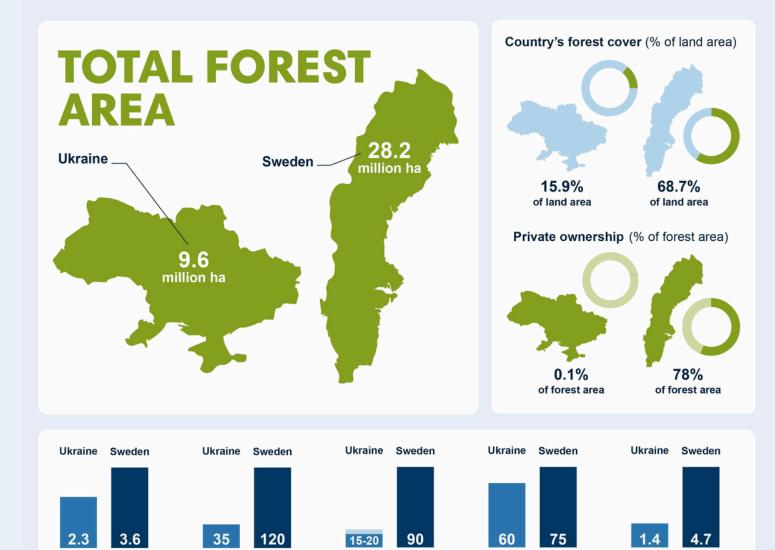


Ukraine's Forestry at a Glance: Lessons from Sweden

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Annual harvest

(million m³)

Utilized annual

growth (%)

INPUT INTO ECONOMY

Annual timber

growth (million m³)

Timber stock

(billion m³)

Ukraine's forests cover 9.6 million hectares, representing 15.9% of the country's land area. Unlike in many European countries, where private forest ownership is widespread, in Ukraine it accounts for only 0.1%. About 87% of forest land in Ukraine is state-owned, while approximately 13% is communal property, managed by communal enterprises under local self-government bodies. The country's total timber stock is estimated at 2.3 billion cubic meters. Annual timber growth is 35 million cubic meters and harvest averages to 15-20 million cubic meters.

Exports of wood

and wood products

(2023, USD billion)

 $[\]textbf{1} \ \ https://kse.ua/wp-content/uploads/2021/12/KSE_Rinok_derevini_ta_lisomaterialiv.pdf$

² https://wwfeu.awsassets.panda.org/downloads/analysis-of-the-forest-and-wood-biomass-market-in-ukraine.pdf

As opposed to Ukraine, Sweden's forestry sector is predominantly privately owned, with 78% of forests under private ownership and over 300,000 individual forest owners.³ The country has 28.2 million hectares of forest, covering 68.7% of its land area, and the forestry sector accounts for 9-12% of total national employment, exports, turnover and value-added.⁴

TIMBER HARVESTING AND GROWTH

The war significantly disrupted Ukraine's forestry sector. In 2022, timber harvesting fell by 9.7%, while the number of active businesses declined - logging by 9.3%, woodworking by 14%, furniture production by 12.9%, and paper manufacturing by 15.1%.⁵ As of May 2024, damage to Ukraine's Nature Reserve Fund reached UAH 102.79 billion (USD 2.55 billion), with 4.775 million trees destroyed across 8,000 hectares.⁶ As of January 2024, total infrastructure damages to Ukraine's forest fund were estimated at over 82.9 million cubic meters of timber, with a total value of \$4.5 billion.⁷

In 2023, of the harvested timber, 6.6 million cubic meters were classified as business roundwood and 8.6 million - fuel wood. Timber harvesting remains below potential, utilizing only 60% of annual stock change, leading to an accumulation of timber reserves. In 2023, Ukraine exported over 1.2 million tons of fuelwood, wood chips, and shavings, valued at USD 186 million. Total exports of wood, wood products, and wood charcoal reached USD 1.4 billion for the year.⁸

In Sweden in 2023, net felling reached 72.2 million cubic meters. Of this, just under half was conifer sawlogs, 44% was pulpwood, and 8% was firewood.⁹ Annual timber growth is approximately 120 million cubic meters,

³ https://www.forestindustries.se/forest-industry/forest-management/insights-swedish-forests-and-forestry/

⁴ https://www.forestindustries.se/siteassets/bilder-och-dokument/rapporter/fakta-och-nyckeltal/fact-and-key-figures-2022-.pdf

 $[\]textbf{5} \ \underline{\text{https://unece.org/sites/default/files/2024-10/Ukraine\%20Statement\%202024\%20country\%20market\%20statement.pdf}$

