

# Knowledge Brief

No. 2024:119

April 2024



Ministry of Climate Change  
Government of Pakistan



## WOOD DEMAND AND SUPPLY IN PAKISTAN

### BACKGROUND

Pakistan is the world fifth most populous country with more than 230 million population which is growing at a rate of 1.7% (World Population Review, 2022). This growing population requires huge quantity of timber to meet the demands for building construction, furniture, panel and ply wood, and pulp and paper on one hand and fuelwood to meet the energy demands of domestic, commercial and industrial sectors on the other hand. In the face of these demands the country's forest resources are deficient and primarily managed for sustenance of the crucial ecosystem services like watershed protection, biodiversity conservation, climate change mitigation, environmental amelioration, recreation and tourism. Pakistan has only 5% forest area against the international standard of 20-25% which is required to meet economic and environmental demands of a country (MoCC, 2020). This should ring alarm bells and thus, robust supply demand analysis of wood was necessitated. Therefore, this policy brief presents the supply and demand analysis of timber and fuelwood in Pakistan. At the end, policy recommendations are given for addressing the gap between demand and supply of wood in Pakistan.



## WOOD SUPPLY

The total wood supply in the country is estimated at 52 million m<sup>3</sup>, out of which timber is 15 million m<sup>3</sup> (29%) and fuelwood is 37 million m<sup>3</sup> (71%). After imposition of ban on felling of green trees in natural forests in 1992, the bulk of the total wood supply (88%) is contributed by private lands and only 12% comes from the public forests (PIDE, 2022).

The average annual wood supply from private land has been assessed as 45.34 million m<sup>3</sup> during 2017-2021. Farmlands provide 32.59 million m<sup>3</sup> and wasteland supply 12.75 million m<sup>3</sup>. Wood production on farmlands has increased from 7.7 million m<sup>3</sup> per year in 1992-93 to 32.6 million m<sup>3</sup> in 2021. The highest wood production on farmlands is found in Punjab (55%), followed by KP (20%) and Sindh (15%). The remaining 10% production has been recorded in Balochistan (6%), AJK (2%) and GB (2%).

Table 1: Annual wood supply from the public forests from 2017 to 2021 (in 000 m<sup>3</sup>)

Province	Timber	Fuelwood	Total Wood	% age
Punjab	30	846	876	14.07
KP	124	2,079	2,203	35.38
Sindh	1	2,036	2,037	32.72
Balochistan	16	547	563	9.04
Gilgit Baltistan	37	43	80	1.28
AJK	81	385	466	7.48
Total	289	5,936	6,225	100

Figure 1: Annual Wood Production in Pakistan (million m<sup>3</sup>)

