

11 SUSTAINABLE TIMBER SUPPLY

BACKGROUND

- 11.1** The Department of Natural Resources is responsible for helping to ensure the sustainability of the Province's forests. The Department's website defines forest sustainability as *"the maintenance and enhancement of the long-term health of a forest ecosystem for the benefit of all living things while providing environmental, economic, social and cultural opportunities for present and future generations."*
- 11.2** One of the activities that relates to sustainability is the timber forestry. This refers to the harvesting and regenerating of trees for purposes such as the supply of construction materials and pulpwood. An economic impact study of the Nova Scotia forest industry performed by the Atlantic Provinces Economic Council indicates that in 2004 there were about 11,000 direct and 4,800 indirect jobs that depend on forestry. Many of these jobs are in rural areas of the Province. The value of international exports of paper and wood products totaled in excess of \$1.0 billion in 2004.
- 11.3** The land mass of Nova Scotia is approximately 5.3 million hectares and the total forested area is about 4.2 million hectares. Approximately 70% of Nova Scotia forest land is privately owned and about 30% is owned by the Federal and Provincial governments. Approximately 1.6 million hectares (38%) of Nova Scotia forest land is considered unavailable to support forest industries because of designation for parks, protected areas or wildlife habitats; other biodiversity considerations; or inaccessibility or nonproductivity.
- 11.4** The land remaining to support forest industries is about 2.6 million hectares. About 75% of operable land is privately owned and 25% is crown land. In 2004, the total Provincial harvest was 6.9 million cubic metres of wood. The private harvest totaled 6.3 million cubic metres (91%) and the timber harvested from Provincial crown land was 0.6 million cubic metres (9%). Two large industrial licensees were responsible for approximately 80% of the Provincial crown land harvest; of which 64% was processed by the licensees and 36% was redirected to sawmills for processing into construction materials. The sawmills processed the wood and returned byproducts to the licensees for use in pulp production. Licensees pay a fee called 'stumpage' to the Province for wood they harvest from Provincial crown lands.
- 11.5** The majority of wood harvested from private and crown lands is softwood (see Exhibit 11.1, page 176). Departmental forecasts indicate that softwood supply on crown land is generally sustainable into the future. However, it is uncertain whether softwood supply on private lands is sustainable. The Department has no concerns about the overall sustainability of the hardwood supply (see Exhibit 11.2, page 176). However, management indicated the harvest of quality hardwood

material (i.e., suitable for use in construction) is estimated to be approaching long-term sustainability limits.

- 11.6** In 1982, the Provincial government established a Royal Commission on Forestry, which reported recommendations in 1984. In 1986, the government released *Forestry: A New Policy For Nova Scotia* and established forestry reforms and goals by way of legislation. The concept of sustainable forestry was introduced as a principle in the Forests Act. One change to the Act added the objective of doubling forest production by 2025.
- 11.7** In January 1997, the Department released a position paper titled *Toward Sustainable Forestry* which noted that softwood harvests had exceeded sustainable supply levels on private lands. In response, the Forests Act was amended to provide authority to implement a new forest strategy. New regulations were drafted to require registration of buyers of forest products and provision of statistical returns to the Department.
- 11.8** In 1999, the Department released *Wood Supply Forecast for Nova Scotia 1996 - 2070*, confirming that softwood timber harvest on private woodlots was not sustainable at current rates of regeneration. In 2000, legislative changes were proclaimed and registration and statistical returns regulations came into full effect. In December 2001, regulations were again revised. Buyers acquiring more than 5,000 cubic metres of wood per year were made responsible for performing or funding silviculture on harvested lands. Registered buyers who choose not to do silviculture work must make contributions to the government's Sustainable Forestry Fund. The fund is used by the Department to pay for silviculture on private lands.
- 11.9** In 2005, the Department received stumpage for crown timber and other forest revenues of \$5.5 million (2004 - \$4.7 million). The Department spent \$7.3 million (2004 - \$6.8 million) on forest silviculture for private and crown lands. (Exhibit 11.3, page 177.)

