BN 2b Phase 2 Ind Decline

Nova Scotia's forest industries are declining

The issue:

Nova Scotia's forestry industry is in decline. For some 50 years forest companies logged our woodlands as if there were no tomorrow, but tomorrow has come. The rate of removal was unsustainable. So our forests are also in decline. They are disproportionately younger and less valuable ecologically and economically.

Nova Scotia faces a decision. Do we allow industry to clearcut the last of the forest available to it, until forestry becomes a cottage industry dependent largely on providing low-value products, chiefly for biomass? Or do we change course right now and embrace the ecological forestry approach recommended in the Lahey report - an approach dedicated to restoring our climate-resilient, mixed-species, mixed-age forests?

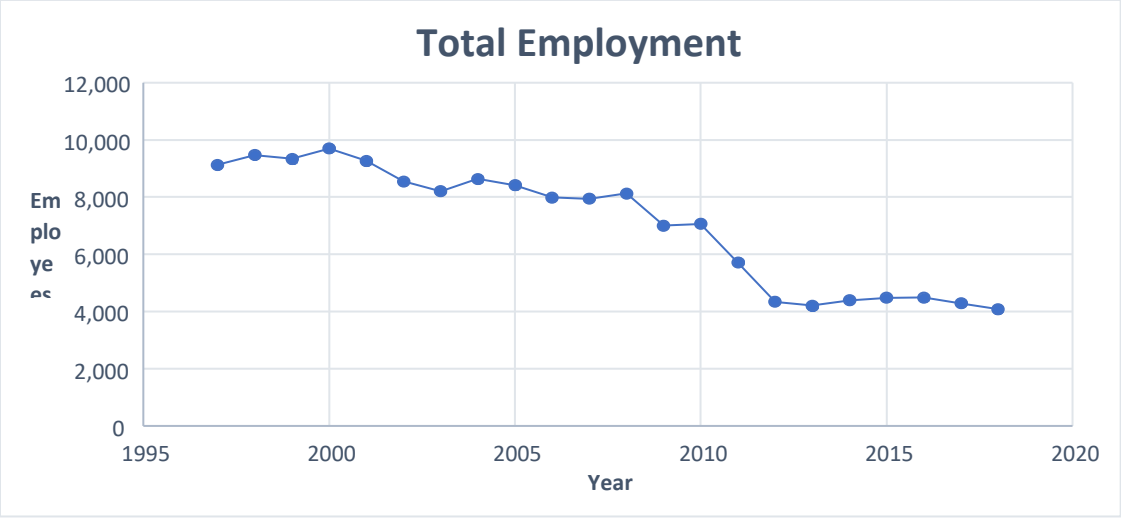
The facts:

The decline registers in most of the sector categories reported by Statistics Canada:

- employment
- industry revenue
- area harvested
- revenue per hectare harvested
- revenue per cubic metre harvested. (https://cfs.nrcan.gc.ca/statsprofile)

Declining employment

The decline in employment is dramatic. After attaining a high of nearly 10,000 in 2000 it dropped steadily to 4,000 in 2018.

