

# Why Further Socio-economic Analysis is Necessary

## A response to the report, "*The New Brunswick Forestry Industry: The Potential Economic Impact of Proposals to Increase the Wood Supply*", Atlantic Provinces Economic Council, 2003

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### INTRODUCTION

Following the release of the Jaakko Pöyry report exploring how the New Brunswick forestry industry could double its annual allowable cut, the provincial government commissioned the Atlantic Provinces Economic Council (APEC) to explore the economic ramifications of the plan. The resulting document, "*The New Brunswick Forestry Industry: The Potential Economic Impact of Proposals to Increase the Wood Supply*", reports that there would be numerous positive results from following the Jaakko Pöyry plan. However, after carefully considering the assumptions and omissions in the study, it becomes apparent that there is a need to look further at the economics of this plan. The positive results reported by the APEC report may be overstated, or indeed may be offset by negative impacts not considered in their analysis.

The APEC report ably describes the current economic context for the forestry industry in New Brunswick, and shows the limited economic returns that may result from following the Jaakko Pöyry report proposal. This document takes a brief look at what may be considered weaknesses or omissions in the APEC study, and points out areas where further investigation needs to happen before final decisions are made on the future of New Brunswick's Crown lands.

This report does not in any way question the validity of the economic analysis done by APEC, nor the expertise of the economists involved. The economists were given the task of answering certain questions with respect to the Jaakko Pöyry report scenarios, while other valid economic questions related to Crown lands were not asked of them. However, it is important for decision-makers and the public to know that if any of the assumptions in the study do not hold up in the near or distant future, the potential economic outcomes may also not occur.

### ASSUMPTIONS OF THE APEC REPORT

1. The first assumption of the study is that "[i]ncreased output can be sold at constant real prices."(p.24) Without an examination of real-world circumstances, this assumption casts doubts on the outcomes of the study. The report states that between 2000 and 2002, New Brunswick forestry exports decreased by half a billion dollars (\$2.9 billion to \$2.4 billion). Since that time, numerous layoffs and mill closures have occurred in our province reportedly due to unfavourable exchange rates with the United States and the falling real prices for products. The question needs to be asked, is it reasonable to assume that there will be a reversal of these factors to allow for sale of increased output from New Brunswick mills?

A recent report in *The Economist* (February 7th-13th, 2004, p.65-68) states that the American dollar has been devalued internationally, in an apparent intentional attempt to lower the American "current account" deficit. Loosely speaking, "current account" refers to the flow of money in and out of a country, whether through trade, relocation of jobs and industries, and international aid and investments. Currently the American current account deficit is considered by some economists to be too high (i.e. too much money is leaving the country), and lowering the value of their dollar against other currencies is one tool which can lower this deficit. It makes investment outside America less desirable and increases the cost of imported products, thus encouraging Americans to buy domestic. *The Economist* notes that the devaluation of the American dollar has had an effect on the current account deficit, but that there is still more to be done. This suggests that the American dollar may continue its intentional downward movement for years to come before the economy is considered strong enough.

Since 2002, the Canadian dollar has seen 20% growth against the American dollar, resulting in poorer prices for Canadian exports. Failing a drastic change in Canadian economic policy, it is likely that this state of affairs will worsen rather than improve, at least in the short term. This is a serious concern, as 84% of New Brunswick's forestry exports are to the United States. The most likely scenario resulting from this is a further decline in revenues from exports.

Another international factor which would affect New Brunswick's ability to sell its products at "constant real prices" is the global supply of softwood. At present, industry sources state that there is a glut of softwood on the market, weakening prices. This situation could worsen in the future. One major concern is the increase in softwood plantations in South American countries, notably Brazil, Chile, Venezuela and Argentina. These countries have already seen dramatic growth in the amount of import to the United States, and their output is expected to grow rapidly. Some estimates state that output from these countries (where trees experience quicker growth due to the climate) may grow from 3 to 5 times the current output over the next 50 years, providing greater competition for New Brunswick's exports to the US. Plantations are also beginning to reap benefits in Russia and in European countries, potentially affecting overseas markets.