TIMBER PRODUCTION  
from forests

**0.289**

TIMBER PRODUCTION  
from private land

**14.34**

FUELWOOD PRODUCTION  
from private land

**31**

FUELWOOD PRODUCTION  
from forests

**5.94**

TIMBER IMPORT

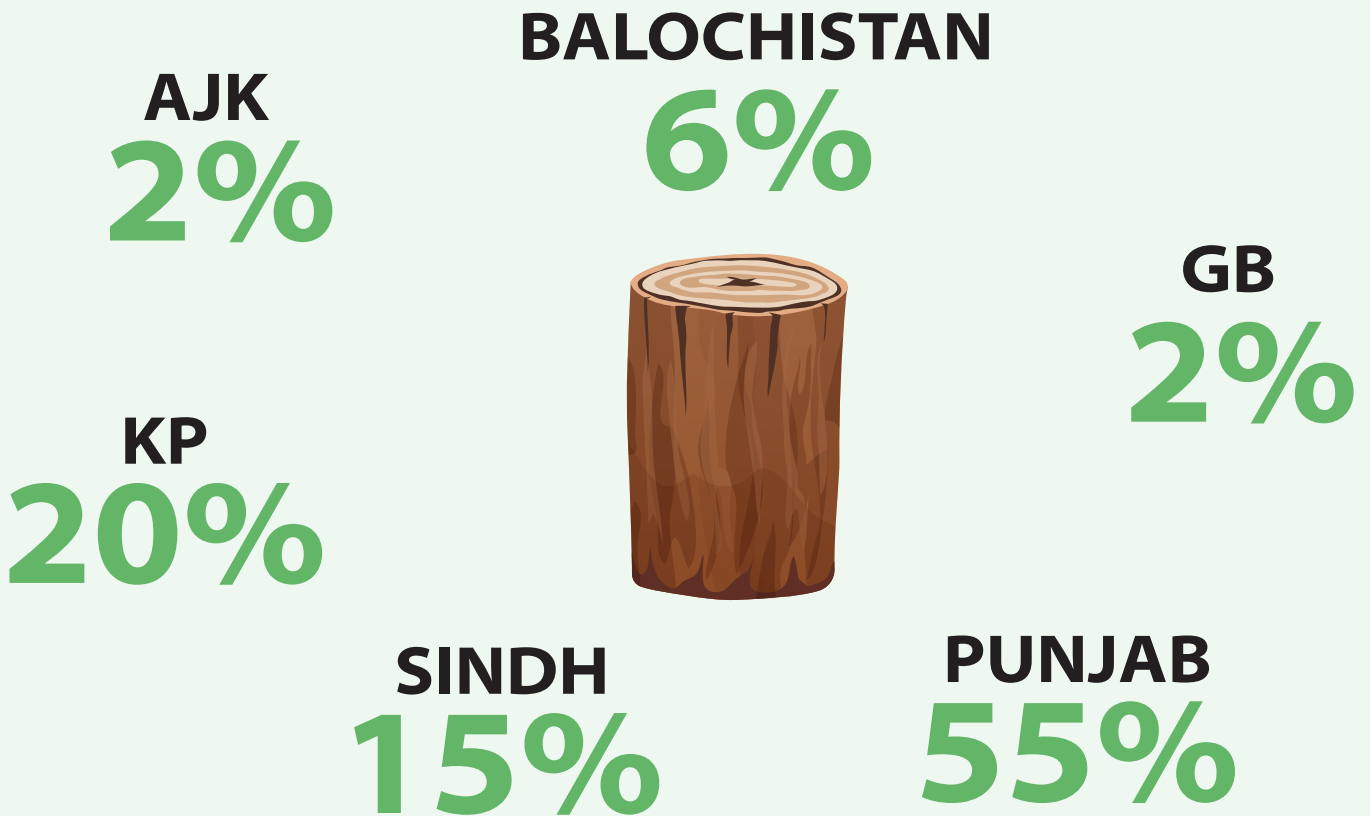
**0.587**



## TIMBER SUPPLY

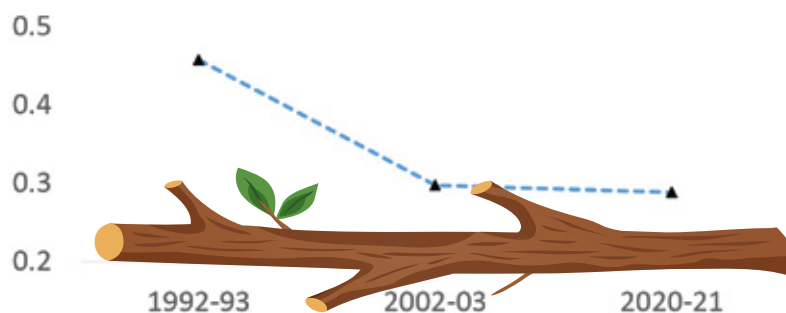
Total annual timber supply in Pakistan is 15 million m<sup>3</sup>. About 95% of the timber is supplied by plantations on private lands and only 2% is contributed by the public forests. The rest of the gap is met by imports.

