

# GOVERNMENT SUBSIDY AND PROGRAM SUPPORT FOR NOVA SCOTIA'S FOREST BASED INDUSTRIES

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## EXECUTIVE SUMMARY

### Purpose

This study provides an overview of:

- public sector policies and actions from 1899 to 2006 that have most influenced the size, scope and operation of the primary and secondary forestry sectors in Nova Scotia (NS);
- the consequences of the policies and actions for the
  - structure of the forest-based economic sectors and
  - condition of the province's forest resource.

The data and information presented in this report are current as of August 2007.

### Conclusion

Federal and provincial policies and programs since the turn of the 20<sup>th</sup> century favoured industrial uses of the forest resource base, resulting in a forest-based sector of the economy that is dominated by pulp and paper and softwood lumber producers. These sectors maintain a strong dependence on clearcutting and silviculture oriented towards softwood, thus continuing the degradation of the native Acadian Forest.

The substantial support appears to have 'worked'. Industry based on NS softwood forest resources is well established, and, due to its size, continues to influence economic policy.

Since 1995, the Nova Scotia government has spent approximately \$3 million per year supporting private land silviculture, over 90% of which is even-age softwood silviculture. Although this support is substantial, it shows a reduction in the level of direct support given to the softwood-based forest industry since 1995.

Low-wage foreign competition, lower costs for primary inputs, the rising Canadian dollar and the liberalization of world trade will continue to put stress on the traditional forest-based economic sectors in NS. The exception may be lumber production.

Even in the face of unprecedented foreign competition there appears to be little planning for alternative and globally competitive uses of the province's forest-based resources.

### Sectors Studied

The sectors included in the study are:

- Forestry and Logging, which includes companies involved in timber tract operations, forest nurseries, logging and support activities to forestry;
- Wood Product Manufacturing, which includes sawmills and businesses that manufacture hardwood veneer, plywood or oriented strand board; and
- Paper Manufacturing, which includes pulp mills, paper mills, and paperboard mills.

### How Public Policy Influences Private Sector Behaviour

Some public sector support programs involve straightforward payments for services rendered. Others act as subsidies because they alter the response of business to market forces. The data show that Nova Scotia has made extensive use of subsidies, a series of federal/provincial development agreements and its own policies to attract and grow industry that depends on large supplies of softwood fibre.

## **Where We Were and Where We Are**

Nova Scotia contains only remnants of its old-growth Acadian Forest, due to a 400-year history of land clearing, clear cutting and high-grading (removing only the best trees).

Federal and provincial actions have served as *de facto* subsidies to forest-based sectors in NS. From 1899 to mid-2006 there have been at least 23 major policy and program actions that have influenced the use of NS's forest resources toward lumber and paper production that depend on softwood resources. The dollar value of the 14 actions for which dollar values could be found exceeds \$650 million (2006 dollars). Extrapolated to the 23 actions the total would amount to about \$1.1 billion (2006 dollars).

The first forest inventory, completed in the mid-1950s, confirmed that the quality of the province's forests had substantially declined.

The pace of cutting increased significantly in the last 30 years. Clearcutting, combined with even-aged softwood silviculture, became the dominant form of forest management.

The volume of cutting in NS has doubled between 1980 and 2000. In the 1990s, the annual area harvested by clearcutting doubled. In 2000, 95% of timber was harvested by clearcutting.

Data now suggest that the rate of softwood cutting is reaching the limit of a sustained yield annual cut.

## **Approaching a Crossroads**

In a 2003 report, the Atlantic Provinces Economic Council (APEC) noted "In the past, forest products from Nova Scotia and Canada held a competitive advantage over other countries ... but increasing raw material costs are dulling that edge". This situation, combined with reductions in the demand for newsprint, may be bringing the NS forest-based industry to a crossroads.

In 2007, APEC reported that in Atlantic Canada:

- the number of firms in the forest industry dropped by 11% between 2004 and 2006;
- closures included several large pulp and paper mills
- the forest industry's:
  - output fell 9% in 2005
  - employment dropped by more than 8,000 jobs, 24%, between 2004 and 2006, which was more than double the 11% drop nationally.

## 1. INTRODUCTION

This study was prepared under contract to the Ecology Action Centre, Halifax, Nova Scotia. It provides:

- an overview of the public sector policies and programs from 1899 to 2006 that have most influenced the size, scope and operation of the primary and secondary forestry sectors in Nova Scotia (NS); and
- a description of the consequences of the policy and programs
  - for the structure and operation of the sectors and
  - condition of the forest resource.

### 1.1. BACKGROUND

The Ecology Action Centre (EAC) is NS's largest and most active environmental organization. Since 1971, the EAC has been working to build a healthier, more sustainable environment. The EAC has over 1,500 members, over 20 staff, and 9 active issues committees.

Forestry issues have been a major concern for the EAC since the late 1970s. The Wilderness Committee, which oversees the Standing Tall forestry campaign and the NS Public Lands Coalition campaign for protected areas, has been in existence since 1989.

The goal of Standing Tall is to achieve a shift towards more ecologically sustainable forestry practices in NS.

Standing Tall intends to reach its goal through these objectives:

- heighten the general public's awareness of the degradation of NS's forests and the need for their participation in influencing forest policy;
- encourage industry to reduce clearcutting; to pursue FSC certification; to support modifications to the Forest Sustainability Regulations; and to adopt ecologically sustainable forestry practices; and
- encourage government to:
  - undertake FSC certification on Crown lands;
  - incorporate analyses of uneven-aged management practices in their wood supply forecasts;
  - modify the Forest Sustainability Regulations and the Wildlife Habitat and Watercourse Protection Regulations to encourage ecologically sustainable forestry practices; and;
  - incorporate public input into forest policy development.

### 1.2. RESEARCH METHODS

Information for the document was collected from primary sources via interviews and from secondary sources that included provincial and federal government publications and databases, previous research undertaken by the Ecology Action Centre, reports, papers of NGOs, published papers, and books by independent authors.

### 1.3. THE SECTORS UNDER STUDY

For the purposes of this report, the primary and secondary forestry sectors are taken to include the following lines of business.

**1.3.1. FORESTRY AND LOGGING (NORTH AMERICAN INDUSTRY CLASSIFICATION [NAICS] 113)**

This group includes companies involved in timber tract operations, forest nurseries, logging and support activities to forestry.

There are over 500 logging contractors in NS. Over 90% are strictly harvesters and the remainder harvesting and carryout silviculture work. About 85% of the contract harvesters use mechanized cutting techniques.

There are about 100 silviculture firms in NS. Scott & Stewart Forestry in St. Andrews (near Antigonish), is the largest silviculture firm and was one of the most significant nurseries. About 50% of firms whose main business is silviculture also do contract logging. Silviculture firms are more likely to undertake more contract harvesting work when the demand for silviculture services declines.

**1.3.2. WOOD PRODUCT MANUFACTURING (NAICS 321)**

This group includes sawmills and businesses that manufacture hardwood veneer, plywood or oriented strand board.

As of early 2006 the largest of the sawmill operators, processing more than 70,000 m<sup>3</sup> of timber per year, include:

- BPMC Oakhill Sawmill (owned by Bowater Mersey), Oakhill Rd., Lunenburg County;
- Ledwidge Lumber Co. Ltd, Enfield, Halifax County;
- Elmsdale Lumber Co. Ltd., Elmsdale, Hants County;
- Harry Freeman & Son Ltd., Greenfield, Queens County;
- J.D. Irving Limited-Weymouth Sawmill, Weymouth, Digby County (closed at the time of writing);
- Ligni Bel Ltd., Scotsburn, Pictou County;
- MacTara Ltd., 9156 Highway 224, Halifax County; and
- Truro Lumber Limited, 529 Valleydale Road, Colchester County.

There are no hardwood veneer, plywood manufacturing or oriented strand board firms in NS.

Louisiana Pacific – ABT in Chester produces building board from wood dust. It employs over 200 people.

**1.3.3. PAPER MANUFACTURING (NAICS 322), WHICH INCLUDES PULP MILLS, PAPER MILLS, AND PAPERBOARD MILLS**

The three largest firms in this group in NS are:

- Bowater Mersey Paper Company Limited, Brooklyn, Queens County;
- Neenah Paper Company of Canada, Abercrombie Point, Pictou County; and
- Stora-Enso (NewPage) Port Hawkesbury, Point Tupper, Richmond County.

Minas Basin Pulp and Power Company Limited is the smallest producer and 100% of its product is derived from recycled fibre.

**1.4. THE PROBLEM**

The Acadian Forest of NS has been subjected to a long history of exploitation, arguably more so than any other area in North America. Land clearing and high-grading by early European settlers began in the 17th century. With the increasing dominance of the pulp and paper industry, by the mid-to-late 1900s, clearcutting, combined with even-aged softwood silviculture, became the dominant forest management paradigm.

The pace of cutting increased significantly over the last 30 years. The shift from largely older, mixed species forests to young softwood forests has had an enormous influence on the forest ecosystems of NS. The forest-based sectors maintain a strong dependence on clearcutting and silviculture oriented towards softwood, thus continuing the degradation of the native Acadian Forest.

The forest-based industry (NAICS 321 and 322) is an important part of the NS economy, contributing \$1.5 billion to NS's manufacturing shipments in 2004.<sup>1</sup> Revenue from the primary forestry sector, logging, added \$265.4 million in shipments.<sup>2</sup>

Direct forestry sector employment in 2004 (**Figure 1**) was 11,000, down from its 2003 peak of 12,600.<sup>3</sup> Employment fell further in 2005 to 10,500.<sup>4</sup>

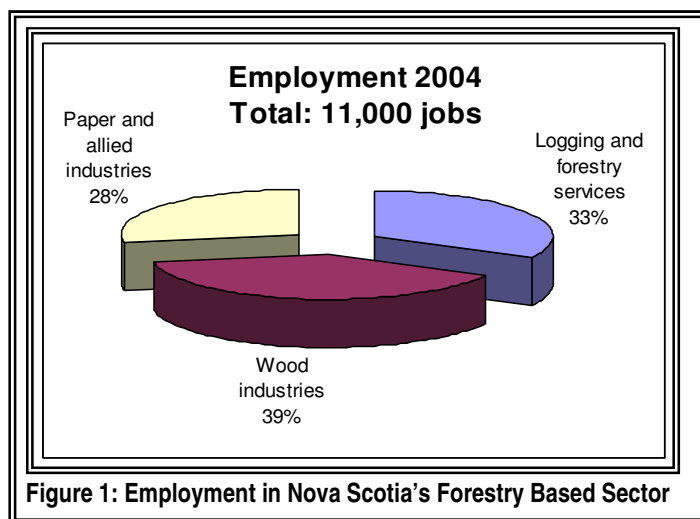
Revenue by forest product type in 2004 was:

- Logging, \$265.4 million;
- Wood products, \$578.7 million; and
- Paper, \$886.7 million.<sup>5</sup>

The forest-based sectors make up a major portion of NS's domestically produced exports, standing at \$1.04 billion in 2004

(**Figure 2**).<sup>6</sup> Exports of forest products accounted for about 20% of NS foreign exports.<sup>7</sup> The value of exports held at \$1.0 billion in 2005.<sup>8</sup>

Much of the sectors' activity is based in the rural areas of NS. Nova Scotia's economic development strategy includes maintenance and development of the rural economy. Therefore, community, political and economic influences ensure that forest sector issues and related policies and programs will remain prominent in NS.



