



FINLAND INNOVATION TOUR DEBRIEF

October 19th – 27th, 2024

Overview

The forest sector in Finland has some similarities to New Brunswick and some distinct differences. In Finland, private woodlots (or "family forests") make up 60% of the forested land, supported by cooperatives that offer financial, technical, and managerial resources. This framework supports innovation for those private owners who actively engage in forestry practices, but like New Brunswick, there is a diversity of objectives for forests among private landowners. In contrast, New Brunswick's forests are primarily Crown land (49%), with private woodlots (30%) and industrial freeholds (18%) comprising the remainder. While centralized Crown land management facilitates broad policy implementation, private woodlot owners face challenges in accessing services to make productivity improvements for wood supply from private lands. This creates a disconnect between public and private forest resources. Finland's cooperative model, supported by the Ministry of Agriculture and Forestry, demonstrates how diverse ownership models can align to achieve sustainability and profitability.

Public perception of forestry varies significantly between Finland and New Brunswick, reflecting differences in land ownership structures, historical practices, and societal values. In Finland, public trust in forestry is deeply rooted in the widespread ownership of small private forests, which historically contributed to the well-being of rural families. This ownership model fosters a sense of personal responsibility and connection to forest management, reinforced by initiatives such as "Everyman's Right," which ensures public access to forests for recreation. While Finland is often celebrated for sustainable forest management, this reputation is relatively recent, as earlier industrial practices focused on low-biodiversity forestry and wetland conversion. However, Finland has successfully built public support by emphasizing transparency, aligning with EU sustainability standards, and involving stakeholders in decision-making processes. In New Brunswick, public perception of forestry is more polarized, with concerns about environmental impacts, particularly on Crown lands, dominating the discourse. Challenges include skepticism about industry practices and a lack of integration between public and private land management. Ongoing efforts to improve relationships with Indigenous communities and environmental organizations provide an opportunity to learn from Finland's approach, which emphasizes clear communication and participatory decision-making.

Finland and New Brunswick share several challenges in their forestry sectors, particularly recruitment, absentee landownership, and the urban-rural divide. Attracting younger generations to forestry remains difficult as urban-centered career preferences and perceptions

of limited opportunities in the sector deter interest. This issue is compounded by absentee landowners, who are often disengaged from managing their properties, leaving forests vulnerable to climate change, pests, and other disturbances, thereby reducing their contributions to the timber supply. The urban-rural divide further intensifies these challenges; urban populations may undervalue the forestry sector's environmental and economic roles, while rural communities lack sufficient resources to implement sustainable practices. Addressing these interconnected issues requires strategies such as workforce development programs, policies to incentivize landowner engagement, and public education to foster a broader understanding of forestry's importance. Collaborative efforts between governments, industry, and communities are vital to overcoming these barriers and ensuring the sustainability and productivity of both regions' forestry sectors.

Productivity

Finland excels in applying the circular economy ideology, where actions serve multiple purposes—enhancing market access, improving forest health, generating public support, and ensuring transparency. Like Canada, the Finnish forestry sector is driven by the need to access global markets, with certifications playing a pivotal role. Both public and private lands must meet high sustainability standards to ensure market access. Forest collectives and accessible tools have made certification easier for private owners, encouraging them to invest in forest health, as they can see tangible returns from stand improvements and harvesting. Tracking key metrics, such as harvest types, preparation activities (e.g., seedling locations), and transportation to mills, is vital for sustainability and will be crucial for compliance legislation such as the EU Deforestation Regulation (EUDR).

Finland's forestry sector is anchored by advanced digitalization and technology, which enable precise and efficient forest management. Tools like [Metsään.fi](https://metsaan.fi), a comprehensive digital platform, allow forest owners to access real-time inventory data, connect with contractors, and optimize harvesting practices. Similar systems are employed by service providers such as Metsa Group and Stora Enso, which connect landowners with management firms to complete silvicultural prescriptions and harvesting operations that meet landowner expectations. These systems also enhance transportation efficiency by reducing transportation costs and aligning supply specs with local mill demands. While New Brunswick continues to make strides towards similar integration of advanced digitalization, implementation remains at an earlier stage, limited by inconsistent province-wide access to the internet and fractured data streams. With the high productivity demands of Finland's forests, a sector-wide focus on technology supports operational efficiency, offsetting higher labour costs by improving productivity and optimizing supply chains through digitalization and technology advancements.