2. A second assumption that the APEC report makes is that "[e]mployment grows at the same rate as output after adjusting for growth in labour productivity."(p. 24) Labour productivity is defined in the document as "real GDP per hour worked"(p.14), and it becomes higher as mechanization and a decreased work force becomes more intensified in the industry. Therefore, labour productivity is a measure of efficiency and not of socio-economic benefit. As efficiency in processing increases (resulting in lower overall costs of production), benefits to the population will decrease as fewer labourers are needed. The APEC report notes that in the past decade, output of products from NB's forestry industry has doubled, but statistics show that there has not been a corresponding increase in employment, presumably due to increased mechanization in the industry (i.e., increased labour productivity). Over this period, there has been some increase in overall job statistics, but this is due primarily to an increase in silviculture activity. A study by Van Lantz and Michael Kennedy of the Faculty of Forestry and Environmental Management at UNB ("Examining the factors that affect employment in the Canadian forest industry: an employment/harvest ratio decomposition", Nov., 2003) shows that New Brunswick's employment per unit of wood harvested is rapidly decreasing, faster than any region to our west. The result is less economic benefit for the population.

The APEC report states that under the scenario proposed by Jaakko Pöyry, the total industry employment will level out at 100 jobs in 2062 over current levels, a growth of 0.4%. This number reflects an assumed continued growth in "labour productivity" in all areas, except in silviculture; the report states, "Future silviculture employment requirements may be lower than forecast as no allowance has been made for improvements in labour productivity." (p.31) This throws into question the potential reality of these figures, as it could be reasonably assumed that over the next 60 years advances will be made in the planting of seedlings and in thinning, resulting in a decreased need for labour.

It should be further emphasized that the silviculture jobs in question are also seasonal (between 16 and 22 weeks per year) and therefore generally less desirable. The report states that the northern counties most affected under this scenario have a more difficult time filling these types of jobs and may have to resort to "additional incentives or non-traditional labour sources" (p.30). Although this comment is not elaborated upon, it implies that many of the short-term job gains (at least in the north) may be lost through importing "migrant labourers". As a result, there is the possibility that more economic benefits would be foregone as money leaves the province; this scenario would affect the calculations of personal income tax revenues for the province.

Further to the discussion of labour productivity, the APEC report states that NB's labour productivity is above the Canadian average, yet still lags behind the international market (p.14). The implication here is that, to be competitive, NB needs to reduce the costs associated with forestry activities so as to provide better prices to consumers. When the competition is against the South American countries, with booming plantations and lower wages, the question needs to be asked how far down this road we should travel before it becomes unproductive. To compete in this way would presumably need, not only an increase in output, but a major decrease in wages spent. It is unclear at this point whether New Brunswick is capable of surviving the competition and maintaining a place in the global market, without substantially changing the way that our products are manufactured and marketed. This is not explored in the APEC document.

3. A third assumption in the APEC report is that "a proportionate increase in the wood supply will lead to the same proportionate increase in the output of forest products." (p.24) This assumption lends itself to an oversimplification of future results, as real-world variables are not taken into account. Different sectors of the industry have different input/output ratios. These ratios may change over time given changes in production methods and in potential value-added measures. At the same time, as product demands change, the different sectors may change in dominance, with some sectors growing while others decrease. To do a clear analysis of the effects of change over time, there needs to be a clear breakdown of the different sectors, the input /output ratios for each, and a sense of how these industries may change in the future. While it is unclear as to whether this may result in greater or lesser benefit to the province, such a broader study needs to be done to provide us with a better sense of the final outcome of proposed changes to our forestry industry.