^{6 &}lt;a href="https://ecozagroza.gov.ua/damage/pzf">https://ecozagroza.gov.ua/damage/pzf

^{7 &}lt;a href="https://kse.ua/wp-content/uploads/2024/05/Eng_01.01.24_Damages_Report.pdf">https://kse.ua/wp-content/uploads/2024/05/Eng_01.01.24_Damages_Report.pdf

⁸ https://comtrade.un.org/

^{9 &}lt;a href="https://www.skogsstyrelsen.se/en/news/sharp-decrease-in-fellings-in-2023/#:~:text=According%20to%20the%20Swedish%20Forest,million%20cubic%20meters%20standing%20volume.">https://www.skogsstyrelsen.se/en/news/sharp-decrease-in-fellings-in-2023/#:~:text=According%20to%20the%20Swedish%20Forest,million%20cubic%20meters%20standing%20volume.

with about 90 million m³ harvested each year, meaning around 75% of the annual growth is utilized.¹¹ In 2023, less than 2% of Sweden's harvested wood was exported as raw timber; the rest was processed domestically into lumber, pulp, paper, and other products. Total exports of wood, wood products, and wood charcoal amounted to USD 4.7 billion.

TRENDS

Recent trends in Ukraine's forestry sector include the growing use of wood biomass for renewable energy and increasing demand for timber in green construction, particularly for post-war reconstruction. Wood currently plays a minor role in Ukraine's green energy mix. In 2023, total renewable electricity production reached 8 million MWh, primarily from wind and solar, covering around 10% of total electricity generation. Green construction also remains underdeveloped, accounting for just 2% of the market - 15 times lower than the European average.

Unlike in Ukraine, the forest industry is Sweden's largest bioenergy producer and includes 40 pulp and paper mills, 80 sawmills, and 105 timber-processing companies, including SCA, Stora Enso, Holmen, Billerud, and Södra.¹⁴

ENABLING ENVIRONMENT IN UKRAINE

The 2021 KSE Institute study "The wood and timber market in Ukraine: How it works and what hinders its development" identified several key constraints in Ukraine's forestry sector. It highlighted that most logging activities focus on forest maintenance rather than commercial timber harvesting, with their effectiveness in question. The study also pointed to

¹⁰ https://www.swedishwood.com/wood-facts/about-wood/wood-and-sustainability/the-forest-and-sustainable-forestry/

¹¹ https://forest.gov.ua/news/ohliad-rynku-derevyny-v-ukraini-tendentsii-ta-maibutni-perspektyvy

¹² https://unece.org/sites/default/files/2024-10/Ukraine%20Statement%202024%20country%20market%20statement.pdf

^{13 &}lt;a href="https://unece.org/sites/default/files/2024-10/Ukraine%20Statement%202024%20country%20market%20statement.pdf">https://unece.org/sites/default/files/2024-10/Ukraine%20Statement%202024%20country%20market%20statement.pdf

^{14 &}lt;a href="https://www.forestindustries.se/forest-industry/statistics/facts-and-figures/">https://www.forestindustries.se/forest-industry/statistics/facts-and-figures/

the continued use of clear-cutting, which contradicts Western sustainable forestry practices. Illegal logging remains a major issue, exacerbated by weak enforcement, the lack of reliable data on its true scale, and insufficient damage compensation. Additionally, the absence of systematic monitoring prevents an accurate assessment of forest resources and illegal deforestation. The aging forest stock further deteriorates, increasing the need for sustainable forest management and ecologically sound reforestation efforts.¹⁵

Since 2023, Ukraine has enforced a 0-ton export quota on roundwood.¹⁶ This restriction coincided with rising European demand for alternative heating materials due to high gas prices. While Ukraine's banned roundwood exports, it has boosted the supply of other fuelwood products. In 2022, 96.3% of Ukraine's pellet production (430,000 tons) was exported.¹⁷

In July 2021, Ukraine introduced legislative reforms allowing timber trading through licensed commodity exchanges, which aimed to eliminate market opacity, price manipulation, and tax evasion. According to the 2023 KSE Institute study "The impact of commodity exchange trade on the development of Ukraine's timber market," before these changes, low timber traceability and shadow market practices led to rigged auctions, underreported sales, and tax losses. The state forestry sector benefited from cheap raw materials and faced limited competition. The introduction of mandatory exchange trading forced processors to either increase efficiency or exit the market. The Timber Market Law¹⁸, electronic auctions for all timber sales, single forestry portal for market data, mandatory disclosure of timber trade information and stricter traceability and accountability rules. This resulted in increased timber prices, raised tax revenues from the industry to UAH 1.77 billion in 2022, and improved market transparency. However, according to market actors, 5–10% of the market remains in the grey economy. 19

