects are important and therefore need to be paid attention to promote the role of the forestry sector in Pakistan and its constituent provinces and regions. These include appropriate policy and institutional measures for ensuring increased coordination with other relevant sectors, application and institutionalization of landscape and ecosystem-based approach to forest sunagement, the involvement of all relevant sectors in resources conservation and sustainable management including the private sector and local communities, access to diversified financial resources through a number of mechanisms including environmental and green finance, adoption of environmental fiscal reforms and appropriate accounting mechanisms to appropriately record and reflect the contribution of forestry sector to the economy.
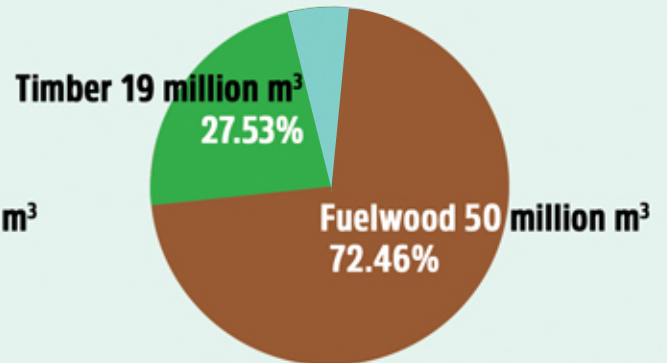
The key finding are represented in summarized infographics as well, in the pages to follow.
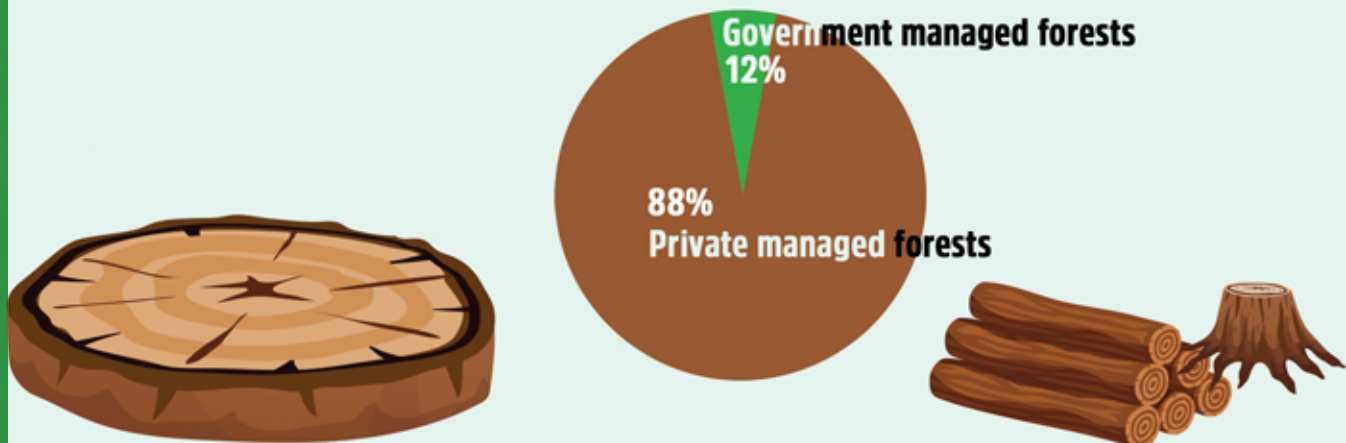
WOOD DEMAND AND SUPPLY