RESULTS IN BRIEF

- 11.10** The following are our principal observations from this review.
- The level of assurance provided on the findings and conclusions in this chapter is less than for an audit (i.e., a review provides moderate assurance while an audit provides high assurance). This is because of the type of work we performed. Our evidence was based on management representations and review of applicable documentation. We did not test controls to determine if they operated as described to us.
 - There has been no regular, comprehensive public reporting relating to sustainable forestry in Nova Scotia. The Department should implement its goal of issuing a state of the forest report on a periodic basis.

- In 1986, the Department set a goal of “doubling of forest production by the year 2025.” Information presented to us indicates that the goal has been achieved, in approximately half the planned time. We are also aware that the Department has concerns about the sustainability of softwood harvests on private lands. The Department has not publicly reported progress in achieving this goal, nor provided an assessment of whether the increase in production is one cause of its concerns about sustainability.
- The Department follows a regular annual and long-range planning process for timber supply sustainability.
- The Department has appropriate processes and procedures to monitor and control silviculture on private and crown land. However, we noted the Department was not receiving audit reports from one licensee of crown lands as had been previously agreed upon.
- The Department should review the investment practices of the special funds it administers and publicly report financial information related to the funds on a regular basis.

REVIEW SCOPE

- 11.11** In December 2005 we completed a review of the Department of Natural Resources’ programs and processes related to its role in helping to ensure a sustainable timber supply. The review was conducted in accordance with Section 8 of the Auditor General Act and assurance standards established by the Canadian Institute of Chartered Accountants, and accordingly included all procedures we considered necessary in the circumstances.
- 11.12** The objective of this assignment was to review and assess whether the Department of Natural Resources is appropriately accountable for the sustainability of the timber supply in Nova Scotia, and whether it has adequate planning, monitoring and enforcement systems to regulate this area.
- 11.13** Our work included interviews with divisional management and staff, as well as review of legislation, agreements, manuals, public reports and other documentation. We did not verify that all systems and controls described to us were operating effectively. During the review, numerous reports, data and statistics were obtained from the Department and the National Forestry Database of the Canadian Council of Forest Ministers. We did not verify the completeness or accuracy of this information. Accordingly, the level of assurance provided on the findings and conclusions in this chapter is less than for an audit (i.e., a review provides moderate assurance while an audit provides high assurance).
- 11.14** We developed criteria to assist in the planning and performance of the review. The criteria were discussed with senior management of the Department and accepted as appropriate.

PRINCIPAL FINDINGS

Sustainable Timber Supply Planning

11.15 The Department has a formal planning process relating to forest sustainability. Annual operational plans are prepared by the Department, by licensees which harvest crown land, and by buyers of forest products. The plans prepared by licensees are reviewed and approved by the Department. The Department also prepares and publishes periodic forest inventories. It prepared a long range study in 1999 titled *Wood Supply Forecast for Nova Scotia 1996 - 2070*. A new forecast will be released in 2006. In 2002, the largest licensee of crown land prepared a long-term forest management plan with a 200-year horizon and submitted it to the Department.

Sustainable Timber Supply Monitoring

11.16 Forecasts and studies have shown that harvest of crown forest land is sustainable with current levels of harvest and silviculture effort. The Department reviews and approves all plans for forest harvest and silviculture on crown land, and inspects selected areas where work has been carried out. The Department does not formally document all sites inspected, but does follow up any sites where the harvest or silviculture work does not meet established guidelines, standards or regulations.

11.17 The Royal Commission on Forestry in the 1980's and several Department studies in the 1980's and 1990's have indicated that softwood harvest on private land is not sustainable without a concerted silviculture program. The Provincial government provided programs and incentives through a series of forestry development and other agreements between 1975 and 1995, and through Provincial regulations after 1998.