<sup>1</sup> Department of Finance. *Nova Scotia Manufacturing Profile, 2001-2005*. (Halifax, Nova Scotia), Table 2.

<sup>2</sup> *ibid.*

<sup>3</sup> Canadian Council of Forest Ministers. *National Forestry Database Program (NFDP)*. From: <http://nfdp.ccfm.org>

<sup>4</sup> Natural Resources Canada. *The State of Canada's Forests, 2005 – 2006*. From: [http://www.nrcan.gc.ca/cfs-scf/national/what-quoi/sof/sof06/profilesNS\\_e.html](http://www.nrcan.gc.ca/cfs-scf/national/what-quoi/sof/sof06/profilesNS_e.html)

<sup>5</sup> *ibid.*

<sup>6</sup> Canadian Council of Forest Ministers. *National Forestry Database Program (NFDP)*. From: <http://nfdp.ccfm.org>

<sup>7</sup> Atlantic Provinces Economic Council. *The Forestry Industry in the NS Economy*. Halifax, Nova Scotia, 2003.

<sup>8</sup> Natural Resources Canada, *op. cit.*

Nova Scotia and the other Atlantic Canadian provinces were exempted from most American softwood duties during the softwood lumber dispute. Nova Scotia was exempted because over 70% of its wood supply is on privately owned land. Therefore, stumpage fees were seen to be close to what the United States considers open market determined.<sup>9</sup>

Notwithstanding NS's exemption, public sector support for forest management expenditures in excess of stumpage revenues does exist and influences the behaviour of private landowners.

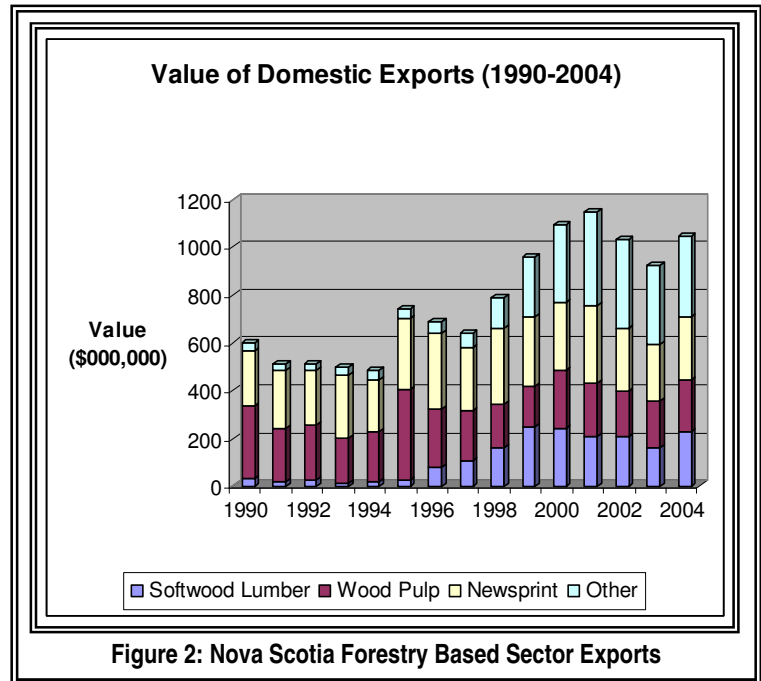


Figure 2: Nova Scotia Forestry Based Sector Exports

### 1.5. HOW PUBLIC POLICY INFLUENCES PRIVATE SECTOR BEHAVIOUR

Public sector support of the private sector comes in many forms, but those of particular interest to this study are policies and programs that influence the development of forest-based sectors. Some public sector actions, such as the issuing of licenses and permits, involve a relatively straightforward payment for services rendered. Others serve as a form of a subsidy because they alter the response of business to market forces. Subsidies are one of the most common techniques used to influence the behaviour of the marketplace to make it more consistent with the overall values of a society.<sup>10</sup>

#### 1.5.1. ALL SUBSIDIES ARE NOT CREATED EQUAL

In a perfect market:

- market prices reflect the full and true cost of the resources used to make a product or service<sup>11</sup>;
- purchasers receive all the benefits of what they have bought;
- producers and purchasers have full knowledge of the options open to them; and
- markets are not dominated by one (or a few) producers or purchasers.

<sup>9</sup> In terms of overall NS ownership in 2005, 68% of forested land is privately held, 29% is owned by the province and 3% by the federal government. Ownership in the rest of Canada stood at 6.3% private, 77.5% province and 16.2% federal. Natural Resources Canada, op. cit.

<sup>10</sup> For example, when the national need for energy conservation became a top public priority subsidies were used to encourage homeowners to improve their insulation and hence reduce energy consumption.

<sup>11</sup> For example, the full cost of production would include payment for negative external effects its manufacture may have on the resource base, such as air pollution, emission of toxic waste material and so on. The price paid for any resource should equal the cost of replacement (e.g., cleaning the air, safely disposing of toxic waste material, replacing the timber used, and so on).

These conditions are rarely met; and some forms of non-market intervention, such as a public sector subsidy, may be deemed advisable to promote a particular policy direction or when the public good is at stake.

In broad terms, a subsidy is any measure that has one or more of the following impacts:

- keeps prices for consumers below the market level;
- keeps prices that producers earn above the market level; and/or
- reduces the costs for consumers and producers by giving direct or indirect support.

Museums, universities and public transportation are examples of economic activities that are valuable to every citizen, and yet, without government support, could be:

- unaffordable to individual consumers; or
- individuals may engage in alternative forms of consumption that may be considered to have negative external effects for the broader society.<sup>12</sup>

Subsidies act in a similar manner to taxes. Subsidies shift the supply curve to the right by:

- reducing the private sector's production costs (via subsidies provided to producers), which may result in lower prices to consumers, which increases demand and thence supply; or
- reducing the effective price to consumers (via subsidies provided to consumers), stimulating demand and thence supply.

The conditions for perfect and free markets are rarely if ever approached in the forest-based sectors. This is because technology favours the creation of larger firms that produce forest-based products. Through their timber purchases, they can have, even without any collusion, some control over market prices: there are relatively few buyers of timber compared to the number of sellers. This is particularly the case in NS where 70-75% of the wood supply is provided by about 30,000 woodlot owners.

Subsidies can be considered beneficial to the efficient operation of an economy or a society when they:

- protect an infant industry as it becomes competitive;
- help to make a product competitive with internationally subsidized goods; or
- encourage innovation and processes that are in the public interest.

Subsidies are, in the long-term, not beneficial when they:

- encourage long-term consumption at prices below the cost of replacement;
- are used to prop up obsolete processes and industries;
- act as a disincentive to technological innovation; and/or
- cause a negative balance of externalities (e.g. if the cost of pollution to the overall society is greater than the benefit to consumers).

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<sup>12</sup> For example, if the full cost of entry to a museum were charged few people may visit. However, the broader social good of having museums as conservators of our history makes the subsidy justifiable to the public.

Public transportation is widely subsidised but it is generally judged that the benefits of public transit accrue to more than the riders because broader use of public transit reduces the need for the construction of new roads, reduces the overall emission of pollutants, and so on. Similarly, without subsidies to public transportation consumers may switch to other forms of transportation that bring unacceptable levels of negative externalities (e.g., significant increases in greenhouse gas emissions if travellers were induced by high public transit prices to switch to private cars.).

It follows that subsidies are not inherently good or bad. Hence, our approach differentiates between subsidies that pay for benefits accrued by society in general and those that can be considered ‘perverse’, which encourages society to “eat its capital”.

#### **1.5.1.1. (THE CASE OF) EXTERNALITIES**

Subsidies affect far more than just the industry that they target. Subsidies also cause what economists call externalities. Externalities are effects that are indirect consequences. These externalities may be positive or negative.<sup>13</sup>

Subsidies are not always easy to identify because they are not always in the form of direct grants. They can be in the form of tax credits, rebates, soft loans, and any other method of decreasing prices below the market level for producers or consumers.<sup>14</sup>

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<sup>13</sup> For example, selective harvesting can benefit timber and forest products buyers and also produce externalities that provide broad societal benefits such as erosion and flood protection, reduced risk of forest fire, improved air quality, wildlife habitat, recreation resources, aesthetic amenities, and so on. The value of broader societal benefits accrues not only to the direct consumer of timber and forest products but also to society in general (and therefore some payment, perhaps via a subsidy, may be justified).

<sup>14</sup> In the case of perverse subsidies, they usually reward powerful interests and so, not only may they be hidden, they may also be fiercely protected. For example, the United States imposes punishing duties on ethanol produced in Brazil, which, due to the growing environment and wage structure in Brazil, is produced much more efficiently than ethanol from corn in the United States. These duties are retained even though the USA has a policy to reduce hydrocarbon consumption. Agricultural interests in the USA are strong, and strong interests such as these make many subsidies difficult to undo after they have achieved their purpose.

## 2. WHERE WE WERE AND WHERE WE ARE

Nova Scotia contains only remnants of its original mature and old-growth Acadian Forest, due to a 400-year history of high-grading (removing the best trees), land clearing and clearcutting. The first Department of Lands and Forests inventory in the 1950s confirmed even then that the quality of the province's forests had substantially declined.<sup>15</sup>

Major losses in age-class diversity have continued to occur since the 1950s, with an increasing percentage of forests in younger age classes, and the loss of almost all the province's older forests. In 1958, forests more than 80 years old covered 25% of the province's forested land base. In 2006, they comprised 1% of the province's forest. Forests more than 100 years old covered 8% of the province's forest area in 1958; in 2006, they covered 0.15% of forested land.<sup>16</sup>

Natural tree species diversity has also declined, especially long-lived, shade-tolerant trees such as the eastern hemlock and sugar maple. White and red pine and red spruce occupy less than 50% of their former range in this region.

The volume of wood harvested in NS doubled between 1980 and 2000. Of the 6.5 million m<sup>3</sup> of wood harvested in 2000, 95% was harvested by clearcutting. For the period 1994 – 2004 clearcutting averaged 520 km<sup>2</sup>/year.<sup>17</sup>

Representatives of the NS Department of Natural Resources (DNR) suggest that the current rate of softwood cutting is reaching the limit of what they termed a “sustainable annual cut based on current forest management regimes” (P. MacQuarrie, pers. comm. 2006-2007), a situation that remains unchanged since its assessments in the late 1990s.

The majority (68%) of the province's forests are privately owned, making regulation and forest protection initiatives more challenging than in jurisdictions with higher rates of Crown ownership. In 2000, about 80% of Crown forests (732,000 hectares) were available for timber harvesting (P. MacQuarrie, pers. comm. 2006-2007).

In the late 1990s, NS set out to create an integrated resource management (IRM) framework for Crown Lands. However, the consultation process and resulting plans drew significant opposition from environmentalists, hunters and anglers, the tourism industry, and recreational users who believed that the process favoured the forest industry. Implementation of the IRM framework has proceeded much more slowly than anticipated, leaving the management of Crown land little changed.

### 2.1. CODE OF FOREST PRACTICE

The NS government is now in the process of developing a Code of Forest Practice to regulate forestry practices on Crown Lands and influence those on private holdings. The first component of the Code, “A Framework for the Implementation of Sustainable Forest Management”, describes the general principles of forest practices. *Appendix 2* summarises the principles. The Code will be completed with the preparation of guidebooks and technical manuals.

