

Transformation of the Nova Scotia Forest Sector

ISSUE: Nova Scotia's forest sector has undergone drastic restructuring over the last 10 years. Recent reports by external economists (Woodbridge, Poyry, Roberts) reflect long-term declines and cyclical markets for newsprint and softwood lumber, signaling the need for change if this very interdependent sector is to be viable in the future. A healthy primary forest industry and the by-products it provides is a precondition for the new forest industry. Innovation and advanced wood products in the value-add forest sector means that after a tree has been cut, additional processing by people, tools or machines increases the market value of the raw log, creating more jobs and economic spin-offs. Balancing the need for industry to flourish in rural Nova Scotia with the obvious need for sustainable resource management is key to the success of the forest sector.

CURRENT SITUATION & ANALYSIS:

Innovation and Value-Added:

- Currently, post-harvest manufacturing is dominated by construction lumber products.
- Wood chips and other by-products such as bark, sawdust, and shavings are an important revenue source for sawmills.
- Opportunities for usage of these wood by-products are emerging within Nova Scotia related to biochemical and bioenergy uses of wood fibre, as well as engineered wood products.
- By encouraging manufacturers of true value-added products like factory-built housing, windows and doors, cabinetry, and fine flooring we can add to the GDP which will allow us to restore and maintain our forest ecosystems, and provide stable rural jobs.
- The NS Department of Natural Resources (DNR) has promoted new economic opportunities for higher value wood fibre uses through partnerships with FP Innovations, Canadian Forest Service, Innovacorp, ACOA.
- DNR is supporting sector innovation through contractor training on forest ecosystem based management and productivity improvements; investigating more sophisticated landscape modelling tools to inform harvest planning, and facilitating Forest Products Association of NS to liaise with Economic & Rural Development and Tourism, and Labour & Advanced Education on sector training and productivity programs.

Forest Sector Labour Market:

- The forest sector employed about 5,200 people in Nova Scotia in 2012. With direct and induced effects, the employment rises to 10,200 jobs and 2.2% of provincial employment (Atlantic Provinces Economic Report 2013).
- About 62% of forest industry employment is in rural areas.
- Forestry employers in NS have identified the need for more employees, and productivity/skills training.
- Opportunities are strong within technology development and engineering/chemical professions.

Wood Supply:

- Wood supply commitments are structured to align with the Natural Resources Strategy and policy commitments such as Code of Forest Practice, forest ecosystem based management and reduced clearcutting, as well as the Minister's responsibility under Forests Act and Crown Lands Act to support private land wood supply as a primary source of fibre.
- Approximately 35% of Nova Scotia's forest land base is held by the Province.
- Forestry companies seek supply predictability and affordable wood costs, with a high demand to access Crown land fibre.
- The demand for spruce and fir wood from Crown land exceeds available supply both now and in the coming years. Lower quality hardwood species and other softwoods are available for allocation and harvest.
- Woodland owner engagement is essential to facilitate more access to private wood through incentives, because market spikes do not engage enough woodlot owners in the forest economy to provide predictable fibre flow for the mills.
- Current pressures and opportunities on fibre supply include:
 - Increased market demand for sawmill products.
 - Operations resumed at Port Hawkesbury Paper and on-going operations at Northern Pulp which involve Crown licences.
 - Legal agreement to provide residuals to support operation of Brooklyn Energy.
 - Government commitments to establish protected areas affect available supply.
 - Technology advancements in the use of wood fibre for bio-fuels, bio-plastics and other products will increase efficient use (high dollar per biomass ratio).

Linkages to Provincial Innovation & Productivity Programs

Labour & Advanced Education (LAE), as well as Economic & Rural Development & Tourism (ERDT), are departments with existing programs related to innovation and productivity. The Workplace Innovation and Productivity Skills Incentive (WIPSI) provided funding towards training forest contractors and their crews on using existing harvesting and silviculture equipment to conduct partial harvesting and stand treatments. Labour costs were covered through the one time Forestry Infrastructure Fund. DNR can identify training and productivity needs, develop programs with forest sector groups, and complete pilot testing.

Further, DNR, Energy and ERDT are collaborating on bioenergy initiatives. DNR works with forest sector professionals on the science of wood fibre and wood fibre based products, including fibre availability and physical/chemical characteristics. DNR is funding a feasibility study for the use of woody biomass as renewable diesel fuel (Cellufuel). If the technology is feasible for use in Nova Scotia, DNR will use wood supply modeling to assess fibre availability and consider requests for Crown fibre. ERDT will use their existing programs to assess anticipated requests for capital funds.

Forestry Innovation Role for DNR

- BioPathways assessment of technologies and products,
- Fibre assessment: quality & quantity,
- Wood fibre technology assessment,
- Alternative wood products marketing support,
- Outreach/continuing education on forestry innovation.

Forest sector specific transformational projects related to innovation which DNR will deliver include, but not be limited to:

- Continue provincial and Atlantic Region BioPathways analysis with FPInnovations (cross-laminated timber, glulam timber, hemicellulose fractionation),
- Demonstration projects aligned with wood promotion in building procurement,
- Initial testing to demonstration scale pilot projects of new and/or modified wood technology,
- Regulatory assessments and modifications (Forest Products Association of NS and Dalhousie University 3 year study recommendations to Province e.g. wetland buffers, transportation),
- Wood fibre science assessments (fibre quality to product match),
- Financial assessments of technologies, products and practices,
- Forest practice productivity trials (e.g. hardwood growth & yield),
- Promotional events (e.g. Forestry of the Future campaign; Innovation Summit).

Ecosystem based forest management & sustainable forestry practices

- Code of Forest Practice implementation,
- Forest Ecosystem Classification -- harvest & silvicultural treatments,
- Silvicultural treatments assessments,

Forest land uses, tenures and timber allocation modernization

- Evaluating options for provincial annual allowable cut,
- Modernize timber allocation system,
- Pulp and sawmill license conversions,
- Mi'kmaq Forestry Initiative,
- Community forest model development and implementation.

Shared stewardship with private woodland owners

- Silviculture
 - Support to Registry of Buyers required silviculture rates,
 - Pre-commercial thinning rates and productivity training,
 - Commercial thinning site identification and productivity training.
- Infrastructure
 - Road construction & maintenance support (Crown and/or joint roads),
 - Bridge and culvert replacement/installation.
- Training
 - Contractor training for productivity improvements and altered forestry practice requirements.
- Extension
 - Dedicated outreach support.
- Certification support

NEXT STEPS:

- Success requires a sustainably managed, integrated forest industry that achieves a critical mass of activity while taking a longer term view for effective stewardship of the resource. Key decision-making will revolve around the viability of the two large mills (Port Hawkesbury Paper and Northern Pulp), as well as the lumber mills, seizing opportunities for collaboration, and maximizing the application of policy to support ecosystem services.
- Forest sector future in Nova Scotia is expected to include a mix of existing industry as well as new technologies and uses; all supporting harvesting/silviculture contractor/woods worker base in rural areas.
- One of the keys to getting this transition underway in Nova Scotia is to shift our forest economy from a very tight focus on commodity based products, to one which also incorporates value-based production.
- Support development of forest sector innovation to achieve higher value from wood fibre.
- DNR needs to be appropriately equipped with resources and a dedicated structure to proactively address challenges during the transition period toward a transformed forest sector.