11.18 In 1999, the Department published *Wood Supply Forecast for Nova Scotia 1996 - 2070*. The forecast identified that the softwood harvest on small private land was still not sustainable with the amount of silviculture carried out. The following year, government proclaimed additional regulations respecting forest sustainability on private lands. Registered buyers of forest products were required to report the volume of wood cut each year from private lands, and outline in their wood acquisition plans strategies for meeting their obligations to provide for the regeneration of forests harvested. The Department annually selects up to 1,000 sites on private lands which received silviculture treatment and evaluates the work against the requirements of regulations and guidelines.

Reporting on Sustainable Timber Supply

11.19 Section 2 of the Forests Act notes that the Act is directed toward several purposes, including:

“(a) developing a healthier, more productive forest capable of yielding increased volumes of high quality products;

- (b) encouraging the development and management of private forest land as the primary source of forest products for industry in the Province;
- (c) supporting private landowners to make the most productive use of their forest land;
- (d) providing effective management of all crown lands;
- (e) maintaining or enhancing wildlife and wildlife habitats, water quality, recreational opportunities and associated resources of the forest;
- (f) enhancing the viability of forest-based manufacturing and processing industries;
- (g) doubling of forest production by the year 2025;
- (h) creating more jobs immediately and in the longer term through improved productivity.”

11.20 The Act does not have a requirement for reporting progress towards these goals. However, in January 1997 the Department published a position paper titled *Toward Sustainable Forestry* which recommended that a state of the forest report be prepared to provide “an assessment of the ability of the province’s forests to meet various demands, including sustainability of harvests and related data”. It also recommended that the report be published during the 1997-98 fiscal year and updated every three to five years thereafter.

11.21 No state of the forest report has been produced in the nine years after the release of the position paper. There has been no other form of regular comprehensive reporting relating to sustainable forestry in Nova Scotia. The Department’s 2003-04 business plan indicated that the first state of the forests report would be prepared and released during the year. The Department’s 2003-04 accountability report noted that report has been deferred to 2005-06.

11.22 In February 2004, the Department presented an overview of the Nova Scotia Forest Strategy to the Legislature’s Standing Committee on Resources. The presenters indicated that an outline had been developed for a state of the forest report that would be produced on a three-year cycle, and that the report would include many of the results achieved under the Department’s forest strategy. We encourage the Department to fulfill its commitment to report on the state of the forestry as soon as practical, and we advise that it include reporting against the purposes stated in the Forests Act in order to provide accountability for progress against major legislative goals.

Recommendation 11.1

We recommend the Department prepare and issue a state of the forests report as soon as practical. The report should address progress relating to the purposes noted in the Forests Act.

- 11.23** The Department maintains a comprehensive library and website containing information about the Department and its operations. There is much information available, including forest inventory reports and a registry of forest product buyers. Most of the reports contain information for one fiscal year only. In 1999, the Department produced *Wood Supply Forecast for Nova Scotia, 1996-2070*. The forecast included a number of graphs which illustrated trend information over several years and decades, and also included comparative information in various graphs (e.g., wood harvest versus supply). However, this information is not readily available to the public.

Recommendation 11.2

We recommend the Department include long-term comparative and trend information in its proposed state of the forest report and/or on its website.

- 11.24** The Department prepared a submission to the Royal Commission on Forestry in 1983. The submission's summary noted the forest industry required 3.3 million cubic metres of softwood annually and, with an intensive forest silviculture program, the softwood annual harvest could be increased to 5.5 million cubic metres by 2020. Following the report of the Royal Commission, the Provincial government released a policy statement and implemented legislative reforms to establish the goal of doubling forest production by 2025, representing a span of approximately 40 years. At that time, the planned annual harvest was 3.1 million cubic metres. In 2004, approximately 20 years later, the annual harvest was 6.9 million cubic metres. We are also aware that the Department has concerns about the sustainability of softwood harvests on private lands. This significant goal and the Department's progress in achieving it have not been publicly reported and assessed in light of its concerns over sustainability.