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<sup>15</sup> Wilson, Sara. *The Nova Scotia Genuine Progress Index Forest Accounts*. Tantallon, N.S. GPI Atlantic, 2002, Vol. 1, p. vii.

<sup>16</sup> Ibid.

<sup>17</sup> Ecology Action Centre. *Nova Scotia's Forest Sustainability Regulations and Uneven-aged Forest Management: Conflicts and Opportunities*. (Halifax, September 2005. p. i.)

### 3. PUBLIC SECTOR INVOLVEMENT IN THE FORESTRY SECTOR

Federal and provincial spending and programming act as de facto subsidies to sectors within the provincial economy. The following section provides a summary list of the major ways that federal and provincial government activity has affected the operation of the NS forestry sectors.

#### 3.1. THE EARLY YEARS, 1899 – MID-1960S

The major elements of public sector involvement in the primary and secondary forestry sectors in NS up to the mid-1960s were assessed in three papers published by the Gorsebrook Research Institute for Atlantic Canada Studies<sup>18</sup>, under the title “Trouble in the Woods: Forest Policy and Social Conflict in NS and New Brunswick.”<sup>19</sup> Section 3.1.1 provides a topline summary of the findings and *Appendix 1* provides more detail.

##### 3.1.1. FOREST POLICY IN NOVA SCOTIA: THE BIG LEASE, CAPE BRETON ISLAND, 1899-1960 (L. ANDERS SANDBERG)

Since the early 1900s successive governments in NS made significant efforts to attract investment in pulp and paper mills.

The Lease Act of 1899 intended to promote forest management and raise revenue from Crown Lands via improved leases. The Act offered terms that are more generous to lessees of marginal timberland and those prepared to improve or build manufacturing facilities. These terms enabled the lease of the only extensive, contiguous block of Crown Land in NS, the so-called Big Lease<sup>20</sup>, covering about 248,000 hectares.

To accommodate the pulp and paper industry, the Act permitted a reduction of the diameter limit to five inches upon payment of an additional 10 cents per acre, raising the rent to 50 cents per acre. No stumpage fees were

**1899:** Lease Act promotes forest management and enables NS government to offer large leases with generous terms to attract industrial users of NS forest.

**Early 1920s:** Provincial forester said diameter limits on Crown Land were not being enforced and the rent was “ridiculously small”.

**1928:** First paper mill in NS opened, with concessions for power rates and a guaranteed supply of wood provided.

**1940:** Government pays more than 3.5 times normal rate to buy-back about 30% of the ‘Big Lease’.

**1956:** Government buys-back remainder of ‘Big Lease’, about five years before its termination date, at 14% more, after inflation, than it did in 1940.

**1957:** NS Pulp Limited Agreement gives NS Pulp Limited (now Stora-Enso) the right to build a paper mill, lower power rates, stumpage at 1930 rates, land, reduced taxation and forest inventory assistance.

**1962:** Small Tree Act of 1942 repealed and replaced with the Forest Practices Improvement Act, not proclaimed until early 1970s.

**1965:** Bowater Mersey resorts to clear-cut harvesting as dominant harvesting method.

**1965:** Scott Paper (now Neenah Paper Company of Canada), via Scott Maritime Pulp Agreement Act, given 100,000 hectare lease, 5-year income tax holiday, 20-year tax break on land owned or leased, \$5 million operating subsidy, & commitment that NS would own and operate Scott’s waste treatment facility.

**1966:** Scott Paper moves to clearcut harvesting as dominant harvesting method.

Stora undertakes clearcutting of mature stands and degraded and commercially non-valuable forests.

<sup>18</sup> The Gorsebrook Institute is closely allied to the Atlantic Canada Studies programme at Saint Mary’s University, Halifax, NS.

<sup>19</sup> Sandberg, L. *Trouble in the Woods: Forest Policy and Social Conflict in Nova Scotia and New Brunswick*. Fredericton, N.B. Fredericton, New Brunswick, Acadiensis Press, 1992. (In Sandberg, L. *Trouble in the Woods: Forest Policy and Social Conflict in Nova Scotia and New Brunswick*. Fredericton, N.B. Published for the Gorsebrook Research Institute for Atlantic Canada Studies by Acadiensis Press, 1992.)

<sup>20</sup> The first owners of the Big Lease created the Cape Breton Pulp Company. In 1920, the Big Lease was sold for the last time to the Oxford Paper Company.

charged.

In the early 1920s, the Chief Forester of NS found the diameter limits on Crown leases were not enforced and the rent was “ridiculously small”.<sup>21</sup>

Nova Scotia’s first newsprint mill was built in Liverpool by the Mersey Paper Company in 1928. The company received a concession in the price of power and was guaranteed 1.0 million cords of pulpwood from Crown Land.

In 1940, the provincial government expropriated about 71,460 hectares of the Big Lease to create the Cape Breton Highlands National Park. Compensation for the expropriation translated to \$5.58 per hectare - well above the \$1.56 per hectare that the Department of Lands and Forests was normally allowed to pay.<sup>22</sup>

In 1956, the provincial government pursued Stora Kopparberg. A major tract of Crown Land was needed for lease to Stora. The NS government repossessed the Big Lease, paying about 14% more (after inflation) than it did in 1940, even though the Big Lease was now less than five years from its 30-year renewal/termination date.<sup>23</sup>

In 1957, the Stora Kopparberg Corporation formed NS Pulp Limited (NSP) and with the NS Pulp Limited Agreement 520,000 hectares were leased to NSP. The following inducements helped Stora commit to build a pulp mill:

- revised tax laws (e.g., the payment of grants in lieu of taxes);
- stumpage rates set at \$1 per cord, the same rate given the Mersey Company 30 years earlier<sup>24</sup>;
- a 131 hectare site for the mill;
- forest inventory surveys for NS Pulp;
- low electricity rates; and
- the assurance of transferability of the new lease.

The lease at the low stumpage rate had serious financial implications for small private pulpwood producers, who were the most significant source of wood, because cheap Crown stumpage set the price ceiling for private stumpage.

In the early 1980s, Stora received federal and provincial funding support through federal/provincial agreements to salvage budworm-killed wood and the provincial government contributed \$10 million towards an on-site electrical generator.<sup>25</sup>

In 1993, Stora threatened to close its mill due to the combined effects of new pollution laws and the recession. Stora received a \$15.4 million loan from the provincial government to help it cope with new pollution laws and the recession.<sup>26</sup>

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<sup>21</sup> Sandberg, L. Anders. *Forest Policy in Nova Scotia: The Big Lease, Cape Breton Island, 1899-1960*. Fredericton, New Brunswick: Acadiensis Press, 1992.

<sup>22</sup> Ibid.

<sup>23</sup> *ibid.*

<sup>24</sup> The government argued that the low stumpage rate was driven by the fact that the alternative market of the day was to ship pulpwood offshore. Current stumpage rates are still relatively low but the government has instituted a supply agreement to increase the effective rate of return for timber from Crown Land.

<sup>25</sup> May, Elizabeth, "At the Cutting Edge", Toronto, Key Porter Books, 2005, page 146.

<sup>26</sup> *Ibid.*

**Neenah Paper Company of Canada.** In 1965, Scott Paper<sup>27, 28</sup>, through the Scott Maritime Pulp Agreement Act, was given a:

- lease of 100,000 hectares;
- five-year income tax holiday;
- 20-year tax break on all land owned or leased by the company and on its mill site;
- \$5 million subsidy to Scott's new operations; and
- commitment that Nova Scotia would own and operate Scott's waste treatment facility.

### 3.1.2. THE POLITICAL ECONOMY OF NOVA SCOTIA'S FOREST IMPROVEMENT ACT, 1962-1986 (GLYN BISSIX AND L. ANDERS SANDBERG)

Forest inventories were revised upward before the agreement with Stora to build a pulp mill on Cape Breton Island. In 1964, on the eve of the establishment of the Scott Paper pulp mill at Abercrombie in Pictou County, forest inventories were again revised upward by 74%.

In 1969, when Stora expanded its sulphite mill from 135,000 to 175,000 tons per year and installed a 160,000 ton newsprint facility the annual allowable cut was increased from 30 to 62.5 feet<sup>3</sup>/hectare/year.<sup>29</sup>

“The revised forest inventories were subsequently dubbed G.I. Smith’s “new forest”, pointing to the strong government bias in favour of pulp industry development. The Department of Trade and Commerce clearly prevailed over Lands and Forests. In 1964, on the eve of the establishment of the Scott Paper pulp mill at Abercrombie in Pictou County, a similar revision of forest inventories was made.

The DLF “re-examined” its records and increased the allowable annual cut from 1,375 thousand to 2,400 thousand rough cords, an increase of about 74 per cent. Then, in 1969, when Stora expanded its sulphite mill from 135,000 to 175,000 tons per year, installed a 160,000 ton newsprint facility, and concluded a new management agreement, covering an extra 200,000 acres of Crown lands, the annual allowable cut was increased from 12 to 25 cubic feet per acre per year.”<sup>30</sup>

The Small Tree Act (STA) of 1942 was repealed in 1962 and replaced with the Forest Practices Improvement Act, which was not proclaimed until the early 1970s.

By 1965, Bowater Mersey resorted entirely to clear-cutting. As of 1966, Stora and Scott Paper continued to use clearcutting as their dominant harvesting method, as they have done since beginning their operations. (J. Cook, pers. comm. 2006.)

<sup>27</sup> Formerly known as Scott Paper and then Kimberly-Clark.

<sup>28</sup> May, Elizabeth, op. cit. p. 139.

<sup>29</sup> Glyn Bissix and L. Anders Sandberg, L. Anders Sandberg. *The Political Economy of Nova Scotia's Forest Improvement Act, 1962-1986*. Fredericton, New Brunswick: Acadiensis Press, 1992. (In Sandberg, L. Trouble in the Woods : Forest Policy and Social Conflict in Nova Scotia and New Brunswick. Fredericton, N.B. Published for the Gorsebrook Research Institute for Atlantic Canada Studies by Acadiensis Press, 1992.)

<sup>30</sup> Ibid.

### 3.2. FEDERAL/PROVINCIAL NOVA SCOTIA FORESTRY PROGRAMS AND OTHER SUPPORT TO THE SECTOR, MID-1960S TO THE PRESENT

Forests are under provincial jurisdiction. However, until 1995, the federal government also provided substantial support for forestry. Before 1988, the programs fell under the scope of the provincial Department of Natural Resources (earlier called Lands and Forests) and the federal Department of Fisheries and the Environment, later Natural Resources Canada (P. MacQuarrie, pers. comm. 2006-2007). Since 1988, these agreements were administered by the Atlantic Canada Opportunities Agency (ACOA).

The **Agriculture and Rural Development Act (ARDA) I & II** agreements began in the late 1960s and ended in 1973. Federal and provincial governments funded the agreements and the resources were mainly used to collect inventory information and purchase acreage to increase the amount of Crown Land.