Figure 2: Province-wise Timber Supply



The average annual outturn of timber from public forests has been recorded as 0.289 million m<sup>3</sup> during 2017-2021. About 84% of the total outturn of the timber is contributed by the forests of KP, AJK and GB together with respective shares of 43%, 28% and 13%. Deodar, Kail, Chirpine, Fir, Spruce, Shisham, Kiker, Poplar and Mulberry are the main timber species. The timber supply from public forests has significantly declined during the last three decades due to the ban on green felling of trees in the forests, increase in timber production on private lands and the availability of imported timber at lower prices in the market.

Figure 3: Timber Supply from Public Forests (million m<sup>3</sup>)



## FUELWOOD SUPPLY

The total fuelwood supply in the country has been estimated as 37 million m<sup>3</sup>. About 84% of the fuelwood supply comes from private land and only 16% is sourced from public forests.

The annual fuelwood supply from the public forests has been estimated at 5.94 million m<sup>3</sup>. Out of which the shares of KP, Sindh and Punjab are 35%, 34% and 14% respectively. The remaining 17% is supplied by Balochistan (9%), AJK (7%) and GB (1%). The total fuelwood supply from private lands has been estimated 31 million m<sup>3</sup>.

Figure 4: Fuelwood Supply



## WOOD DEMAND

The total annual wood demand in the country has been estimated at 69 million m<sup>3</sup> during 2017-2021. This includes both timber and fuelwood. Timber is mainly used in construction, furniture, tools, trucks and boats bodies, panel and ply wood. Fuelwood is used in households, industrial and commercial sectors.

## TIMBER DEMAND

Total timber demand is 19 million m<sup>3</sup>. About 65% of the timber is used by major industry and 35% is consumed by small rural industry. Timber consumption was 12.238 million m<sup>3</sup> during 2002-03 with per capita consumption of 0.079 m<sup>3</sup> (MAANIC, 2002) which increased to 19.122 million m<sup>3</sup> during 2021-22 with per capita consumption of 0.084 m<sup>3</sup>, showing an increase of 56% in the total consumption in the last 20 years.

Table 2: Timber Demand of Major and Small Industry (in million m<sup>3</sup>)

Province	Major Industry	Small Industry	Total
Punjab	10.53	2.99	13.52
Sindh	0.72	0.47	1.20
KP	1.02	2.42	3.44
Balochistan	0.02	0.04	0.06
GB	0.20	0.30	0.50
AJK	0.02	0.40	0.41
Total	12.50	6.63	19.12

## FUELWOOD DEMAND

The total fuelwood demand is 50 million m<sup>3</sup> in the country. The household sector consumes 90%, the commercial sector use 7% and the industrial sector 3 % of the total fuelwood. Per capita consumption of fuelwood is 0.240 m<sup>3</sup>.

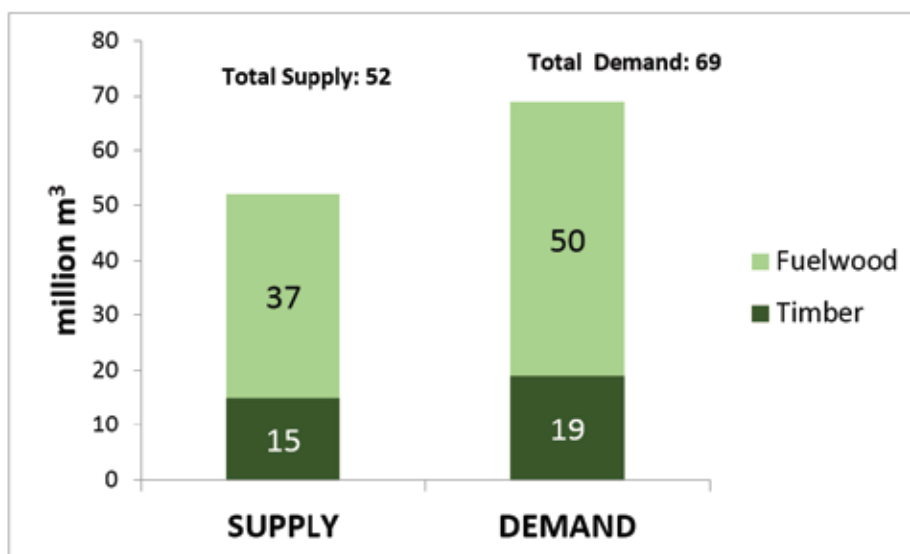
**Table 3: Fuelwood Demand by different Sectors (in million m<sup>3</sup>)**