Recommendation 11.3

We recommend the Department regularly report on progress toward significant sustainable forestry goals and objectives.

- 11.25** Stumpage is a fee charged by the Province to licensees which harvest timber from crown land. Crown stumpage rates are set with the intent of ensuring cost parity with wood harvested from private land. In the 1990's, crown stumpage rates were based on a 1987 study titled *A Review of Stumpage, Forest Management and Market Access*. The stumpage fee was adjusted annually based on forest products industrial indices. In December 2000, another major study was completed, resulting in a report titled *Review and Recommendations on the Valuation, Allocation and Sale of Crown Timber Resources In Nova Scotia*. In January 2001, and again in July of the same year, the Department issued news releases related to the report. In the July new release, the Department indicated that it had accepted most of the report's recommendations and that "Most of the recommendations adopted from the report will be implemented over the next three to five years."

- 11.26** We noted during our review that the Department accepted most of the recommendations related to stumpage rates and was prepared to consider recommendations related to other matters raised in the study. Some recommendations from the study have been addressed. However, the Department has not publicly reported recommendations accepted and rejected, nor its actions in response to each recommendation that has been accepted.

Recommendation 11.4

We recommend the Department prepare and publicly report formal responses to significant studies performed on its behalf, indicating whether recommendations are accepted or rejected. Further, progress in implementing accepted recommendations should be reported.

- 11.27** The Department has developed outcomes and performance measures which are described in its annual business plans and included in its annual accountability reports. The plans and reports also describe the annual strategic goals, core business areas, and priorities of the Department.
- 11.28** In 2002, the Department defined a series of integrated resource management goals and objectives for Nova Scotia. The first goal is to “Use Renewable Resources Within Long-term Sustainable Levels.” The first objective is “Harvest of forest products not to exceed the long-term sustainable levels.” Progress towards the goal and objective is not reported in any Department publications.

Recommendation 11.5

We recommend the Department regularly report progress towards each of its significant integrated resource management goals and objectives.

- 11.29** There are approximately 4.2 million hectares of total forest land in Nova Scotia, of which 1.2 million hectares is Provincial crown land. In 2004, the total Provincial harvest was 6.9 million cubic metres of wood. The private harvest totaled 6.3 million cubic metres (91%) and timber harvested from Provincial crown land totaled 0.6 million cubic metres (9%). That year, two large industrial licensees were responsible for approximately 80% of the Provincial crown land harvest. These two licensees are required to conduct silviculture on Provincial crown land harvested. The Department pays fees for this work and monitors the quality and appropriateness of the silviculture. The Department is responsible for silviculture on the remaining Provincial crown lands.
- 11.30** We noted that the Department has measures for the amount of silviculture investment made and the percentage of required value of silviculture completed for private lands. However, there are no specific performance measures related to the sustainability of crown land. The Department has a measure of the percentage of

crown land with long range management frameworks in place, though there were no frameworks in place at March 31, 2005. The Department's public reporting does not discuss status or progress relating to forest sustainability. We understand that, at this time, sustainability of crown land is generally not a concern to the Department, but sustainability of small private softwood forest is still in question.

Recommendation 11.6

We recommend the Department establish performance measures relating to sustainable forestry on both private and crown land, and report progress towards forest sustainability on a regular basis.