**ARDA III** ran from 1973 to 1977. It supported the creation of the West Pictou Group Venture (a form of woodlot, timber production and wood product production co-op) and provided incentives to woodlot owners for silviculture activities. (P. MacQuarrie, pers. comm. 2006-2007)

During the development and implementation of the federal/provincial **General Development Agreement (GDA)**, which ran from 1977 to 1982, the Canadian Forestry Service became more involved in designing and delivering the programs. Through the GDA:

**Late 1960s - 1977:** Agriculture and Rural Development Act I, II and III agreements provide federal and provincial funding for forest inventory, Crown Land purchases, Group Ventures', and silviculture.

**1977 - '82:** General Development Agreement provides federal and provincial funding for private land silviculture, Group Ventures, new silviculture contractors and forestry consultants, additional provincial government staff & Spruce Budworm Salvage program.

**1982 - '89:** Canada/NS Federal Resources Development Agreement provides \$92.6 million for intensive forest management, silviculture & Native Lands programs.

**Early 1980s:** Stora receives \$10 million in capital assistance.

**1984 - '87:** Forest Renewal Agreement provides \$25.5 million to expand Group Venture Program, increase nursery capacity and support Budworm Salvage Program.

**1987 - '89:** Atlantic Canada Opportunities Agency – Nova Scotia provides \$3.8 million to 127 projects in primary forestry.

**1989 - '91:** Cooperation Agreement for Forestry Development (CAFD) provides \$45 million for silviculture, forest management, training, student employment & GIS forest inventory.

**1991 - '95:** CAFD extended to 1995 with \$98 million (\$87 million spent) for forest land management, research and development, model forest programs, wildlife integration, technology transfer & information and training.

**1995 - '99:** NS provides \$3,000,000/year silviculture support.

**1993:** Stora-Enso receives \$15.4 million in capital assistance.

**1995 - Mid-2006:** Atlantic Canada Opportunities Agency – Nova Scotia provides \$5.2 million (11% grants, 89% loans) to 69 projects that add value to lumber or use lumber in value added products.

**1997 - 2002:** 30% NS tax credit for investment in manufacturing and processing plant and equipment (all manufacturers eligible).

**2006:** NS government pays Stora-Enso \$65 million in lieu of access to 81,000 hectares of Crown land the province had designated as a wilderness protection area.

NS government pays Bowater Mersey \$26 million for 10,000 hectares of land with high conservation value.

**1995 - present:** NS budgets \$3 million/year for Crown Land silviculture, maintenance of negotiated stumpage rates and, purchase of Crown Land. (actual ≈\$3.5 million/yr.) Stumpage revenue of about \$4.3 million/yr. more than offsets expenditures.

**1995-present:** DNR Private Land Program, budgeted at \$3 million per year. (actual ≈\$2.9 million/yr.)

\$250,000/year for construction and maintenance of roads on Crown Land used by the public and for public service such as fire prevention and fire fighting.

'Gas tax for road maintenance program' provides for \$750,000/year of roadwork in lieu of forest product producers forgoing the elimination of gas excise taxes.

**Other:** About \$31 million/year in corporate tax credits and other deductions not targeted for, but available to, the primary and secondary forest sectors.

- more private land silviculture assistance was made available;
- the number of Group Ventures was expanded to eight;
- new silviculture contractors and forestry consultants were established; and
- the provincial government hired additional staff.

In 1978, \$35.6 million was added to the GDA to support the Spruce Budworm Salvage program.<sup>31</sup>

From 1982 to 1989, the Canada/NS **Federal Resources Development Agreement (FRDA)** provided funding for a more comprehensive program of intensive management of the forest resource. The Agreement directed about 75% of its funding to silviculture on private and Crown land. In 1984, additional funding was provided to include Native Lands in its programming. The FRDA ran until 1987 providing \$49.9 million in federal money and \$42.7 million in provincial money to forest-related development, as described in **Table 1**.<sup>32</sup>

<b>Programs</b>	<b>Federal Funding (\$ million)</b>	<b>Provincial Funding (\$ million)</b>
1. Silviculture funding on private land	45.8	-
2. Silviculture for Crown Land	-	24.6
3. Research and development	0.48	0.97
4. Support Services	1.09	9.81
5. Education	0.83	1.67
6. Nursery	2.33	4.67
<b>Total</b>	<b>49.9</b>	<b>42.7</b>

The federal/provincial **Forest Renewal Agreement (FRA)** ran from 1984 to 1987. It provided \$25.5 million to complement the FRDA. It expanded the support of the Group Venture Program, helped increase nursery capacity and provided funding to the Budworm Salvage Program. The FRA was composed of six programs, which ran concurrent with the programs of the FRDA. **Table 2** summarizes the programs and funding levels.

<b>Programs</b>	<b>Federal Funding (\$ million)</b>	<b>Provincial Funding (\$ million)</b>
1. Forest Renewal Act	\$8.2	\$2.2
2. Group Management Ventures (encouraging co-ops)	-	\$1.2
3. Research and development	\$2.1	\$1.4
4. Cape Breton Forestry Development Program	\$4.8	\$2.2
5. Education, Technical Transfer, Information	\$0.5	\$0.4
6. Nursery Construction	-	\$0.8
<b>Total</b>	<b>\$15.5</b>	<b>\$8.1</b>

Note: The difference between \$25.5 million and program totals was allocated to agreement administration and evaluation.

<sup>31</sup> Atlantic Provinces Economic Council. The Forestry Sector in the NS Economy. Halifax, Nova Scotia, 2003, Appendix C.

<sup>32</sup> Atlantic Provinces Economic Council. op. cit.

In combination, the FRDA and FRA supported 48,280 hectares of replanting, primarily softwood, and 47,400 hectares of stand improvement with the objective to maintain and then raise sustainable annual allowable cuts.

In 1989, the federal/provincial **Cooperation Agreement for Forestry Development (CAFD)** was signed, providing \$45 million over 1989-91, with about 73% of funding directed at silviculture. Nearly 20,000 hectares were planted and 11,800 hectares of stand improvements completed.

Greater reliance was placed on federal direct delivery of programs than in previous agreements. Its five programs focused on funding for silviculture, silviculture worker training, student employment and the start of a GIS-based forest inventory. **Table 3**<sup>33</sup> summarizes the program funding levels.

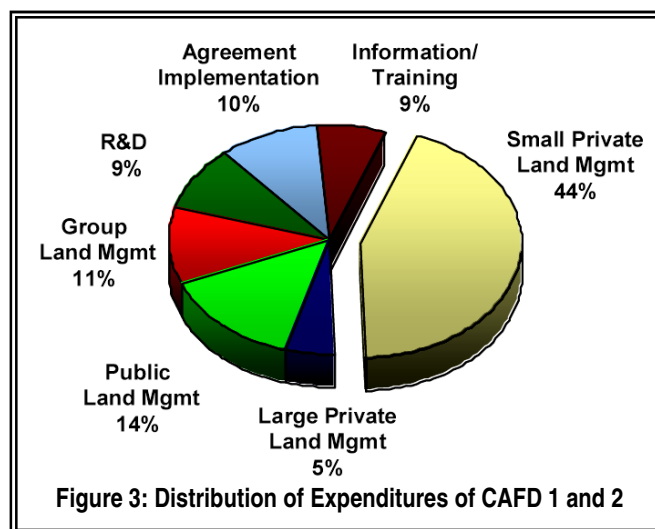
<b>Table 3: Co-operation Agreement for Forestry Development, 1989 – 1991</b>		
<b>Programs</b>	<b>Federal Funding (\$ million)</b>	<b>Provincial Funding (\$ million)</b>
1. Forestry Management	19.5	11.9
2. Group Management (overhead expenses, business support)	-	4
3. Applied Research	0.86	0.7
4. Communication, Research, Training	0.86	1.73
5. Agreement Implementation	2.4	1.1
<b>Totals</b>	<b>23.6</b>	<b>19.6</b>

Note: The difference between \$45 million and program totals was allocated to agreement administration and evaluation.

Included in the above figures are:

- \$7.9 million in silviculture for Crown Land;
- just under \$1 million for road maintenance and construction on Crown Land;
- \$265 thousand for First Nations silviculture;
- \$1.5 million supporting silviculture by large private landowners;
- \$1.5 million for the conduct of silviculture on land owned by pulp and paper companies;
- \$9.9 million to support silviculture by individual woodlot owners; and
- \$10.2 million in silviculture support to group ventures.<sup>34</sup>

CAFD became **CAFD 2** with its extension to 1995. CAFD 2 had a wider scope of programs and \$98 million in funding, provided 50/50 by the federal and provincial governments. Only \$87 million was spent, due primarily to difficulties in moving funds between priority areas as needs changed. **Figure 3**<sup>35</sup> describes the distribution of spending among programs.



<sup>33</sup> John Jozsa, Ian Methven, and Mark Jamnick. CAFD 2: Evaluation of the Canada-Nova Scotia Cooperation Agreement for Forestry Development, 1991 - 1995. Halifax, Nova Scotia, 1995.

<sup>34</sup> Ibid.

<sup>35</sup> Atlantic Provinces Economic Council. *The Forestry Sector in the Nova Scotia Economy*. Halifax, Nova Scotia, 2003.

**Appendix 3** provides details on CAFD 2. A review of the background to CAFD2 and its goals and objectives makes it clear that the focus of forest management was on the supply of softwood fibre.

The programs under CAFD 2 went beyond basic land management, although a majority of the funding was set aside for that purpose. About 9% of total funding was disbursed for research and development, which included identifying new products for under-utilized species and higher valued products, model forest programs, wildlife integration and increasing the rate of technology transfer.

Another 7% of the funding was spent on information and training programs such as skills enhancement for those involved in forestry, a student internship program and public awareness.

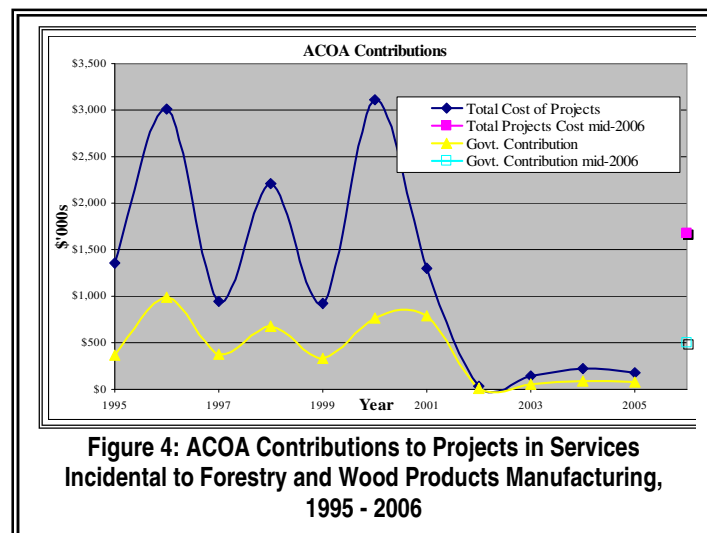
CAFD 2 was not followed by another federal/provincial agreement. Because of the federal deficit and the desire of the private sector to be more self-determining, the Canadian government withdrew from forestry management in areas of provincial jurisdiction and focused on forestry management in national parks and historic sites. (P. MacQuarrie, pers. comm. 2006-2007)

### 3.2.1. OTHER FEDERAL FUNDING<sup>36</sup>

The Atlantic Canada Opportunities Agency (ACOA) has had some involvement in funding firms in the primary forest industry. In the first two years of ACOA's existence (1987 – '89) 127 projects, mostly equipment purchases, totalling \$3.8 million were funded.