Education and Training for Workforce

While education and training are key to both regions' forestry sectors, Finland stands out for its highly specialized and integrated approach. Finland excels in mechanized forestry training, offering programs that incorporate simulators, modern equipment, and partnerships with industry leaders. Vocational schools and universities provide interdisciplinary training, bridging forestry with IT, environmental science, and business. Forestry education is introduced early in Finland, with curricula that includes field experiences, fostering youth interest in the sector. In contrast, New Brunswick's Mechanized Forestry Equipment Operator (MFEO) program is still under development and offers fewer opportunities for exposure to advanced technologies or interdisciplinary learning. Youth engagement is primarily achieved through extracurricular programs like Envirothon NB, but forestry is not as deeply integrated into the school curriculum as it is in Finland, where forestry is included in subjects like math, science, social studies, and art, providing a well-rounded exposure to the sector's opportunities.

The integration of technology into traditionally manual forestry jobs has transformed the sector, making positions more appealing to a younger, tech-savvy workforce while aligning forestry with advancements seen in other industries. This modernization highlights the sector's adaptability and long-term viability, aiding recruitment efforts. In Finland, service providers play a key role in training and upskilling subcontractors, ensuring they can meet the evolving demands of the forestry industry. This investment not only enhances the quality of services but also strengthens the broader forestry network by ensuring sustainable and efficient operations. Furthermore, Finland's forestry sector thrives on producing value-added products, with harvesting strategies closely aligned with market demands. This market-driven approach, supported by mills responding to consumer preferences, ensures economic sustainability and competitiveness. By prioritizing technological integration, skill development, and consumer-focused production, Finland exemplifies how modernization can enhance efficiency and adaptability within the forestry sector.

Bioenergy

Bioenergy production exemplifies Finland's integration of forestry with renewable energy. The country derives 28% of its energy from bio-based sources, with district heating systems providing over half of Finland's heating needs. These systems, which range from large urban plants to smaller rural operations, are supported by sophisticated logistics and a diverse range of feedstocks, including black liquor, forest-thinning waste, chips and bark. Finnish companies also invest in producing torrefied wood pellets (biocoal) for export markets. In contrast, New Brunswick's bioenergy sector is smaller, primarily using sawmill residues to produce pellets or bricks for local and export markets, with limited adoption of other biomass products or district heating systems. Firewood augments heating, particularly in rural areas of the province.

However, the province is considering a major expansion of its use of biomass for electricity generation, and exploring different scales and types of biomass could help meet New Brunswick's energy needs and could draw on proven models like Finland's. Finland's commitment to research and development in bioenergy further highlights the potential for innovation in this sector, which New Brunswick could leverage to diversify its energy portfolio.

Conclusion

Finland and New Brunswick share common challenges and opportunities, shaped by differences in forest tenure, public perception, and resource management strategies. Finland's success in integrating diverse ownership models, embracing technological advancements, and fostering public trust through transparency offers valuable insights. While Finland's forestry practices have evolved to meet sustainability standards and support a thriving bioenergy sector, New Brunswick can draw from other jurisdictions, such as Finland, to create opportunities for improving private landowner engagement, modernizing workforce training, and developing more robust public communication strategies. Despite differences in scale and historical context, both regions face similar challenges such as recruitment issues, absentee landownership, and the urban-rural divide. Addressing these concerns through targeted education, technological investment, and collaborative frameworks will be crucial to ensuring the long-term sustainability and growth of the forestry sector. By drawing on Finland's holistic approach, New Brunswick can uncover valuable opportunities for advancing its own forestry practices, creating pathways for economic growth while aligning with environmental and societal values.