4. A fourth assumption the APEC report makes is that "[t]here is a continued shift within the wood [products and pulp and paper industries towards greater value added." What is not made clear is how much of a shift there will be, nor how that affects the final figures. The case for more value added processing is a strong one, as it could result in greater levels of employment and new products for which markets could be found. Further investigation needs to be done on this point, to determine whether increased rates of movement towards value added processing are possible and what effects it would have on our industries and the province as a whole. This question is also important as it may affect the types of input necessary (i.e., trees), and could result in a change in the plans for silviculture. It also affects employment and wage figures.

5. A fifth assumption, but this time an implicit assumption in the entire discussion of the future of Crown lands, is that it is economically desirable to have a significant portion of our GDP reliant on the volatile natural resource industry. Currently, 8.7% of NB's GDP (\$2.1 billion) is from the forestry industry, the highest in all of Canada (p.12). Under the assumptions of the APEC report, the GDP of the forestry industry will increase by 2062, under the JP plan, by \$360 million over status quo projections (17% growth). [Status quo 2062 = 2.7 billion. JP 2062 3.1 billion]. If the volatility of the industry continues in the future, then this figure may not come to fruition, and the economy of the province could suffer greater losses.

The flip-side to this argument is that the provincial GDP will continue to grow at the same time. If we were to assume a modest growth of 3% in our GDP over the next 60 years, we find that our GDP in 2062 would be around \$68 billion (not adjusted for inflation). Using these numbers we find that the contribution from the forest industry to the provincial coffers will actually decrease to around 4.5%. This suggests that there may be another problem with the idea of investing so much more of our capital into this industry (as currently configured), as it may continue to lag behind other industries. A recommendation rising from this is that, as a province, we should be exploring those industries (old or new) which have the best prospect for growth in the future.

6. The sixth assumption, this another implicit assumption of the report, seems to be that only forestry will be impacted by the increased silviculture and cutting activities. There are many other forms of economic activity which rely on our forests, including (to name a few) tourism, maple-syrup production, and hunting and fishing. In 2002, tourism in our province brought in an estimated \$1.2 billion, a significant portion of which likely results from New Brunswick's traditional image as "The Picture Province". An increased focus on industrial plantations, and the resultant change of our forests more toward softwood trees instead of mixed hardwood/softwood, could seriously affect these other industries, and create situations where it would be impossible to support these industries. Further, new non-timber industries may be discouraged from beginning if they would be dependent on mixed or hardwood forests. The report, by not considering these other industries, fails to provide us with a complete picture of the potential economic impacts of the Jaakko Pöyry plan. While it may be possible that there will be an increase in forestry revenues, province wide these benefits may be offset by losses in other activities.

Finally, some consideration needs to be given to the level of importance the forestry industry has in New Brunswick and the place it may hold in the future. Current employment in the forestry industry is 17,300 direct jobs (5% of provincial total, resulting in a work force of 1 in 20 workers), and 6100 indirect (p.19). Even if the Jaakko Pöyry recommendations are implemented, the grand total of jobs will not change significantly (0.4% growth). To place these job numbers in context, in 2003 the tourism industry supported 31,000 person years of employment. There has not been a study to find out whether or how changes in forest management might impact existing jobs in tourism.

## CONCLUSION

As demonstrated by the above discussion, the APEC report provides only a limited, and potentially optimistic, examination of the economic ramifications of the Jaakko Pöyry plan. Admittedly, they drew their assumptions from the provincial government and from forestry industry representatives, and limited their scope solely to the plan presented to them. However, in doing so, the report presented us with results based on a black-and-white scenario (status quo operations versus the Jaakko Pöyry plan). There are many other scenarios about how the forests could be utilized, scenarios which might possibly provide better levels of employment and economic return. As well, looking at other scenarios would provide us an opportunity to explore ways of diversifying our economy, away from raw resource dependence. Regrettably, the report commissioned by the provincial government doesn't provide us with the degree of information necessary to make the best decisions for the future of New Brunswick's crown forests.