Wood Supply
52 MILLION m³

Timber 15 million m³
29%

Fuelwood 37 million m³
71%

Wood Demand
69 MILLION m³

Timber 19 million m³
27.53%

Fuelwood 50 million m³
72.46%

Sources of Wood Supply

Government managed forests
12%

88%
Private managed forests

RANGELAND

Total Area **37,949,000** hectares **57.47%**

Number of Livestock dependance **88 million**

Annual fodder value **PKR 2,664**

Monetory Value of wood-based industries

PKR 1842 BILLION
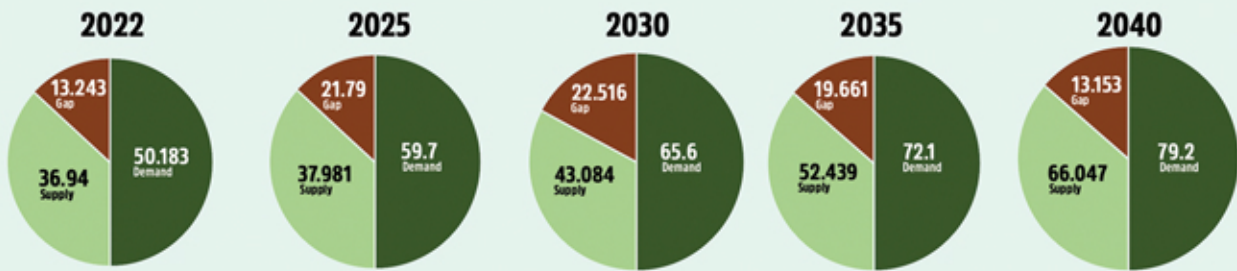**Major**
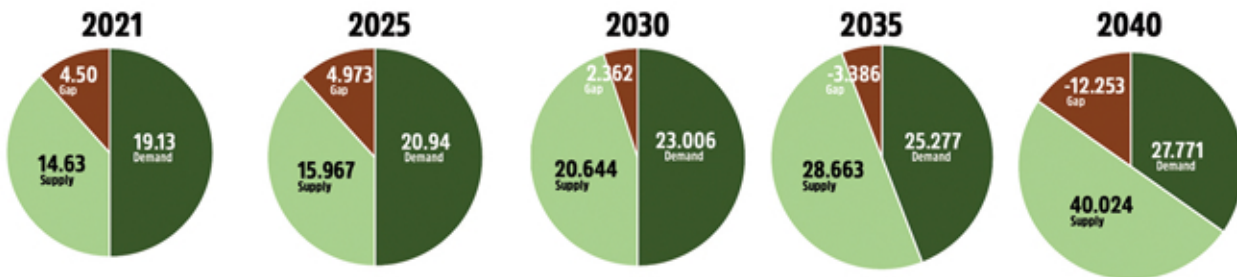
PKR 1421 BILLION
Small

WOOD BASED INDUSTRIES

28,137
Major

293,439
Small

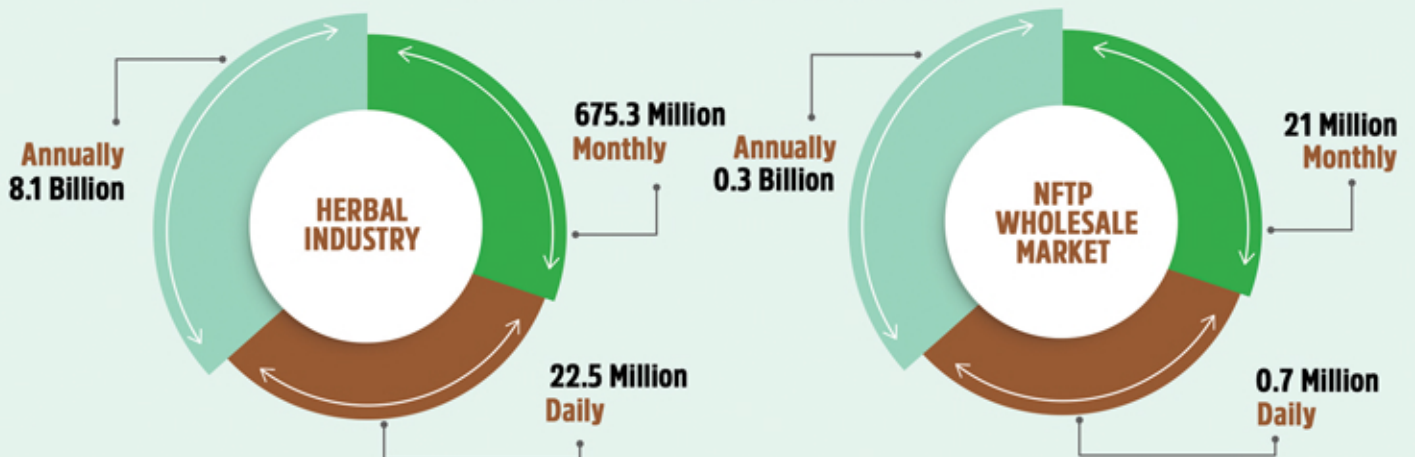# FUELWOOD DEMAND, SUPPLY COMPARISON AND GAP (in million m³)