ACOA and its predecessor agencies have not had direct involvement with projects in the primary forestry sector nor the pulp and paper sector since the early 1970s.<sup>37</sup>

**Figure 4<sup>38</sup>** shows the total cost and government contribution to 69 projects in services incidental to forestry and wood products sector from 1995 to mid-2006. The total value of these projects was about \$15.1 million, including about \$5.2 million in government contributions. Fewer than 11% of the contributions were made in the form of non-refundable contributions and grants. About 89% of government support came in the form of low or no interest repayable contributions.



**Figure 4: ACOA Contributions to Projects in Services Incidental to Forestry and Wood Products Manufacturing, 1995 - 2006**

<sup>36</sup> This research focuses on public sector programs that are largely directed at the primary and secondary forestry sectors. Businesses in the forest based sectors are of course eligible for most of the wide variety of programs, provided by other federal government departments including Industry Canada, Human Resources and Social Development Canada and other agencies and organizations related to the federal government such as the Canadian Business Development Centres, other federal/provincial agreements such as the former Technology Development Agreement, among others.

<sup>37</sup> Support to the Primary Forestry Sector was provided via Federal-Provincial cost-sharing agreements. The programming was delivered by the NS Department of Natural Resources and the Canadian Forestry Service.

<sup>38</sup> Atlantic Canada Opportunities Agency. *ACOA's Project Information Site*. Moncton, New Brunswick. From: <http://pub.acoa-apeca.gc.ca/atip/e/content/List.asp>. (source of data for Figure 4).

About 75% of projects and government contributions were made between 1995 and 2000, inclusive. **Table 4** describes the distribution of support by type of project.

Type of Project	% of Projects	% of ACOA Contributions
Establishment, Enhancement or Expansion of Lumber Production Enterprises	<b>Error! Not a valid link.</b>	<b>Error! Not a valid link.</b>
Establishment, Enhancement or Expansion of Wood Product Enterprises	<b>Error! Not a valid link.</b>	<b>Error! Not a valid link.</b>
Support of NGOs, Studies, Symposia and Similar Activities	<b>Error! Not a valid link.</b>	<b>Error! Not a valid link.</b>
Human Resource Development and Training	<b>Error! Not a valid link.</b>	<b>Error! Not a valid link.</b>

Source: ACOA (Nova Scotia) and Jozsa Management & Economics

Applications for ACOA assistance focused on investments to add value to lumber or to use lumber as inputs for other value-added products. The dramatic reduction in these types of ACOA contributions from the level in year 2000 coincided with the growing challenges by the United States to Canadian business support practices in the primary and secondary forest products sectors. **Appendix 4** provides details on the types of projects and their funding levels.

General business lending support is distributed through the Business Development Bank of Canada (BDC). This money typically comes in the form of asset-based lending and is used to finance operations, not infrastructure. In 2005, it made 240 loans equalling \$55,937,000 in NS. Data were not made available to estimate the forest-based sectors' share or to determine if they received special treatment.

No direct federal funding is currently available for the forest industry in NS, but the Canadian Forestry Service of Natural Resources Canada, through its Atlantic Forestry Centre in Fredericton, does support research in the industry in Atlantic Canada. One of its recent objectives was to support the Model Forest Network throughout the country. In NS, the Centre has collaborated with a variety of forest landowners, NGOs, industry and the provincial government in the Nova Forest Alliance. The Nova Forest Alliance also facilitates a partnership between private wood-lot owners and the provincial government<sup>40</sup> (P. MacQuarrie, pers. comm. 2006-2007). However, the Model Forest Network Program is in the process of being dismantled and the Alliance is being restructured under the new Forest Communities Program.

### **3.2.2. PROVINCIAL GOVERNMENT INVOLVEMENT**

In addition to the forestry-specific provincial programs described previously, businesses in the forest-based sectors can benefit from general industrial credits and incentives.

The lumber, pulp and paper and wood products sectors in NS could take advantage of the Manufacturer and Processing Investment Tax Credit. It was a non-refundable, corporate income tax credit of 30% of eligible investments in manufacturing and processing plant and equipment in permanent establishments in NS. The credit could be applied to reduce NS corporate income taxes payable and unused amounts could be carried forward seven years and back three years. The

<sup>39</sup> Ibid.

<sup>40</sup> Atlantic Provinces Economic Council. *The Forestry Sector in the NS Economy*. Halifax, Nova Scotia, 2003.

program was introduced in 1997 and scheduled to expire December 31, 2002. No data were made available on the extent to which the secondary forestry sector benefited from this credit.

The forest based industry and woodlot owners receive indirect savings from provincial land tax benefits.

Post CAFD 2, and without federal funding assistance, NS was not able to continue extensive investments in forest management due to the mounting provincial debt that needed immediate attention. In addition, in the early 1990s, the forestry industry was relatively profitable and therefore willing to take control of its silviculture investments. By the mid-1990s, the provincial government began to focus more effort on establishing voluntary Stewardship Agreements with industry. The prospect for such arrangements was encouraged when Stora-Enso and the NS Landowners and Forest Fibre Producers Association successfully negotiated an agreement for such a program through their collective agreement. Direct grants for silviculture work effectively ended in 1995. (P. MacQuarrie, pers. comm. 2006-2007) From 1995 until 1999 the Province provided very limited support, with a budget of about \$3,000,000 per year (P. MacQuarrie, pers. comm. 2006-2007), for woodlot silviculture. The support continues to the present in the form of DNR's Private Land Program expenditures in support of small private woodlot owners. The average annual expenditure, 1995-2006 was about \$2.88 million.<sup>41</sup> Assistance for things as Group Ventures, roads, boundary lines and management plans was eliminated (P. MacQuarrie, pers. comm. 2006-2007)

These circumstances culminated in the establishment of the **Forest Sustainability Regulations** in 2000. Essentially, the Regulations require:

- buyers of timber to be registered; and
- registered buyers purchasing more than 5,000 m<sup>3</sup> per year to conduct, or have conducted, silviculture at a rate of \$3.00 per cubic metre of soft wood purchased and \$.60 per cubic metre of hardwood purchased. Buyers have the alternative of paying the required amounts or any portion of money into a fund and allowing the Department of Natural Resources to contract out the silviculture work.<sup>42</sup> Few have chosen the alternative.

The more wood a buyer purchases, the greater is the buyer's requirement to conduct in-house silviculture activities, make a monetary contribution to the sustainable forest fund, or a combination of the two.<sup>43</sup> Monetary contributions are directed to the Association for Sustainable Forestry (ASF), which reinvests money from the Sustainable Forestry Fund, and supplemental funding from DNR, in silviculture work on small private woodlots. Although landowners and forestry contractors can apply to the ASF for silviculture funding, the vast majority of silviculture done under the regulations is completed through registered buyers' own programs.<sup>44</sup>

The wood buyer is able to meet their silviculture requirement by conducting, or having conducted, silviculture according to one or several of the following categories:

- 1. Natural Regeneration Establishment
  - 1a) regeneration and fill plant < 500 trees/ha

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<sup>41</sup> Ecology Action Centre, FOIPOP Request. *Provincial Public Expenditures on Forest Management and Forestry Development for Fiscal Years 1995-2007*. January, 2008.

<sup>42</sup> Source: DNR - <http://www.gov.ns.ca/natr/forestry/wap/default.htm> ahead

<sup>43</sup> Kermit deGoeyear. Nova Scotia's Forest Sustainability Regulations. Halifax, Nova Scotia, 2005, p.1.

<sup>44</sup> *ibid.*

- 1b) regeneration and fill plant ~ 500 trees/ha
- 2. Plantation Establishment
- 3. Early Competition Control
- 4. Density Control and Release in Plantations
- 5. Density Control and Release in Natural Stands
- 6. Commercial Thinning
- 7. Forest Quality Improvement:
  - 7a) Crop Tree Release
  - 7b) Crop Tree Pruning
  - 7c) Selection Management<sup>45</sup>

Categories 1 through 6 support even-aged methods, while Category 7 purports to support all-aged or “uneven-aged” treatments.”<sup>46</sup>

Credits are accumulated when any of the seven categories of silviculture are conducted. Sufficient credits must be accumulated to pay for silviculture work required according to the regulations.

Different credits per hectare are associated with each category. The credit rates were set based on estimates of the amount of silviculture work that would be needed to sustain an annual allowable cut of softwoods and hardwoods. Hardwood silviculture requirements per cubic metre harvested were intentionally set below those for softwood because it was the estimation of the Department of Natural Resources that the demand for NS hardwood harvesting was well below the annual allowable cut. Hence, much less silviculture work was required to sustain the hardwood resource. (P. MacQuarrie, pers. comm. 2006-2007) In addition, there was less ground to support the imposition of a regulatory burden.

Those Registered Buyers required to have wood acquisition programs are able to enter cost-sharing agreements with the province for their private, non-industrial, woodlot owner programs only. Industrial land treatments are not eligible for public funding. The DNR private land program budget has again been budgeted at \$3 million per year (P. MacQuarrie, pers. comm. 2006-2007), and DNR contributes a third of the ‘Credit Value’ rates.

DNR does specify criteria for treatment eligibility under the Regulations, and the same specifications are used for funding agreements. It does not restrict the type of harvesting that a private woodlot owner may undertake. The regulations do not require that the silviculture work be completed on the same land tenure that was harvested. The silviculture work may be conducted either on the land that was harvested or on a tract elsewhere in NS. The Buyers program must also reflect the species that they have acquired, i.e. if they acquire softwood their program should grow softwood and vice versa.

In 2003, some 98% of resources delivered to private woodlot owners through that fund have gone to even-aged softwood treatments (Categories 1 – 6).<sup>47</sup>

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<sup>45</sup> *ibid.*, p. 2.

<sup>46</sup> *ibid.*, p. 1.

<sup>47</sup> Kermit deGooyear. *op. cit.* 2005. p.2.

Many woodlot owners believe that the Forestry Sustainability Regulations resulted in a form of indirect encouragement of commodity-based forestry instead of value-added forestry because Category 7 credits:

- are not sufficient to cover costs and therefore encourage silviculture that favours softwood; and
- do not give enough recognition of the investment required to switch from even-aged softwood silviculture to a more ecologically sound approach.<sup>48</sup>

In addition, they stated that timber buyers provide the silviculture and therefore hold control of the type of harvesting and planting, which usually favours a commodity-based management approach that is in the commercial interest of the buyers.<sup>49</sup>

Changes to the Forest Sustainability Regulations in 2006 – 2007 partially recognized these concerns, increasing credit values for selection management and other uneven-aged treatments.

With the exception of cost recovery charges for spraying industrial land, there are no other general charges applied by NS for services rendered to the primary and secondary forestry sectors.

### **3.2.2.1. ESTABLISHING STUMPAGE RATES AND BUDGETS FOR FOREST MANAGEMENT SUPPORT**

The 1984 Royal Commission on Forestry that led to the "New Forestry Policy" of 1986 set into motion the process of continual reviews of stumpage rates so that they would reflect the private market value for timber of similar quality. In 1986, NS made presentations in the United States to demonstrate that its stumpage rates for Crown Land reflected those that would be charged by the private sector.

