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INDUSTRIAL TREE PLANTATIONS ON THE AXIS OF INDUSTRIAL POLICY

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The Shrinking Area of Green

We discussed the issue of forests in the second quarter 2022 edition of our Ecosystem Review[1], which has been published by the Economic Research department since 2020. Here are some of the numbers that really stand out from that report:

- 1.3 billion people in the world depend on resources obtained from forests,
- These resources prevent 1 in 11 people from falling into extreme poverty,
- In developing countries, forest-related income constitutes 22% of the total income of people living in rural areas close to forests.

Since forests are such an important source of income for local communities, when we refer to forests, we are talking about income distribution, the welfare of local communities and development – and yet, issue goes so much further; forests also play an indispensable role for our ecosystem. Being home to 80% of amphibian species, 75% of birds and 68% of mammals, forests are among the most important areas of biodiversity on Earth. Forests also play a critical role in ecosystem services such as improving the quality of soil and water, increasing water storage and enhancing the filtering capacity of the soil.

Another benefit of forests is that they serve as carbon sinks. The carbon sequestration of both trees and, through the trees, the soil is crucial, thus partially offsetting carbon emissions. As forests and the trees within them grow, their carbon absorption capacity increases. Just as this provides a carbon sink function, the reverse also results in carbon release, albeit with a key difference - carbon absorption is a flow variable, while carbon release is related to stock. In other words, the rate of growth in the forest is the determining factor in carbon absorption; when a forest is destroyed, a significant proportion of the carbon which has been absorbed is then released.

It follows that protecting forests should be an important agenda item, as it is related to more than one development issue.

On the other hand, forests are coming under increasing pressure[2] with 32,6% of woodland losses between 2001 and 2024[3] being due to permanent agricultural activities. Fires, the second important determinant, were responsible for 29,4% of total deforestation. The increase in the rate of forest fires has also been remarkable; while an average of 4.2 million hectares of forest area had been burned annually in the 2001-2005 period, this figure increased steadily to an average of 10.2 million hectares in the 5-year period from 2020-2024. The third largest driver of tree-cover loss – accounting for 25,4% - is tree harvesting for wood products such as furniture, paper and cardboard, which is the focus of this study.

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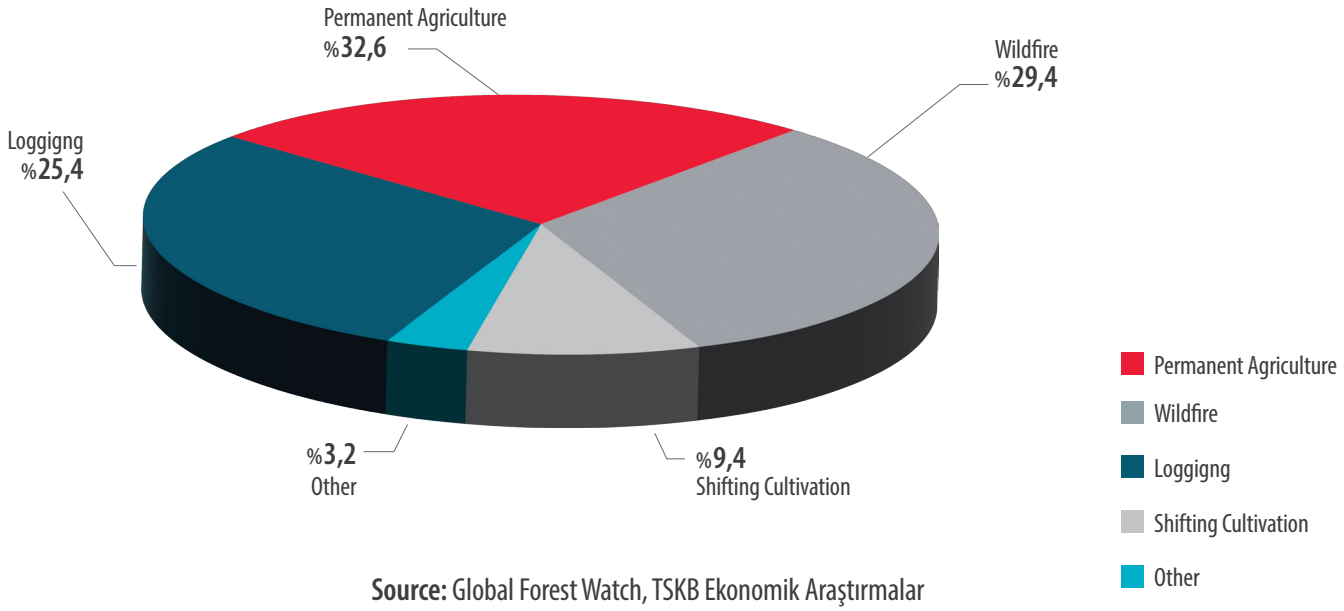
[1] *We published it between 2020-2023 under the name İklime Dair.*