Before the final decisions are made about the future of Crown land management, the above concerns and many others need to be seriously studied. What is missing is an analysis of forest products markets and trends – old and new, and whether New Brunswick is well positioned to take advantage of the real growth markets, based on the type of forests we grow naturally. A new study needs to be performed, exploring a wider range of possibilities and scenarios for a forest-based industry in New Brunswick. This new study must include factors such as:

- < the growth of value added production, its impacts on employment;
- < non-timber forest industries, and the potential for a range of jobs and products;
- < the potential to sell our products, and potential price volatility (up and down) on the range of products;
- < accompanying forest management regimes to support the range of forest-based industries.

Until this more complete study is done, the recommendations in the Jaakko Pöyry report should not be implemented. We need to make sure that the New Brunswick economy, and all New Brunswickers, are receiving the greatest possible benefit from one of our greatest natural resources.

## QUICK VIEW SUMMARY

### 1. **Assumption:** "Increased output can be sold at constant real prices."

#### **Facts:**

- 84% of NB forestry exports go to the United States
- Canadian dollar has grown in strength against American dollar by 20% since 2002
- There is a current glut of forestry products on global market

#### **Problem:** This fails to take into account real-world factors, including:

- changes in American economy affecting trade
- future expected growth from plantations in South America and abroad

### 2. **Assumption:** "Employment grows at the same rate as output after adjusting for growth in labour productivity."

#### **Facts:**

- Labour productivity defined as "real GDP per hour worked", which increases with mechanization and a decreased workforce. It is a measure of efficiency and not socio-economic benefit.
- NB's labour productivity rapidly increasing, while employment in the sector (not including silviculture) has been decreasing for years.
- NB's labour productivity is still low compared to international markets.

#### **Problem:**

- Calculations for silviculture jobs does not account for possible advances in efficiency in the future, thus potentially skewing the results.
- The report points out that if labour productivity (i.e. improved mechanization) increases more than assumed, then employment levels will be lower than the estimates.
- Report does not take into consideration added costs to industry from future improvements.

**3. Assumption:** “A proportionate increase in the wood supply will lead to the same proportionate increase in the output of forest products.”

**Fact:** Different sectors in industry (e.g., pulp production versus furniture manufacturing) require different forms and quantities of input, yielding different amounts and values of output.

**Problem:** Oversimplification of input/output assumption fails to take into account:

- changes in efficiency of wood use over time
- changes in industry, should some sectors grow or others decline in production.

**4. Assumption:** “There is a continued shift within the wood products and pulp and paper industries towards greater value added.”

**Fact:** Increased value added has the potential to increase both employment and value of final product.

**Problem:**

- Report fails to indicate rate of change of value added industry, and how this affects the final numbers.
- Does not take seem to take into account the types of raw materials which may be needed, nor the associated costs.

**5. Assumption (implicit):** The best case scenario is for New Brunswick to have a forestry industry, as currently configured, that dominates the economy.

**Fact:** Currently, 8.7% of NB's GDP (\$2.1 billion) is from the forestry industry, the highest in all of Canada.

**Problem:**

- It remains a question for debate as to whether it is economically wise to have such a significant portion of our economy dependent on volatile natural resource industries.
- Assuming an annual growth of 3% in provincial GDP over the time period described by the APEC report, under the Jaakko Pöyry plan the forestry industry's contribution to the provincial GDP will fall to 4.5%.

**6. Assumption (implicit):** Only forestry industry will be affected by changes in forest structure.

**Facts:**

- Numerous other non-timber industries rely on our forests.
- Tourism brings in over a billion dollars a year to our province and supports over 30,000 person years of employment.
- Even if the Jaakko Pöyry recommendations are followed, the grand total of jobs in the forestry industry will not change significantly (0.4% growth).

**Problem:**

- Fails to take into account potential economic ramifications on non-timber forest industries, which may incur losses which could offset potential gains in forestry industry.
- As forest structure changes more toward softwood, businesses requiring hardwood availability may face difficulties.

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