Nova Scotia lumber producers were exempt from the United States' Countervailing Duty during the softwood lumber dispute because US trade officials agreed that stumpage rates charged in NS for timber from Crown Land reflected non-subsidized private sector rates. The Anti-dumping Duty portion was charged against the Maritimes. The case was helped by the fact that 90% of the lumber produced in NS came from timber purchased from private woodlot owners.

Nova Scotia DNR has an annual Crown Land management budget of approximately \$3 million to conduct silviculture on Crown Land and build or maintain roads on unlicensed lands. On occasion, it has also had to be used to fund protection programs against insect pests, such as tussock moth, blackheaded budworm or pale wing grey moth or salvage of storm damage. (P. MacQuarrie, pers. comm. 2006-2007) Total spending for the period 1995-2006 was about \$41.8 million, for an average annual expenditure of about \$3.48 million, about 16% above budget.<sup>50</sup> Stumpage revenue for Crown Land timber were about \$51.93 million, which more than offset the total spent on Crown Land management.<sup>51</sup>

Nova Scotia no longer pays for the construction of resource roads to induce harvesting on Crown Land. The Crown land management budget includes about \$269,000/year for road construction and maintenance on Crown Land managed by the Department directly. Total expenditures from 1995 to 2006 were about \$3.22 million.<sup>52</sup> Although forest-based companies benefit from this work, the

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<sup>48</sup> *ibid.*, p.14 – 15.

<sup>49</sup> *ibid.*

<sup>50</sup> Ecology Action Centre. *op cit.* January 2008.

<sup>51</sup> National Forestry Database Program, Table 8.1 A. [http://nfdp.ddfm.org/compendium/profile/tables\\_index\\_e.php](http://nfdp.ddfm.org/compendium/profile/tables_index_e.php)

<sup>52</sup> *Ibid.*

budget is based on reasoning that the roads are also used by the public and for public service uses such as fire prevention and fire fighting.

The Province has also incorporated into its Crown stumpage prices a silviculture fee that is the same as that under the Forest Sustainability Regulations, i.e. \$3.00 and \$0.60. These funds are held in a segregated account and can only be used to fund additional silviculture on Crown lands. If the original Licensee wishes to do the work as well, they have three years to complete it. Otherwise, the Department may conduct the work, as they desire through contracts.

The province participates in a 'gas tax road program' initially proposed by the Forest Products Association of Nova Scotia (FPANS) in 1966. The program has forest product producers forgoing the refund of gas excise taxes paid on fuel used in licensed vehicles or equipment while on private land. Approximately \$750,000 of work per year is completed in lieu of a more complicated system for the refund of gas excise taxes, as is provided for all other business sectors. (P. MacQuarrie, pers. comm. 2006-2007) For the period 1995-2000 spending averaged about \$764,700/year. Spending stabilised at \$720,000/year from 2001 onward.<sup>53</sup> The program has been administered through FPANS, but DNR makes the final payments to the individual applicants.

### 3.2.2.2. EXPORT CONTROLS

All provinces have policies to prevent the export of unprocessed Crown timber. Exports of Crown timber from NS occur only when there is not a local market for the resource (P. MacQuarrie, pers. comm. 2006-2007). There is no policy or process to prevent the export of private timber.

## 3.3. TAXATION TREATMENT

### 3.3.1. INCOME TAX

The primary and secondary forestry sectors benefit from most of the same tax treatments as other businesses in Canada. They do provide the sectors with cash flow needed to grow their businesses. In the case of NS, due to the history of public sector policy and program support, their businesses emphasise industrial uses of the forest that require large volumes of softwood fibre. They are able to reduce their taxes payable by the application of capital losses, resource allowances, earning depletion allowances and other exemptions and deductions.

**Table 5** summarises the tax credits and deductions claimed (approximately) by firms in NS during the five-year period 2001-2005.

<b>Table 5: Estimated Tax Credits&amp; Deductions by the NS Primary &amp; Secondary Forest Sectors, 2001 – 05 (\$ millions)</b>		
<b>Industry Sector</b>	<b>Tax Credits &amp; Deductions</b>	<b>Operating Revenue</b>
Forestry Logging and Support Activities	\$9.1	\$1,614
Wood Products Manufacturing	\$75	\$1,614
Paper Manufacturing	\$71	\$4,612

Sources: "Financial and Taxation Statistics for Enterprises"<sup>54</sup>, "Nova Scotia Business Statistics"<sup>55</sup>, Canadian Council of Forest Ministers' "National Forestry Database Program", "Nova Scotia Manufacturing Profile, 2001-2005"<sup>56</sup>.  
Data were provided for Canada as a whole. JM&E estimated the benefit of these tax treatments to the primary and secondary forestry sectors in NS on the ratio of NS value of shipments to Canadian value of shipments.

<sup>53</sup> Ibid.

Sources: "Financial and Taxation Statistics for Enterprises"<sup>54</sup>, "Nova Scotia Business Statistics"<sup>55</sup>, Canadian Council of Forest Ministers' "National Forestry Database Program", "Nova Scotia Manufacturing Profile, 2001-2005"<sup>56</sup>.

Data were provided for Canada as a whole. JM&E estimated the benefit of these tax treatments to the primary and secondary forestry sectors in NS on the ratio of NS value of shipments to Canadian value of shipments.

### 3.3.2. PROPERTY TAX

The Graham Commission, conducted during the early 1970s, examined the equity of taxation methods for resource land. Municipalities were taxing property owners based on the highest use versus the actual use. This process was placing hardships on the resource sector and the Commission recommended that the provincial government take over the assessment practice. Land used for forestry sector activities is now assessed at \$0.25 per acre for small holdings and \$0.40 per acre for large holdings. If landowners change uses soon after being assessed as forest resource land, a penalty equivalent to five years of back taxes is charged.

### 3.4. SUMMARY POINTS

During the 1990s federal and provincial government contributions to the forest-based economic sectors totalled at least \$153 million. The thrust of the majority of the programs supported by the funding was to enhance the capacity of the NS forest to provide timber and fibre to the lumber and pulp and paper industries at costs competitive with other jurisdictions.

Major public funding support ended in the mid-1990s due to the pressure:

- of rising federal and provincial government debts; and
- from the federal government's desire to eliminate programs in areas of provincial jurisdiction, especially natural resources of all kinds.

The reduction of public funding combined with the improved financial strength of the forest based economic sectors led to the creation of the Forest Sustainability Regulations, wherein timber buyers became responsible for conducting silviculture, thus internalising the cost of silviculture within the primary forestry sector. (Registered buyers are responsible for 2/3 of the cost for private woodlots and government has provided 1/3. Registered buyers pay 100% of the cost on industrial freehold lands.) The amount of silviculture required was based on the volume of timber purchased. The silviculture treatments must be of a type that would grow either softwood or hardwood trees, relative to the amount being acquired. As pointed out earlier, 98% of resources delivered to private woodlot owners through that fund have gone to even-aged softwood treatments. The plan thus tends to maintain the plantation type silviculture supported by earlier federal/provincial programs.

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<sup>54</sup> Statistics Canada. *Financial and Taxation Statistics for Enterprises*. Ottawa, Ontario, 2005.

<sup>55</sup> Department of Finance. *Nova Scotia Business Statistics*. Halifax, Nova Scotia, 2005.

<sup>56</sup> Department of Finance. *Nova Scotia Manufacturing Profile 2001-2005*. Halifax: Nova Scotia, 2005.

#### 4. SOURCE OF THE PUBLIC INTERVENTION IN THE FORESTRY SECTOR

The Ecology Action Centre recently completed a review of selected pulp and paper industry related legislation in NS. It focused on early statutes related to Bowater Mersey Paper Company Limited (1962), Stora Forest Industries Limited (1957 and 1970) and Scott Maritimes Limited (1965), as well as the Forests Act of 1989, which describes the management policies for NS forests.<sup>57</sup>

The research came to the following conclusions:

- The statutes can be read as creating the legislative mechanism for the creation and maintenance of a sustained pulp and paper industry in the province.
- The Province of NS is a key participant in the scheme and its intent is clearly set forth in Section 2 of the Forests Act. It intends to enhance the viability of forest-based manufacturing and processing industries, double forest production by 2025 (from 1989 levels), and create jobs in the short and longer terms through improved productivity.
  - It intends to enhance the viability of the forest-based sectors by developing a more productive forest to yield greater volumes of higher quality products by effectively managing Crown lands and encouraging the development and management of private forestlands while maintaining wildlife habitats, water quality and recreational opportunities.<sup>58</sup>

The province's long-term economic development strategy included large-scale pulp and paper production. One can thus readily understand that the federal/provincial co-operation agreements, and subsequent provincial programs, focused on the forest resource as an input for the pulp and paper and lumber industries.

In this context, it is easy to understand why the Sierra Club of Canada's 'National Forest Strategy Report Card' (May 2006) had such strong criticism of NS's forest management planning processes. It also noted that the Integrated Resource Management process of the late 1990s was criticized for its failure to address public concern. Over 100 scientists signed a letter to the Minister of Natural Resources condemning the IRM process and asking government to scrap it.

While the policy goal of increasing employment was a key influence on the nature of past governments' interventions, policy concerns regarding the NS economy have expanded to attracting and training enough skilled labour to keep up with the growth of the provincial economy and net out-migration. With the improvements in the NS economy public concern broadened from the provision of jobs in traditional sectors to a wider view of prosperity. Hence, appreciation for the multiple roles of the forest resource has gained prominence in public debate.

##### 4.1. THE IMPACT OF GLOBALISATION ON THE FOREST BASED SECTORS

In its 2003 report "The Forestry Industry in the Nova Scotia Economy" the Atlantic Provinces Economic Council noted that "In the past, forest products from Nova Scotia and Canada held a

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<sup>57</sup> Bowater Mersey Agreement Act 1962, S.N.S. 1962, c.2

Stora Forest Industries Limited Agreement Act, R.S.N.S. 1989, c.446

Scott Maritimes Limited Agreement (1965) Act, R.S.N.S. 1989, c. 415

Forests Act, R.S.N.S. 1989, c.179, as amended

<sup>58</sup> Brian Wentzell. *Comparison of Selected Pulp and Paper Industry Legislation in Nova Scotia*. Halifax, Nova Scotia, 2006.

competitive advantage over other countries because of their low cost of production, but increasing raw material costs are dulling that edge.”

Atlantic Canada’s primary forestry and logging, lumber and wood products and pulp and paper industries continue to contract because of intense global market pressures.

“The number of firms in the Atlantic forest industry dropped by 11% between 2004 and 2006. The majority of closures have been among small logging or sawmill operations but several large pulp and paper mills have also shut down. ...output of the region’s forest industry fell 9% in 2005. ... Atlantic Canada’s forest industry shed more than 8,000 jobs between 2004 and 2006. ...24% decline in employment is more than double the 11% drop nationally.”<sup>59</sup>

This situation, combined with reductions in the demand for newsprint, may be bringing the NS forest-based industry to a crossroads.

#### **4.2. APPROACHING THE CROSSROADS - STORA, A CASE IN POINT**

The Province of NS has made considerable effort to support its forest product producers, but global economic conditions may have a greater hand in the future of pulp and paper and lumber producers. The following sub-section provides a six-year overview of academic and business literature describing the global forces facing the pulp and paper sector. The overview highlights that the global rationalization of the sector may be a stronger force than efforts that promote even-aged forest management to supply timber and fibre.