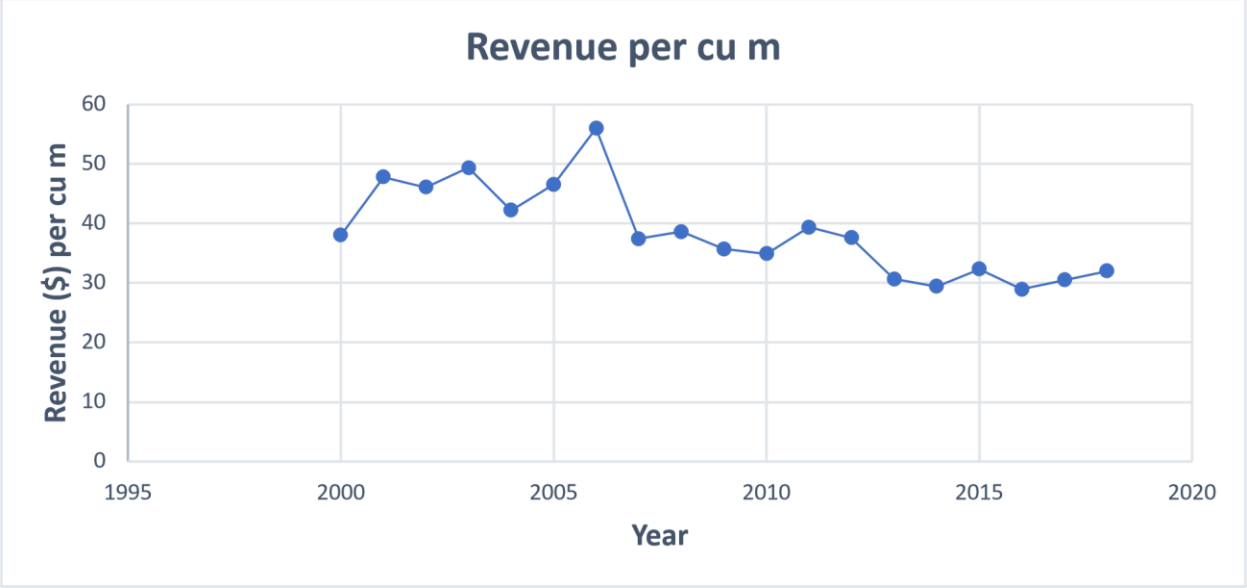


In the year 2000 there were 2,500 employed in the woods, in 2018, less than 1000.
Wood products manufacturing is the part of the industry that employs the most people. Just under 4,000 people were employed in it in 2000, but now it numbers slightly more than 1,500. This sector includes many businesses, often small-scale, that add value to wood products. A number, such as the hardwood flooring manufacturers, have gone under in recent years. Employment in support services, such as transportation, has also declined. In 1997 these support activities employed close to 900. By 2018 less than half of that number were employed in the sector.

Over-harvesting leads to declining revenue

The decline in revenue is equally dramatic. Total revenue from forestry hovered around $300 million annually between 2001 and 2006, then declined until 2013 when it reached $100 million. Since then it has stayed in that range – a third of its 2001 value. Revenue per hectare harvested dropped from a high of $6000 in early 2000 to a low of $3000 in 2016 and 2017; though it recovered to $4,000 per hectare in 2016. This year it may have recovered further during the Covid-induced demand for lumber, a demand that is reported to have been short-lived.

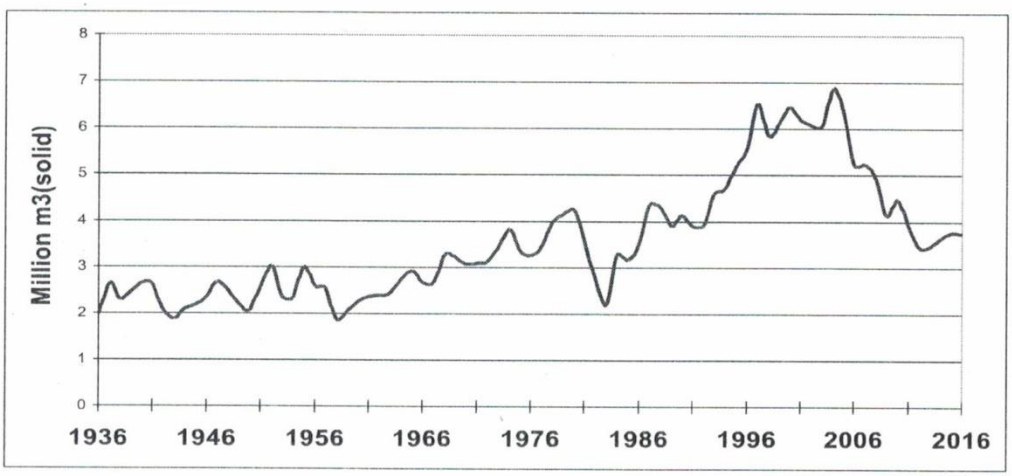
These depressing numbers reflect losses in the closing or significant reduction of pulp and paper manufacturing and, in the logging sector, the replacing of manual labour with capital intensive, highly efficient harvesters. But they cannot be attributed solely to these factors or even to market conditions or trade difficulties. Statistics for wood products manufacturing, which are reported separately from those for pulp and paper products, show that employment and revenue in wood products manufacturing continued to decline. Given the reduction in demand for pulpwood, we might have seen more timber diverted to wood products manufacturing, thereby increasing the value of the timber harvested. Yet revenue per cubic metre declined from about $50 to $30 between 2000 and 2018, suggesting that the timber harvested was less valuable than in earlier years.



Why?

The short answer is that the best timber had been removed over a long period of unsustainable harvesting, leaving only a relatively small stock of valuable timber. All the rest was young growth valuable chiefly as biomass or as chips for 'manufactured' timber. Between 1958 and 2003, according to forest inventories, the proportion of forest in Nova Scotia aged more than 61 years fell from 59% to 13.5%. By 1995 less than 3% of the forest was older than 80 years. With the advent of modern harvesters, the pace – demonstrated in the following table –quickened in the 1980s and 1990s.

Historical Harvest Levels
Nova Scotia 1936-2016



Source: DNR 'Registry of Buyers Report 2016, Fig. 18, p. 29. (Novascotia.ca/natr/forestry/annual/2017/Registry-of-Buyers-2016/pdf)

This pace, which had been vigorously encouraged by government, was unsustainable for the forest, but also unsustainable for the industry.