Other Observations

- 11.31** *Stora Enso Port Hawkesbury Limited* - The Department grants Stora Enso Port Hawkesbury Limited use of certain crown land in accordance with the Stora Forest Industries Limited Agreement Act. If the company continues to meet the terms of the agreement, the company has everlasting use of the specified crown land. The Act was brought into force in 1957, replaced in 1969, and there have since been various supplementary agreements.
- 11.32** The Act makes Stora Enso Port Hawkesbury Limited responsible for silviculture on the crown land it manages, and the Province pays the company for this work using negotiated rates. One Departmental requirement is that the company contract for its external auditors to report annually on the accuracy of the company's silviculture claims, and provide this report to the Department. We understand that such a report has not been provided since 1998. However, we have been informed that the company has agreed to have the claim audits reestablished and reported to the Department.
- 11.33** Stora Enso Port Hawkesbury Limited sends interim and final claims to the Department for silviculture completed. During our review we found two errors primarily related to Harmonized Sales Tax. The errors understated the company's 2004 silviculture claim, and thus the amount owing to it by the Province, by \$253,336. We understand that these silviculture claims were revised several times by the licensee, and this may have led to the errors. However, we believe the Department needs to be more careful in the verification of silviculture claims.

Recommendation 11.7

We recommend the Department check all silviculture claims for mathematical accuracy.

- 11.34** *Special funds* - The Department is responsible for 10 special funds which totaled approximately \$6.2 million on March 31, 2005. The funds relate to several

operational areas within the Department, including forestry, mineral resources and wildlife. Two of the funds were established to support private and crown land silviculture, and totaled \$2.5 million at March 31, 2005. Each of the special funds are controlled by the Department, but are invested by the Department of Finance.

- 11.35** We reviewed the forms prepared by the Department to set up the special funds and noted that most indicate funds are to be invested for 30 day terms, or not to be invested at all. We reviewed the annual transactions in the funds and found that several had few or no disbursements. We reviewed the income earned in the funds and found the rates of return were between 0% and 2.3% per annum. We noted that two funds were deposited to bank accounts and earning low interest. We were informed that these two funds were invested subsequent to our enquiries.
- 11.36** Investment rates of return are affected by the amount, quality and term of the investment. The Department's funds are earning a minimal rate of return because they are generally invested in 30 day bankers' deposit notes. We believe the Department should analyze the activity in the funds and project future expenditure requirements. Finance should be advised of the expected cash flow requirements so it can invest the funds appropriately.

Recommendation 11.8

We recommend that the Department analyze activity in its special funds, project future fund cash flows, and advise the Department of Finance to invest the funds accordingly.

- 11.37** There is no detailed public reporting for the special funds administered by the Department. Summary information is published in the Provincial Public Accounts, but there is no reporting of the balance and activity of each fund. In June 2000, the Department released a background paper about its Sustainable Forestry Fund which stated

“However, neither the annual reports of the Department of Finance nor the Public Accounts Book reveal the itemized balance for each of the many small funds administered by Finance. They are reported as an aggregate for all funds. This is not considered sufficient. To improve the accountability for the Sustainable Forestry Fund, the Department of Natural Resources must publish its own annual report. This was clearly identified in the Public review and is now a requirement of the Department under the Regulations.”

- 11.38** As of the date of our review, the Department had not significantly improved its reporting of special funds. To improve the accountability for the Sustainable Forestry Fund, the Crown Land Silviculture Fund and other special funds, the Department should publish a continuity statement or some other financial statement on the Department's website or in an annual report.

Recommendation 11.9

We recommend the Department annually report balances and financial activity in the special funds it administers.

- 11.39** Payment of stumpage fees - The Department charges a stumpage fee based on the volume of timber harvested from crown land. The areas to be harvested are approved in advance by the Department and the harvester sends a quarterly return which notes the amount of timber harvested and the amount owed to the Province. The standard time-limit for making payments is 90 days after the end of the quarter in which harvesting occurs. We noted that the quarterly returns from one harvester were billed in October 2005 for timber harvested between October and December 2004 (\$24,752) and between January and March 2005 (\$73,482).

Recommendation 11.10

We recommend the Department monitor harvesters' stumpage remittances to ensure they are received on a timely basis.