^{15 &}lt;a href="https://kse.ua/wp-content/uploads/2021/12/KSE_Rinok_derevini_ta_lisomaterialiv.pdf">https://kse.ua/wp-content/uploads/2021/12/KSE_Rinok_derevini_ta_lisomaterialiv.pdf

¹⁶ https://unece.org/sites/default/files/2024-10/Ukraine%20Statement%202024%20country%20market%20statement.pdf

¹⁷ https://unece.org/sites/default/files/2024-10/Ukraine%20Statement%202024%20country%20market%20statement.pdf

¹⁸ No. 4197-d

^{19 &}lt;a href="https://kse.ua/wp-content/uploads/2023/06/Vpliv-birzhovoi---torgivli-na-rozvitok-rinku-derevini-v-Ukrai--ni.pdf">https://kse.ua/wp-content/uploads/2023/06/Vpliv-birzhovoi---torgivli-na-rozvitok-rinku-derevini-v-Ukrai--ni.pdf

OWNERSHIP

Almost all forests in **Ukraine are publicly owned**, with 73% managed under the State Agency of Forest Resources of Ukraine (SAFR). SAFR oversees the umbrella State Enterprise "Forests of Ukraine" (SFE), established in February 2023 by merging over 170 formerly independent state forest enterprises.²⁰ SFE manages 6.6 million hectares of state forest land through a central office, 12 regional offices, with 97 forestry management units, including 1343 forestries.²¹ SFE operates as a self-financed entity and implements a national electronic timber accounting system, ensuring that all raw wood logs are marked and traceable.

While **private Swedish forest owners** have high management autonomy, their decisions are often shaped by forestry advisors from associations. The four major forest owner associations collectively manage 6 million hectares. For instance, Södra, a timber processing company, not only controls the entire timber supply chain - from seedlings to finished products - but is also Sweden's largest forest owners' association, with over 50,000 members. It provides its members with support in sustainable forest management, access to markets, technical services, and training.²²

EDUCATION

One of the key issues **in Ukraine's** forestry sector is the lack of market-oriented skills among specialists. Ukraine's forestry education system produces specialists with strong technical backgrounds. In 2023, over 4,000 forestry students studied at over 20 universities.²³ The forestry studies mostly focus on forest cultivation, protection, inventory and timber processing. Core subjects include higher mathematics, dendrology, forest taxation, phytopathology, geodesy, GIS, and remote sensing. However, study programs lack alignment with some modern market demands, with business strategies, financial planning, climate-resilience and soft skills making up only a small portion of studies.

Although Sweden has a large number of private forest owners, forestry

^{20 &}lt;a href="https://forestpolicy.org/sites/default/files/pdf/ukraine.pdf">https://forestpolicy.org/sites/default/files/pdf/ukraine.pdf

²¹ https://e-forest.gov.ua/en/

²³ https://www.ukrstat.gov.ua/

education is concentrated in a few universities offering full forestry programs. The main institutions are the Swedish University of Agricultural Sciences (SLU) and Linnaeus University, with some other universities providing adjacent courses related to forestry. In total, up to 1,000 students study forestry each year. This relatively small number, compared to Ukraine, can be explained by Sweden's tradition of family-based forestry, where knowledge is often passed down through generations or gained through forest owner associations. Unlike Ukraine's technically focused forestry education, Swedish forestry programs place strong emphasis on ecological, economic, and social perspectives. For instance, Linnaeus University offers bachelor's, master's, and specialized courses for private forest owners and forestry enthusiasts, integrating business management, financial planning, risk assessment, and regulatory compliance alongside technical skills.²⁴ Programs equip students to align management strategies with ownership goals, market conditions, and evolving environmental regulations, including the EU Green Deal.

CONCLUSIONS

While Ukraine is implementing important reforms in the forestry sector, a comparison with Sweden highlights important issues. Ukraine's natural resources for forestry are more limited than Sweden's. The fact that only 60% of Ukraine's annual timber growth is harvested indicates that the sector's potential is underutilized.

Key challenges include:

- inefficient practices;
- outdated or poorly enforced regulations;
- shortage of skilled labor.

The shortage of skilled workers is closely linked to gaps in Ukraine's forestry education. In Sweden, forestry education is more practical and business-oriented, preparing specialists to manage forest assets in line with market conditions and ownership goals. Additionally, Sweden's model of private forest ownership creates strong economic incentives for efficient resource use and reinvestment — an element largely absent in Ukraine's forestry sector.

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