[2] *This pressure leads producers to use more chemicals in the soil to meet the increasing need for agricultural products, compromising the health of the soil and therefore its long-term quality and capacity despite an increase in the short-term productivity of the soil. We have examined this issue and alternative ways in our study "From Carbon to Credit: Regenerative Agriculture and Carbon Credits"; click here to view the report.*

[3] *Tree canopy cover > 30%.*

Tree-Cover Loss by Driver (2001-2024)



Source: Global Forest Watch, TSKB Ekonomik Araştırmalar

In the coming period, population increase, economic growth and shifts in consumption patterns are expected to increase the demand for forest products and this rising demand is likely to put additional pressure on natural forests. Indeed, Global Forest Watch points out that 88% of tree-cover loss between 2021 and 2024 took place in natural forests. For this very reason, the expansion of industrial tree plantations to meet the growing demand for forestry products is an increasingly prominent method of reducing pressure on natural forests.

New Roots - Reduced Pressure

The 254th issue of the forestry magazine, Unasylva, published by the Food and Agriculture Organization (FAO) since 1947, draws attention to the importance of cultivating forests (FAO, 2023). The study underlines that 7% of the forests in the world are planted, with these cultivated regions meeting 46% of the industry's needs for timber and logs. The study states that the need for such wood products is expected to increase by 37% in the 2020-2050 period, with cultivated forests and industrial tree plantations potentially growing in importance to meet this rise in demand.

The progress to be achieved in forest cultivation or industrial afforestation may also support industries which rely on forest products. Indeed, the healthy and stable development of industries based on forest products depends on their ability to procure raw materials from domestic sources, regularly and predictably. In this vein, predictability regarding the input supply to be provided through industrial forests is crucial both in terms of existing capacity utilization and new capacity planning. The European Union's move to prohibit purchasing products which cause deforestation also increases the importance of industrial forests for exporters of forest products, especially paper and furniture, which are sold from Türkiye to the EU.

One of the important steps that has been taken towards industrial afforestation in Türkiye was the establishment of Endüstriyel Ağaç Tarımı A.Ş. (ENAT) in 2005 with the participation of a group of entrepreneurs and industrialists. While the number of trees planted by ENAT has grown each year, with afforestation reaching approximately 1,500 hectares, trees started to be felled from 2019. The reason the private sector turned to industrial forests 20 years ago was to manage possible risks related to the input supply of the industry based on forest products. Over the last 10 years, we have been observing that the needs of the private sector in this area have also started to be noticed by policymakers.

A Quiet Industrial Policy Implementation

In response to global trends and the demands of domestic industry, the General Directorate of Forestry (GDF) has been increasing its emphasis on industrial forests. A major milestone in this area is OGM's Industrial Afforestation Action Plan covering the 2013–2023 period. Both the 2024–2028 Strategic Plan and OGM's annual plans include new targets for industrial afforestation. As of 2024, the cumulative area allocated to industrial afforestation has exceeded 115,000 hectares[4].