In the mid-1990s, management at Stora-Enso in Port Hawkesbury successfully convinced the Corporation's headquarters to invest \$750 million to turn the Stora Port Hawkesbury plant into a producer of higher-grade Super Calendared paper. The investment:

- likely saved the plant from closure, as its newsprint manufacturing process was aging and becoming uncompetitive; and
- made Stora-Enso the largest employer in the Strait area, employing 900 people.

In its May 18, 2000 issue<sup>60</sup>, The Economist stated that one of the main reasons that pulp and paper firms were merging was that they had no other way to grow. It noted an analysis by Andersen Consulting that suggested share values of these firms would be forced down by the market if they attempted to expand by adding capacity in a glutted market. As proof, the analysis showed an inverse correlation between capital spending and share performance. The analysts used this as an explanation for why, for the first time ever, the American paper industry recorded a decline in overall capacity, accomplished by firms shutting down plants after takeovers.

This trend was also seen in Europe. The Economist quotes Jukka Harmala, Stora-Enso’s CEO, as explaining that firms “had just kept building new capacity, and destroyed the market. But now, we must consolidate and shutdown plants.”

In June 2002<sup>61</sup>, CBC News reported that Stora-Enso said it would shut down its newsprint mill in Port Hawkesbury, putting at stake 450 mill and 400 wood supply jobs, unless it received concessions from workers and NS Power.

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<sup>59</sup> Atlantic Provinces Economic Council. *Atlantic Canada’s Forest Industry Under Pressure*. Halifax, Nova Scotia, 2007.

<sup>60</sup> "Beaten to a Pulp." The Economist May 18 2000.

<sup>61</sup> "Nova Scotia Power Takes on Stora Enso". 2002 (June 13). Available: [www.cbc.ca](http://www.cbc.ca)

It said electricity rates are higher in NS than anywhere else in the country. David Mann, then president of NS Power, was reported as saying that the prices charged to Stora-Enso were not out of line with what Stora pays elsewhere in North America and the rates are not to blame for Stora-Enso's financial problems.

In August 2002, the *Milwaukee Journal Sentinel*<sup>62</sup> reported that Stora-Enso was about to increase production at some facilities in Wisconsin and Canada, and close others, and eliminate 500 jobs, mostly in Wisconsin and NS. The move was reported to be in response to weak markets in the two years since Stora-Enso bought Wisconsin Rapids-based Consolidated Papers Inc. for \$4.4 billion in September 2000. The shutdown appears to follow the model described in 2000 by *The Economist* magazine that has pulp and paper firms purchasing competitors and then shutting down capacity.

Pulp and Paper Network, LLC reported in February 2003<sup>63</sup> that Stora-Enso had approved a \$90 million investment at Port Hawkesbury, NS and would continue newsprint production. The NS government announced it would contribute \$10 million for capital investments at the newsprint mill in Port Hawkesbury and another \$5 million for training. The government attached conditions to its contribution, requiring the company to keep a:

- minimum of 210 full-time jobs at its newsprint mill, and
- total workforce of at least 550 at its overall Port Hawkesbury operation.

The Utilities and Review Board (URB) gave approval for a new extra-large industrial interruptible power rate structure, reducing annual electricity costs to the mill by about \$9 million. The new extra-large industrial interruptible rate was also made available to other large power-using industries. (Stora-Enso, in June 2002, threatened to eliminate 350 jobs at the mill unless it got lower power rates.)

Stora said that it made the decision to invest after negotiating reduced prices from its wood suppliers, lower wages from its main union, and a rate reduction from NS Power.

By the late fall of 2005 Stora-Enso's continued presence in the Strait area appeared to be in jeopardy again. The plant was shutdown on December 24, 2005 for maintenance and the closure escalated to a lockout on January 26, 2006, after contract negotiations broke down. In March 2006, *CBC News*<sup>64</sup> quoted Bernd Rettig, the chair of the board of Stora-Enso, as saying, "The mill has not returned a profit to shareholders for eight of 10 years. In fact, the mill has been losing money. We are a business and we can't continue to absorb losses. Our parent company has given notice that we have a very short window in which to develop a business case for continued commitment in NS." The company quoted pressures related to lost markets, the rising value of the Canadian dollar, increasing costs of raw materials, property taxes, and, increasing cost of other inputs such as electricity and labour.

The same *CBC* news report provided information from Stephen Atkinson, a forestry product analyst with BMO Nesbitt Burns. He cited the case of a mill owned by United Paper Mills in Miramichi, N.B., as a good parallel to the port Hawkesbury situation: "They've shut the mill down indefinitely because what they've found is that they can make the product more cheaply in Europe and ship it over to North America, so there's no need to run the mill at all."

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<sup>62</sup>Dresang, Joel. 2002. Stora Enso to Cut 500 Jobs in State, Nova Scotia. *Milwaukee Journal Sentinel* August 28.

<sup>63</sup>"Stora Enso Gets Power Rate Break, Will Install C\$90M Pulp Line at Port Hawkesbury". 2003 (February 3). February 3 2007. Available at: <http://www.pulpandpaper.net/>.

<sup>64</sup>2006 (March 28). "Future of Port Hawkesbury Mill in Doubt." [Available Online] Available from <http://www.cbc.ca>.

In May 2006<sup>65</sup>, the provincial government announced that it would pay Stora-Enso \$65 million over seven years in lieu of 81,000 hectares of additional Crown land the province had agreed in 1970 to make available to Stora by 2013. The Province does not currently own sufficient additional lands to meet that commitment and would need to purchase them from private owners so that the land may be added to the License area. The funds will be paid to Stora for each year completed where both paper machines have operated normally. Later in the month, the government announced it would pay Bowater Mersey \$26 million<sup>66</sup> in return for lands of high conservation value.

By July 2006, Stora-Enso had won agreement from its unions to roll back wages 10%. It also received a reduction in municipal taxes. It continued to press for electricity price reductions from NS Power Inc. Its appeal to the Utility and Review Board (URB) resulted in the URB refusing to consider any price agreement that would be subsidised by the ratepayers.<sup>67</sup>

One can assume that other paper producers in the NS will also require similar accommodations and subsidies.

The terms of trade, with free trade agreements and globalization, appear to be turning against the pulp and paper industry, as currently structured, in NS. The tax, wage and power rate cuts may not be sufficient to compensate for the structural problems faced by forest product producers in NS - disappearing local wood supplies, more cost-efficient foreign competition and the rising Canadian dollar.

There are few signs, if any, that the worsening terms of trade for pulp, paper, and forest products producers in North America are ameliorating. The situation may end up being little different from that faced by the operators of Sydney Steel Corporation or the coalmines of Cape Breton. The only choice is to adapt and find new places to generate value from Nova Scotia's resource base.

#### **4.3. MORE THAN A CASE IN POINT**

The situation with Stora-Enso and other forest products producers in NS is not unique. In May 2006, the *Globe and Mail*<sup>68</sup> reported that Canada's pulp and paper industry continues to shrink under the impact of the strong dollar and competition from more efficient producers in South America, such as Brazil. Forestweb Inc., a California business intelligence service, said that 1.93 million tonnes of Canadian capacity had been shut down or was slated for closing in 2006, following a reduction in capacity of 1.96 million tonnes of capacity in 2005.<sup>69</sup> These reductions in capacity should be partially offset by over 1.0 million tonnes of output that will be added to Canadian production from mills that are scheduled to restart this year, mainly specialty producers producing for niche markets such as the United States weapons production sector.

Moreover, the consensus is that the market for printing and writing papers is mature and that demand will either grow slowly or hold constant. At the time of writing, North American demand for newsprint had declined by 16% from its peak and the decline is expected to continue.

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<sup>65</sup> 2006 (May 3). "The Provincial Government Has Reached a \$65-million Deal with Stora Enso to Keep Its Paper Mill in Cape Breton." [Available Online] [cited December 23, 2007] Available from <http://www.cbc.ca>.

<sup>66</sup> Smith, Amy. 2006. Nova Scotia Buys Bowater Land for \$26 Million. *Chronicle Herald* May 13.

<sup>67</sup> Smith, Amy. 2006. Premier: Province Needs Big Business; URB "Right Place" for Possible Help for Stora, MacDonald Says. *Chronicle Herald* August 23.

<sup>68</sup> Kennedy, Peter. 2006. Pulp and Paper Sector Feeling the Heat. *Globe and Mail* May 13.

<sup>69</sup> Ibid.

Forestweb said domestic producers must grapple with the global shift in pulp and paper manufacturing away from developed countries to developing regions. Countries such as Brazil and Chile saw a net capacity increase of almost 3.0 million tonnes in 2005-06, much of it using low-cost eucalyptus hardwood pulp.

The situation for forest products producers is similar in Europe. In May 2006, forest workers in Finland shut down most of the forestry industry during a two-day strike to protest planned layoffs.<sup>70</sup> The strike was partly prompted by the March announcement by UPM - the world's largest magazine paper maker - that it would close plants and cut as many as 3,600 jobs, over 10 percent of its work force.

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<sup>70</sup> Huuhtanen, Matti. 2006. Unions Shut Down Finnish Forest Industry. Associated Press May 15.

## 5. CONCLUSION

**Table 6** summarises the range and amount of support provided to the primary and secondary forest products sectors. Dollar values were not available for many of the support activities. Those for which financial contributions could be found (14 of 23) totalled \$449.1 million (\$653.4 million in 2006\$). Extrapolated to the 23 the total contributions would be about \$1.1 billion (2006\$).

The substantial support up to 1995 appears to have ‘worked’. Industry based on NS forest softwood resources is well established, and, due to its size, continues to influence economic policy.

Relative to the first 95 years of the 20<sup>th</sup> century, the last 10 years brought relatively little new direct program or policy support to the primary and secondary forestry sectors that could be construed as a form of subsidisation or effort to direct the development of the sector. Granted, the government did monetize (\$65 million, paid over seven years) its commitment to provide future access to 81,000 hectares of new Crown Land. However, that was a promise already made in 1970 and therefore ‘spent’, and essentially a movement of assets off the firm’s balance sheet and back to public control. Similarly, the payment of \$26 million to Bowater Mersey was not a subsidy in that it reflected the value of assets moved to public ownership and off the firm’s balance sheet.

The NS government continues to stand back from direct support. The recent Stora-Enso situation is a case in point. The plant was shut down for the better part of a year during 2005-2006 over claims that without tax, wage and power rate concessions the plant could not be profitable. Traditionally, the pressure on the government to "give" would have been almost unbearable.

It was left to the URB to deny Stora power rate concessions that would be subsidized by ratepayers.

However, ending direct public sector support may not be enough to change the pattern of forest resource use.

Perhaps what is needed is a return to public sector support, but this time with the goal to develop a forest sector that supports a wider range of values, and produces more value in the long term and sustainable value. Such a change may not likely occur without significant amounts of material support because it would require a fundamental structural shift in the NS economy.

Low-wage foreign competition, lower costs for primary inputs, the rising Canadian dollar and the liberalization of trade in the world will continue to put stress on the current structure of the forest products sectors in NS. The exception may be lumber production. However, it already suffers from a lack of scale economies, and offers wages that are below the average in NS. Exports to United States could be further constrained by the rising value of the Canadian dollar and the softening American housing market.

