Focus Report series - Hot topics in global forest industries

Central European softwood supply

Constrained industry growth post-bark beetle

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WOOD RESOURCES INTERNATIONAL



Central European roundwood markets are at a turning point. Forests in much of the region have recently suffered extensive damage from a bark beetle outbreak, leading to temporary increases in harvest, lumber production and log export. An adjustment is inevitable in coming years as salvage winds down and forest management adapts in the wake of the outbreak. This report provides a view on how Central European roundwood supply will evolve to 2030, implications for forest industries in the region, and the likely impact on global softwood log and lumber markets.

Contents

1. Central European forests and forest industry

- · Forest area, distribution and species mix
- Forest ownership
- Roundwood production, trade and prices
- · Forest industry structure and roundwood demand

2. The spruce beetle outbreak

- · Characteristics of the beetle and risk factors
- Timeline of the outbreak and current status
- Extent of forest damage and salvage harvests

3. Impact of bark beetle on wood markets

- · Development of harvest and wood supply
- · Analysis of where the additional wood supply went
- · Impact on log trade and prices
- · Growth in Central European sawmill sector

4. Outlook for wood supply

- Forecast beetle damage to 2025
- Scenarios for roundwood harvest to 2030
- · Implications for log trade and industrial wood supply
- Long-term supply potential of forests by country

5. Implications for European markets

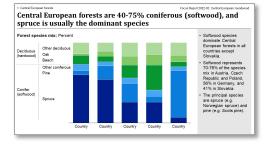
- Expected market balance for sawlogs and pulplogs
- · Projected price movements for sawlogs and pulplogs
- · Implications for local forest industries
- · Long-term implications of adapted forest management

6. Implications for global markets

- Outlook for European softwood log exports
- Outlook for European softwood lumber exports
- · Further climate-change related risks to wood supply

Example exhibits

Spruce and other species mix in Central European forests



Timeline of the bark beetle outbreak, storm damage, and market impact



Analysis of the different outlets for additional roundwood supply

Inspect in word-market
From Regret 2022 CB. Certain Engineers monoteco
The increases in roundwood removals was absorbed by increased
sammill production and higher log exports
Change in Central European roundwood supply-demand 2015/2021e. Million m³
Most of the increased

Increased removals	Increased harvest, mainly of softwood sawlogs, as forest owners sought to salvage trees impacted by the soruce bark beetle.	harvest due to the bark beefle was alsoched by the savmill industry, with higher production to serve a storag domestic and export lumber market. Some also vent to export, both sawlogs (mainly to thina) and publicity (mainly other Europa). Public gemand fell due to elevated savmill chip supply.
Higher sawlog demand	Lumber production grew by 23%, driven by strong domestic demand and increased exports to the US and China – requiring more sawlogs.	
Lower pulplog demand	Decline in use of domestic pulplogs despite growth in pulp and panel production, due to increased supply of sawmill chips.	
Higher fuelwood demand	Increased supply of fuelwood absorbed in residential heating and energy sector.	
Net increase sawlog export	Increased sawlog export from Germany and Czech Republic, to China and neighbouring countries (including Austria, Poland and Slovakia).	
Net increase pulplog export	Increased export of softwood pulpwood from Germany, Czech Rep. and Poland. Reduced import of hardwood pulplogs.	



Questions the report helps answer

- How has the bark beetle outbreak impacted CE wood supply and forest industries?
- What is the current status of the outbreak and the outlook for salvage harvests?
- What impact will the outbreak and elevated harvest levels have on future harvests from CE forests?
- What are the implications for wood supply to CE industry, log prices and trade?
- What role to CE forests play on global markets?
- How will CE log and lumber export evolve post-bark beetle?

Who the report is most relevant for

- Forest owners in CE and broader Europe.
- Lumber, panel, pulp and pellet producers in CE and broader Europe.
- Importers of CE logs and lumber.
- **Exporters** of softwood logs and lumber to Asia and North America.
- European forestry policy-makers and forest industry trade associations.
- Analysts, consultants, financial institutions and industry associations.

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Example exhibits

Scenarios for forest growth and harvest to 2030

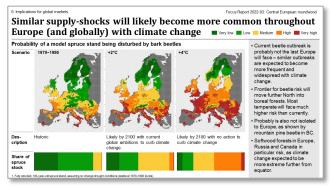
Forests will need to be utilized more intensively to maintain preoutbreak wood supply - following the BC trajectory is more likely Central European forest growth (NAI) and fellings; Million m³ X% Harvest degree To maintain pre-outbreak harvest levels in coming years, forests will have to be utilized much more intensively (up to 85% harvest rate). Pre-outbreak (2015) Peak outbreak (2020) Post-outbreak (2030e) A) Pre-outbreak harvest volume B) Pre-outbreak harvest degree (79%) narvest rate). This is unlikely, because much forest which is *technically* available is not in practice. Also, the EU has set targets to increase forest carbon sinks. x% x% x% sinks. More likely, Central European will follow the BC trajectory with at lea 40 mln m³ reduced woo supply (vs. peak), and harvest rate no higher then pre-outbreak than pre-outbreak

Impact of bark-beetle adapted forest management

5 Implications for European markets Focus Report 2022-02. Control European mu Forest owners will need to adapt forest management to mitigate risk of future bark beetle outbreaks

Risk factors for bark beetle outbreak		Likely changes in forest management	Implications for wood markets	
]	Hot dry weather; Water-stressed trees and favorable conditions for beetle. Increasing with climate change.	Increased focus on biodiversity (tree species and full forest ecosystem) to increase forest resilience.	Increasing supply risk with future outbreaks. Reduced allowable harvest with more focus on biodiversity.	
Ł	High share of spruce.	Diversifying species mix; e.g., Douglas-fir, fir, pine, larch, beech, oak. More mixed forests (species, age class).	Reduced share of spruce, more other species.	
ł	Mature / overmature stands (old trees).	Shorter rotations; e.g. in Germany considering 40-50 yrs, in Czech Rep. from 120 down to 70-80 yrs. More active forest management	Smaller diameter logs, higher overall yield. Potentially increased harvesting in private forests.	
÷	Sun-exposed trees; exposed to south, limited branches or small canopy.	Reduced thinning in old stands.	Limited impact (smaller logs at final harvest, but reduced share of smaller thinning logs).	
<	High levels of dead wood.	Rapid and compete clean-up after storms.	Sharper swings in prices, and need to quickly ramp up/down production.	
4	Proximity to infected trees (~100 meters considered critical).	Buffer zones around infected areas.	Limited impact.	

Future risk of beetle damage throughout Europe



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