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KEY SECTOR OVERVIEW **FORESTRY AND FOREST PRODUCTS**

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OVERVIEW

Canada's forest sector is a key economic driver, especially in rural, remote, and Indigenous communities, where it often provides vital employment. While it continues to produce traditional goods like lumber, pulp, and paper, the sector is increasingly diversifying into innovative products to meet evolving global demands. Canada's forest sector is evolving beyond traditional lumber and paper to become a key player in the emerging bioeconomy. With growing investments in biofuels, bioplastics, and engineered wood products, the sector is actively seeking clean technologies to support low-carbon production, waste utilization, and process innovation. For cleantech providers, this represents a strategic opportunity to collaborate with an established, resource-rich industry committed to sustainable transformation. The forestry sector in Canada includes forest management, solid wood manufacturing, pulp and paper manufacturing, and logging.

FORESTRY AND FOREST PRODUCTS REPRESENT

- \$33.4 billion contribution to Canada's GDP, equivalent to 1.2% of Canada's nominal GDP in 2022.
- A growing sector, with GDP growth of more than 50% over five years.
- The world's largest producer of newsprint and northern bleached softwood kraft pulp, and the second-largest producer of softwood lumber.
- 9% of the world's total forested area.
- 7.6 million tonnes of CO₂ equivalent emissions from pulp and paper manufacturing.

DRIVERS & LEADERSHIP

- Canada's forestry industry operates under a comprehensive regulatory framework that emphasizes sustainable forest management and environmental protection.
- Sustainable Forest Management principles incentivize the adoption of cleantech solutions like precision forestry tools and sustainable harvesting equipment to maintain biodiversity and water quality.
- Canada's clean fuel standard is incentivizing operators to reduce fossil fuel use and consider opportunities for forest biomass for bioenergy and low-carbon fuels.
- Environmental regulations drive investments in technologies that monitor habitats, protect watercourses, and reduce ecological disturbances.
- The Forest Products Association of Canada represents Canada's wood, pulp, paper, and bioproducts producers. FPAC advocates for sustainable forest management, GHG emissions reduction, and economic innovation, and has released a roadmap to net-zero for the forest products sector.
- Producers are looking for further ways to reduce emissions from forest harvesting and forest renewal operations, transportation, and manufacturing.



CLEANTECH CHALLENGE AREAS



Bioenergy with carbon capture and storage (BECCS) to reduce emissions by capturing CO₂ from biomass-based energy production. Existing forest bioenergy facilities have an opportunity to retrofit with BECCS.



Electrification of forestry operations (including equipment for harvesting and transportation) and pulp and paper processes. Unique challenges exist at remote forestry operations where infrastructure is not developed.



Adoption of alternative fuels like biodiesel, hydrogen, renewable natural gas, and biomass as low-carbon alternatives.



Uses for forest biomass and excess wood materials, such as converting sawmill waste into energy or utilizing as a feedstock for fuel production.



Climate adaptation technology for forestry operations to enhance resilience, reduce forest stress, and maintain yield and forestry health in a changing climate.

OPPORTUNITIES: AREA OF ALIGNMENT WITH EU STRENGTHS & SOLUTIONS PROVIDERS

Climate Adaptation Technology for Evolving Environmental Conditions

Countries like Finland and Sweden have strong tech ecosystems focused on forestry, with emerging technologies for improving resilience in forests. Germany, Portugal, and Spain are also making advancements in this area with relevance in Canada.

Technologies to Gather and Utilize Forest Harvesting Residuals for Bioenergy

Technological innovations to optimize processes like pyrolysis and other bioenergy production methods are available in the EU.

Bioenergy with Carbon Capture and Storage (BECCS)

Europe has several BECCS demonstration projects, and BECCS is considered a key solution for reducing emissions in the region.

Electrification or Decarbonization of Forestry Operations (Harvesting Equipment and Transportation)

Emerging technologies in the EU include electric harvesting drones and automation technologies for forestry equipment.