CONCLUDING REMARKS

- 11.40** During our review, we observed no instances at the Department of inadequate planning, monitoring and enforcement systems to regulate the sustainability of the timber supply in Nova Scotia.
- 11.41** We believe the Department could improve its reporting of progress towards a sustainable forestry.
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Exhibit 11.1 **Provincial Softwood Supply and Harvest**
Year ended December 31

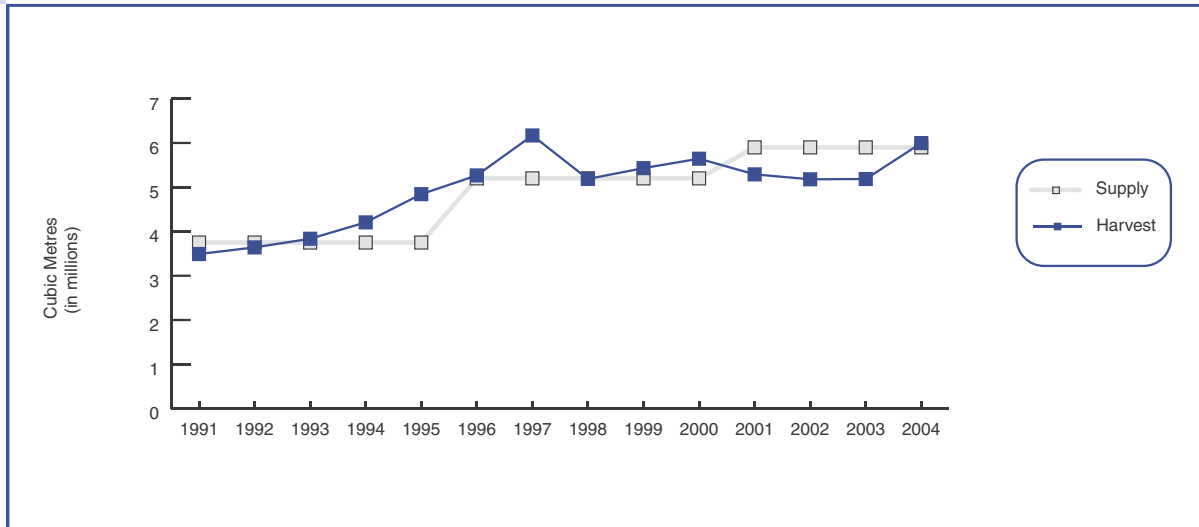
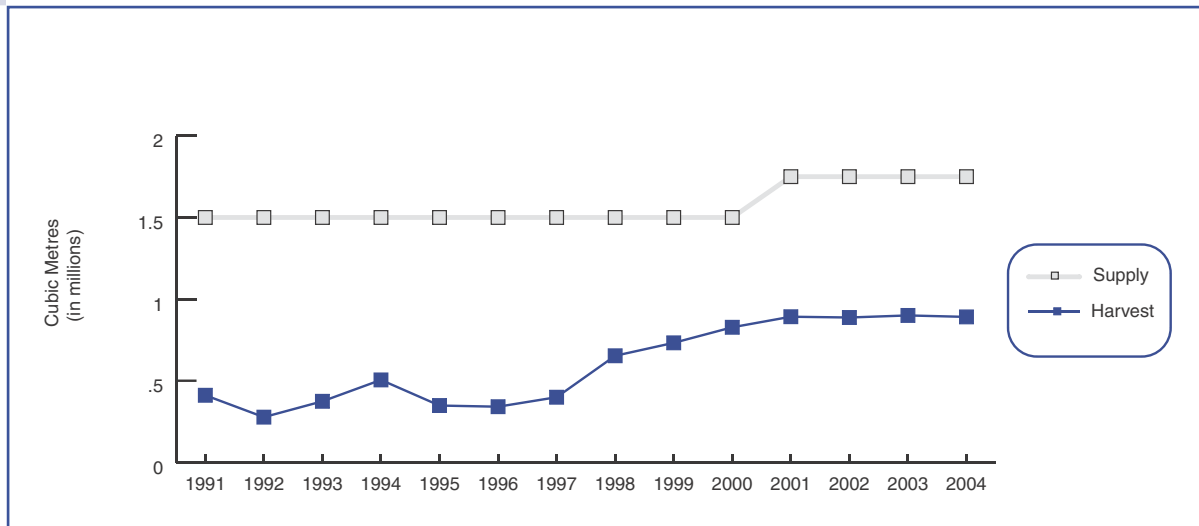