The issue appears on the policymaker's agenda in multiple dimensions. For example, the Presidential Annual Program for 2026 includes the launch of preparatory work to establish a specialized Organized Industrial Zone (OIZ) dedicated to forest products. Additionally, supporting private-sector industrial afforestation with genetically improved and fast-growing tree species is highlighted as one of the targets in the 12th Development Plan. Another indication of the policymaker's growing interest in this area is the regulation that enables Treasury land to be leased at very low cost for afforestation purposes, thereby encouraging private industrial afforestation. The emphasis on "industrial plantations" in the 2026–2028 Medium-Term Program further demonstrates that the topic remains high on the policy agenda.

The policymaker's gradual introduction of the necessary micro-regulations and incorporation of new targets aligns with the perspective of the New Industrial Policy. Connecting these efforts with development finance could help accelerate progress.

[4] About 0.5% of the total forested area.

Taking Root for Shared Prosperity

Industrial afforestation can become a meaningful theme within development finance to the extent that its benefits can be created, managed, and demonstrated across multiple domains.

1. Ecosystem

When well-managed, industrial tree plantation can significantly contribute to the ecosystem services provided by forests. Water retention by trees reduces flood risk as well as soil surface erosion. Carbon stored in the soil through trees supports carbon offsetting activities and strengthens the soil's water-filtering capacity by increasing soil carbon levels. To generate these benefits, any industrial tree plantation activity must involve new afforestation—meaning it should not cause deforestation or make reforestation.

However, these benefits materialize only if forests are managed in line with sustainability principles. Afforestation alone does not automatically create such positive externalities. FAO underlines the importance of designing planted forests according to sustainable forest management criteria and points to 10 essential principles (FAO, 2010). For example, maintaining tree diversity in planted forests is crucial for local biodiversity (FAO, 2023). Tree selection is also critical for soil quality and water availability. For example, although eucalyptus grows rapidly, it uses substantially more water than other industrial tree species, making it suboptimal in many geographies (Environmental Paper Network, 2019). Indeed, in countries like Türkiye—where river basins fluctuate between water stress and scarcity—potential eucalyptus plantations could affect water access for local communities.

2. Industry…

Industrial tree plantations help reduce supply risks for the forest-products industry by providing raw materials, thereby supporting the utilization of production capacity and contributing to employment, production, value creation, and the foreign-exchange balance (through exports or reduced imports).

Policy targets outlined in policy-makers documents offer important insights into the role industrial tree plantations play (or will play). Public inputs—such as land allocation, the production of genetically improved seeds through R&D, knowledge transfer, supervision, and oversight—constitute key elements of the New Industrial Policy in practice. In other words, each of these support mechanisms are critical inputs for the development of industries that rely on forest products.

3. … And the Human Dimension

The third dimension that strengthens the potential for leveraging development finance in industrial afforestation is the human dimension. The **"Industry and People"** perspective that we have emphasized since 2024 in TSKB Economic Research is also relevant here.

Industrial tree plantation is an effort to generate value from land, a national asset. From a development perspective, the value created in this process should not be limited to wood and wood-based products. Non-Wood Forest Products (NWFPs) such as beekeeping or bay leaves can also be integrated into the value-creation model. Designing industrial afforestation initiatives to involve local communities—both in sustainable forest management and in NWFP production—can become a key factor for accessing development-finance opportunities[5].

[5] *This approach is also aligned with the spirit of Article 170 of the Constitution on the Protection of Forest Villagers.*

Providing skills training, supporting or establishing local producer organizations to ensure market access, and involving local communities in the value chain can help create a structure in which both the industry using wood inputs and local communities benefit together (Almeida & Delgado, 2019). Recent studies indicate that tree-planting projects can be designed to generate co-benefits such as local economic transformation and poverty reduction and highlight the importance of multi-purpose program design to achieve such impacts (Pagel, 2025).

Conclusion

When the Nature-Positive characteristics of industrial tree plantations are combined with the Human dimension, the result is a broad-based development, transformation, and structural-change opportunity that aligns naturally with development finance. Approaching the subject through "content rather than arithmetic" (Ünüvar, 2025) also makes the pathways for linking it with development finance more visible.

Such a framework directly intersects with several human-centered development areas—especially poverty reduction, employment, skills development, and green jobs—while creating value by strengthening social capital and supporting locally rooted prosperity. The progress achieved contributes directly to four of the United Nations Sustainable Development Goals.

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