Industry adapts: low-value, high-volume creates…an unhealthy forest

To some extent industry has adapted. Some sawmills survived by relying on demand for milling by-products – chips that can be used in manufactured building materials, such as chipboard or sawdust that can be converted into fuel pellets which, all too frequently, are exported to Europe as 'green energy' . But these short-term solutions depended on the continued availability of sawlog timber. As the availability of sawlogs has declined, mills have either gone out of business or have resorted to chipping younger trees.

These strategies have long-term implications for our forests and the rural communities that depend on them. If our dependence on this by-product industry is allowed to deepen, we will perpetuate the current imbalance in Nova Scotia's forests. In our working forests fewer than 15% of the trees will be more than 60 years old. Most will be a lot younger, because rotations of 40 years, and even less, will satisfy the by-product industry.

In terms of biodiversity the forests created by such a regime will lack species – such as yellow birch - that require 30 years of more to cast the seeds that will ensure regenerations. Birds and wildlife that depend on older trees for nesting and foraging will disappear. Critically important insect populations will decline, whilst invasive species will thrive on the monocultures we will have created. Fungal systems, that we have only recently realized are vital to forest biodiversity, will wither away. It does not take much imagination to realize that we will have created a wasteland.

… and further weakens Nova Scotia's rural economy

The human economic costs will also be considerable. Today's dismal employment levels will seem enviable. Sawmills will continue to go out of business.[1] The decline of wood product manufacturing will accelerate. Forest-related tourism will be confined to nature reserves and national parks. Non-timber forest products – such as maple syrup, mushrooms and pharmaceutical products - will be scarcer than ever. Since the profit margins on harvesting for the manufacture of chipboard and pellets and for generating electricity are very low, the large industrial enterprises that can tolerate low-profit, low-value, high-volume margins, will continue to thrive and send dividends to investors outside Nova Scotia. Our own smaller firms and woodlot owners will suffer. As will our small towns and villages.

To sum up:

Nova Scotia's forest resource base is seriously depleted; the value of our wood products has declined to the point where production has had to shift from lumber to producing chips and pellets. This leaves NS facing two choices:

1. A long term commitment to short rotations which will provide low value productions (chips etc.) with small profit margins. Or…
2. A program of forest restoration that over the medium term would have to tolerate some short term rotations (in order to maintain the core industry) but would be directed to gradually restoring our forests so that once again they can provide for a healthy mix of alternative economic activities such as tourism, recreation, forest food production, etc.

[1] The annual Register of Buyers Report put out by the government records) 268 sawmills active in 1999; 95 active in 2017. (https://novascotia.ca/natr/forestry/registry/annual/2000/summarytables.asp and https://novascotia.ca/natr/forestry/registry/annual/2018/Registry-of-Buyers-2017.pdf)

We assume that most Nova Scotians would opt for the second of these possibilities. Especially as recent research has shown that healthy, mixed aged, mixed species forests play an essential role in addressing the climate and biodiversity crises. That research demonstrates that once the economic value of ecoysystem services is taken into account, a fundamental re-evaluation of forestry economics follows. Clearcutting ceases to be an economically attractive option when carbon captured by standing forests is valued at even $50/tonne, let alone the $170/tonne proposed for 2030. This research has led governments across the globe to reassess the value of forests in protecting biodiversity and mitigating such expensive and tragic impacts of climate change as droughts, wildfires and extreme wind and rain.

Recommendations:

The Lahey inquiry told us what harvesting policies could provide us with a restored forest. However, Professor Lahey was not asked to advise on how the forest industries should be guided in their response to the implementation of ecological forestry.

If we are to have ecological forestry, we must have an ecologically appropriate industry. To achieve that:

1. Government must play a leading part in:
   1.1. Setting a goal for the age and species configuration of the forests that should exist in the long term (100 years +) future.
   1.2. Planning for the implementation of policies that will achieve that goal.

2. Government must work with stakeholders in industry, businesses engaged in other uses of the forests, and the public at large to:
   2.1. Foster ecologically suitable harvesting and silvicultural practices.
   2.2. Retire unsuitable, capital-intensive harvesting equipment.
   2.3. Encourage the use of ‘light touch’ harvesting equipment.
   2.4. Train forest technicians in ‘light touch’ forestry methods.
   2.5. Educate industry members and the public at large in the need for and methods of carrying out ecological forestry.

3. Government should:
   3.1. Take note of the work undertaken in Canada and elsewhere by industry and academic institutions to model the values of the numerous services provided by forests in addressing climate change and biodiversity loss.
   3.2. Encourage our own forest businesses and academic researchers to contribute to this international research, and
   3.3. Use it to explore the economic and development opportunities presented by the transition to ecological forestry and by the efforts to reduce the impact of global warming.
   3.4. Draw on the public funding previously used to support the forest industries to attract suitable value-added industries to Nova Scotia.

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