■ GAP   ■ DEMAND   ■ SUPPLY

2022
13.243 Gap
36.94 Supply
50.183 Demand

2025
21.79 Gap
37.981 Supply
59.7 Demand

2030
22.516 Gap
43.084 Supply
65.6 Demand

2035
19.661 Gap
52.439 Supply
72.1 Demand

2040
13.153 Gap
66.047 Supply
79.2 Demand

TIMBER DEMAND, SUPPLY COMPARISON AND GAP (in millionm³)

2021
4.50 Gap
14.63 Supply
19.13 Demand

2025
4.973 Gap
15.967 Supply
20.94 Demand

2030
2.362 Gap
20.644 Supply
23.006 Demand

2035
-3.386 Gap
28.663 Supply
25.277 Demand

2040
-12.253 Gap
40.024 Supply
27.771 Demand

48.6% RANGELANDS

5.1% FOREST LAND

Pakistan's total area
88 MILLION HECTARES

MONETORY VALUE OF THE HERBAL INDUSTRY & NFTP WHOLESALE MARKET

HERBAL INDUSTRY
- Annually 8.1 Billion
- 675.3 Million Monthly
- 22.5 Million Daily

NFTP WHOLESALE MARKET
- Annually 0.3 Billion
- 21 Million Monthly
- 0.7 Million Daily

Field Survey conducted by PIDE, 2022

Gilgit Baltistan 61%
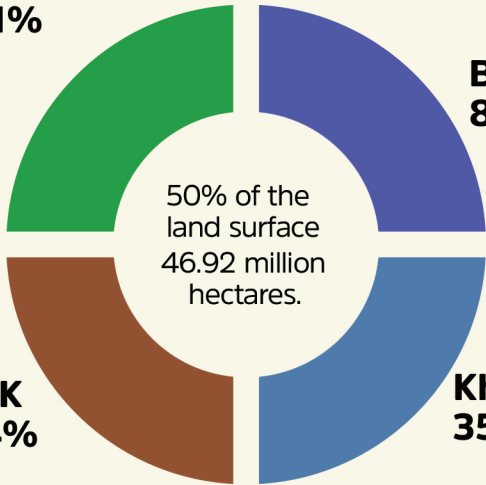
Balochistan 86%

Punjab 24%

50% of the land surface 46.92 million hectares.

AJK 64%

Khyber Pakhtunkhwa 35%

Sindh 21%

1.54 MILLION HECTARES
forest watershed land

18.52 MILLION HECTARES
Rangelands within these watersheds

7 MILLION
local and foreign tourists

20 TOURISM SITES
local and foreign tourists

Murree

Galliyat

Margallah Hills

Quetta

Kallar

Kund Malir

Kahaar

Ziarat

Swat

Neelum Valley

Chitral

Hunza & Skardu

THE HIGHEST WOOD PRODUCTION ON FARMLANDS

| AJK 2% | GB 2% | BALOCHISTAN 6% | SINDH 15% | KP 20% | PUNJAB 55% |

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CONTRIBUTION OF FOREST PRODUCTS AND SERVICES TO THE GDP.

5.58%
LIVESTOCK ON RANGELAND
2,664

1.83%
HOUSEHOLD'S FUEL-WOOD CONSUMPTION
871

0.02%
HERBALS
62.4

0.13%
TOURISM
8

0.40%
COMMERCIAL FUEL-WOOD CONSUMPTION
189

WOOD-BASED INDUSTRY
2,930
14.03%

TOTAL - 6,724
14.09%
Contribution of forest products and services to the GDP

(values in small circles are in PKR billion)

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