Province	Total annual fuelwood consumption round wood* (million m <sup>3</sup> )			Per capita fuelwood consumption round wood (m <sup>3</sup> /year)		
	Rural	Urban	Overall	Rural	Urban	Overall
Punjab	15.177	1.955	17.132	0.219	0.049	0.157
Sindh	8.105	0.865	8.970	0.354	0.035	0.188
KP	11.382	0.496	11.878	0.390	0.087	0.341
Balochistan	3.946	0.692	4.639	0.446	0.207	0.380
GB	0.957	0.308	1.265	0.933	0.601	0.822
AJK	1.204	0.371	1.575	0.433	0.267	0.378
<b>Total</b>	<b>40.771</b>	<b>4.687</b>	<b>45.459</b>	<b>0.305</b>	<b>0.062</b>	<b>0.218</b>

## DEMAND AND SUPPLY GAP ANALYSIS

The total annual wood demand is 69 million m<sup>3</sup> against a supply of 52 million m<sup>3</sup>. There is a gap of 17 million m<sup>3</sup> which is met from import and un-recorded supply from urban settings, road-side plantations, homesteads and illegal cutting of forests. However, due to launching of mega plantation projects in the country 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.

**Figure 5: Wood Demand & Supply**





## RECOMMENDATIONS

The following recommendations are made to increase supply of wood in the country:

- There is a need to review the policy of ban on forest harvesting imposed since 1993 and resume scientific management of forests. This will not only increase timber and fuelwood supply in the country but will also improve the health and productivity of the forests.
- There is also a need to develop management plans for plantations raised under different afforestation projects.
- There is a high potential of increasing wood production in irrigated plantations and riverine forests which are currently producing much lower than their potential. These forests should be intensively managed aimed at increasing wood production per unit area by planting promising species from good seed quality.
- Wood production on farmlands is also much lower than the existing potential. There is a need to give incentives to farmers to grow trees on their farmlands.
- Government should facilitate and promote direct linkages between tree growers and wood industry to reduce the marketing related problems in wood production. This will also enable the farmers to harvest trees at proper time to get maximum return and fulfill the demands of industry.
- Seed quality is very important for producing wood of the desirable quality. There is also a need to introduce seed certification system for forest trees seed in the country. Only certified seed should be used in public and private nurseries. Seed orchards and seed producing areas may be given special importance by the Forest Departments.
- Rangelands and wastelands are also an important source of fuelwood supply in the country. There is a need to develop and implement proper policies and action plans for these lands to ensure their sustainable management.

## REFERENCES

- MAANICS (2002). Study on Supply and Demand of Fuelwood and Timber. MAANICS, International, Islamabad.
- MoCC (2020). Forest Reference Emission Level of Pakistan. Ministry of Climate Change, Government of Pakistan, Islamabad.
- PIDE (2022), "Comprehensive National Level Assessment of Demand and Supply of Forest Products and Services in Pakistan". PIDE, Islamabad.
- World Population Review (2022). <https://worldpopulationreview.com/countries/pakistan-population>

### Authors

**Shujaat Farooq**, Chief of Research

**Durr-e-Nayab**, Joint Director/Pro Vice Chancellor

**Saddam Hussein**, Assistant Chief (Policy)

**Nabila Kanwal**, Research Fellow