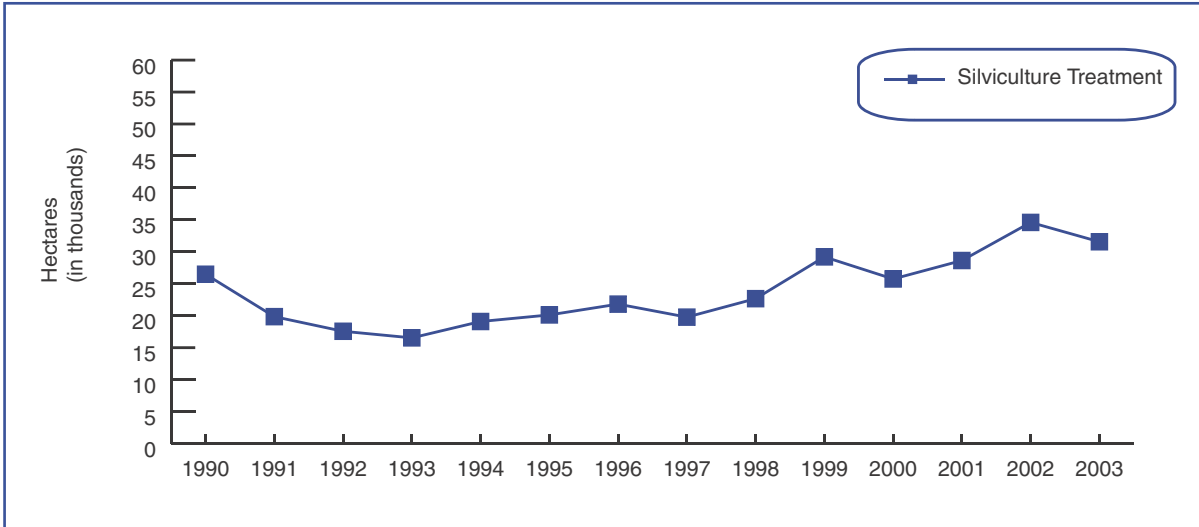
Exhibit 11.2 **Provincial Hardwood Supply and Harvest**
Year ended December 31



Source: Department of Natural Resources

Provincial Hectares of Silviculture Treatment Year ended December 31

Exhibit 11.3



Source: Canadian Council of Forest Ministers - National Forestry Database Program

DEPARTMENT OF NATURAL RESOURCES' RESPONSE

The Office of the Auditor General has provided the Department of Natural Resources its review of sustainable timber supply. The Department appreciates having received the results of the review and is pleased the review found adequate planning, monitoring and enforcement systems to regulate the sustainability of the timber supply in Nova Scotia. The Department agrees that more needs to be done in reporting the progress towards sustainable timber supply.

The Department has initiated the preparation of the recommended state of the forest report and will give full consideration to the inclusion of the items recommended to be reported on within the state of the forest report.

The Department will prepare an Action Plan with respect to all the recommendations made to ensure progress on each recommendation. In the Action Plan, the improvements required, timelines for action, resources required and the positions accountable will be identified. This is being undertaken to ensure improvements are implemented satisfactorily and on a timely basis.

The Department of Natural Resources appreciates the findings of the review and will use it and its recommendations to support the Department's ongoing work towards continuous improvement of its effort to ensure timber sustainability and related management functions. Action for improvement is already occurring in many areas.