It is prudent at this point to examine if the current direction of public support to the forest-based sector is in the best long-term interests of the economy of NS. This is not to say that the current forest-based sectors should be abandoned. It is to say that it is time to challenge conventional wisdom and notions of what the best form of forest management is for the material well-being of the province.

Programs that continue to support forest products producers whose input requirements lead to the dominance of even-aged management and softwood plantations need to be assessed via social benefit/cost analyses to determine if they bring a net benefit to Nova Scotia.

Should the current structure of the forest products sector lead to closures, the province must have alternative value-producing uses for the forest resource not just waiting in the wings but operating and ready to fill gaps.

This approach, rather than being radical, is the ultimate in prudence and conservative management. Many forces acting on the current structure of the NS forest products sector are beyond local control. NS must try to influence forces that it does have some ability to affect if it wishes to improve its economic and ecological prosperity.

Government policies and programs since the turn of the 20<sup>th</sup> century have favoured industrial uses of the forest resource base in Nova Scotia. The pace of cutting increased significantly in the last 30 years. The shift from largely older, mixed species forests to young softwood forests has had an enormous influence on the forest ecosystems of NS. This leaning has resulted in a forest-based sector of the economy that is dominated by pulp and paper and softwood lumber producers. Given the state of world competition and the land and climate bases of Nova Scotia, these sectors maintain a strong dependence on clearcutting and silviculture oriented towards the production of softwood via plantation planting and even-aged management, thus continuing the degradation of the native Acadian Forest.

The well-funded programs to support silviculture and the primary and secondary forestry sectors were very effective in influencing the development of a NS forest that could support economic sectors dominated by lumber and pulp and paper manufacturing.

However, there is currently little in the way of policy and programs designed to identify and develop new, globally competitive, uses of the Nova Scotia forest resource. This situation is to some extent understandable. Changes with respect to the traditional value and use of the forest will need to come first. Unfortunately, such change is slow and usually occurs as a reaction to an economic downturn rather than in preparation to deal with risk and uncertainty.

The Ecology Action Centre made the following recommendations that espouse a view of the forest resource that is more compatible with unique values of the NS forest resource vis-a-vis rapidly rising global competitors who use their forests for primarily industrial style production:

- The Forest Sustainability Regulations (FSRs) should place a higher priority on increasing the quality, not just the quantity, of Nova Scotia's wood supply.
- Opportunities to make the FSRs more conducive to conserving non-timber forest values, in concert with wood supply objectives, should be identified and implemented.
- The Province should recognize the ecological and economic benefits of uneven-aged and restoration forestry and do more to support landowners, contractors, and registered buyers who want to pursue these forest management approaches.<sup>71</sup>

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<sup>71</sup> Ecology Action Centre. *op. cit.* Halifax, Nova Scotia, 2005. p.8 (The report also makes supporting recommendations with respect to technical standards and, administration and funding.)

<b>Table 6: Summary of Public Sector Support of the Forest-Based Sector, 1899 - 2006</b>		
<b>Year</b>	<b>Type of Support</b>	<b>\$'million</b>
1899	Lease Act allows large leases at generous terms. Signed the "Big Lease".	N/A
	Early 1920s, provincial forester reports that the rent was "ridiculously small".	
1928	First paper mill granted concessions on power rates.	N/A
1940	NS pays more than 3.5 times normal rate to buy-back 30% of Big Lease.	N/A
1956	NS buys-back remaining 5 years of 'Big Lease' above market rates.	N/A
1957	NS gives NS Pulp Limited (now Stora-Enso) the right to build pulp mill, lower power rates, stumpage at 1930 rates, land, reduced taxation & forest inventory assistance.	N/A
1965	Scott Paper (now Neenah Paper Company of Canada), given 100,000 hectare lease, 5-year income tax holiday, 20-year tax break on land owned or leased, \$5 million operating subsidy, & NS commits to own and operate Scott's waste treatment facility.	N/A
Late 1960s-- 77	ARDA I, II and III provide funding for forest inventory, Crown Land purchases, Group Ventures', and silviculture.	N/A <sup>72</sup>
1977 - 82	GDA provides federal and provincial funding for private and Crown land silviculture, Group Ventures, new silviculture contractors and forestry consultants, additional provincial government staff, spruce budworm salvage and silviculture programs, research and education programs	N/A <sup>73</sup>
1978	Support the Spruce Budworm Salvage program	\$35.6
1982-89	Canada/NS FRD Agreement provides for intensive forest management, silviculture & Native Lands programs.	\$92.6
Early 1980s	Stora receives capital assistance.	\$10.0
1984-87	FRA provides to expand Group Venture Program, increase nursery capacity and support Budworm Salvage Program.	\$25.5
1987-89	ACOA contributes to 127 projects in primary forestry	\$3.8
1981-91	CAFD provides for silviculture, forest management, training, student employment & GIS forest inventory.	\$45.0
1991-95	CAFD extended to 1995 with \$98 million (\$87 million spent) for forest land management, research and development, model forest programs, wildlife integration, technology transfer, information and training.	\$87.0
1995-present	NS Private Land Program (budgeted at about \$3.0 million/yr.)	\$34.8
1993	Stora-Enso receives capital assistance.	\$15.4
1995 - Mid- 2006	ACOA, and its predecessor agencies, contribute to a 69 lumber and value added wood product production projects. (11% grants, 89% loans)	\$5.2
1997-2002	30% NS corporate income tax credit for investments in manufacturing and processing plant and equipment (all value added manufacturers eligible).	N/A
1995-present	NS provides for Crown Land management (silviculture, build or maintain roads on unlicensed lands) (\$3.48 million/yr.) (Offset by about \$51.9 million in stumpage revenue.)	\$-
	Construction and maintenance of logging roads on Crown Land used by the public and for public service such as fire prevention and fire fighting.	\$3.22
2006 - 2013	NS to pay, over seven years, Stora-Enso in lieu of 81,000 hectares of Crown land the province had agreed to make available, providing both paper machines operating	\$65.0
2006	NS pays Bowater Mersey for purchase from company of high conservation value forests.	\$26.0
Approx. Total	Includes only types of support for which dollars values were available.	\$449.1
		\$653.4 (2006\$)
Mid-1970s	Graham Commission recommends that municipal tax rates be set according to the use of the land, not its highest use, as was the case.	N/A
Other	NS forest-based sector corporate tax credits and other deductions. (Also available to other sectors)	\$31.0/year

<sup>72</sup> Retention of detailed records typically 7-10 years, many records no longer possessed.

<sup>73</sup> Retention of detailed records typically 7-10 years, many records no longer possessed.

**APPENDIX 1: THE CODE OF FOREST PRACTICE: A FRAMEWORK FOR THE  
IMPLEMENTATION OF SUSTAINABLE FOREST MANAGEMENT<sup>74</sup>**

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<sup>74</sup> Department of Natural Resources; <http://www.gov.ns.ca/natr/forestry/strategy/code/NScodeofprac.pdf>



## Forest Ecosystems

To prevent adverse effects on air, soil and water by human intervention, forest practices must be designed in accordance with the following principles that commit to conserving and protecting these critical elements of our forests:

- Forest management practices will be designed and conducted to conserve and enhance the health and natural diversity of Nova Scotia's forest ecosystems.
- Forest management practices will be planned and conducted according to the Ecological Land Classification (ELC) system for Nova Scotia (NSDNR, 2003).
- Forest management practices will be designed and conducted to conserve and enhance habitat for Nova Scotia's wildlife species.
- Forest management practices will be planned and conducted to protect habitat for species at risk.
- Forest management practices will recognize the contribution of protected and wilderness areas in preserving the natural forest heritage within Nova Scotia.
- Forest management practices will be designed and conducted in a manner that maintains and enhances the quality of air, water and soil in Nova Scotia.
- Forest management will be designed and conducted with consideration of the potential effects of climate change, and opportunities to maintain and enhance forest carbon sinks.

## Forest Products

Three key principles set the basis for timber supply sustainability:

- Forest management practices will be designed and conducted to secure a long-term sustainable harvest of forest products.
- Forest management practices will be designed and conducted to improve productivity, quality and value of forests and forest products.
- Forest management practices will incorporate the best available knowledge of local ecological conditions, including soil, climate, water, terrain, vegetation and wildlife habitat, in the planning process for roads, harvesting systems and silviculture activities.

## Wildlife Habitat

The following principles provide the framework for regulations, guidelines and standards for Crown and private lands with respect to sustaining habitat:

- Forest management practices will be designed and conducted to maintain or restore the natural range and structure of forest communities to benefit the wildlife species of Nova Scotia.
- Forest management practices will be planned and conducted to respect significant wildlife habitats in Nova Scotia forests.

## Integrated Forest Use

The following principles apply when planning and undertaking forest practices for integrated forest use:

- Forest management practices will be designed and conducted to balance the economic, cultural, social, and environmental interests and values of all Nova Scotians.

Forest management practices will be designed and conducted to consider structure and diversity elements required for the integration of public interests.



**APPENDIX 2: PUBLIC SECTOR INVOLVEMENT IN THE FORESTRY SECTOR: THE  
EARLY YEARS, 1899 – MID-1960S**



**Forest Policy in Nova Scotia: The Big Lease, Cape Breton Island, 1899-1960 (L. Anders Sandberg)<sup>75</sup>****1899 Lease Act**

In the late 19th century, the government of NS took notice of industrial forest development in Ontario, Quebec and New Brunswick where large areas of Crown forest were used to attract pulp and paper mills through long-term lease arrangements. However, NS had only 600 thousand hectares of relatively poor-quality and difficult-to-access Crown forest. The Lease Act intended to promote forest management and raise revenue from Crown Lands via improved leases. Cutting was limited to trees at least 10 inches in diameter. A special provision, accommodating the burgeoning pulp and paper industry, permitted a reduction of the diameter limit to five inches upon payment of an additional 10 cents per acre, raising the rent to 50 cents per acre.

No stumpage fees were charged. Two decades later the Chief Forester of NS found the diameter limits on Crown leases were not enforced and the rent was consequently “ridiculously small”.

The Act offered terms that are more generous to lessees of marginal timberland and those prepared to improve or build manufacturing facilities. These terms enabled the lease of the only extensive, contiguous block of Crown Land in NS, the so-called Big Lease, covering about 248 thousand hectares. The lessees agreed to pay an annual rental of \$6,000, build two pulp mills and not export roundwood.

**The Cape Breton Pulp Company**

The first owners of the Big Lease created the Cape Breton Pulp Company. In 1920, the Big Lease was sold for the last time to the Oxford Paper Company.

**The Department of Lands and Forests**

By 1926, the newly created Department of Lands and Forests faced two major challenges: creating remedies for the shortfalls of past forest policies and attracting wood product industries. Opposition to the Big Lease grew because it was argued that the larger provincial freeholds and Crown leases were held by United States corporations and were in most cases idle.

**The Mersey Paper Company**

In the mid-1920s, NS government received many proposals for pulp and paper industry development, including one from the holders of the Big Lease. Given the very limited amount of Crown Land available, only one enterprise could be considered. The successful bidder started building the Mersey Paper Company’s newsprint mill at Liverpool in 1928. The company received a concession in the price of power and was guaranteed 1.0 million cords of pulpwood from Crown Land.

The creation of the Mersey Paper Company in 1928 opened a period of stepped-up concessions in the forest industry.

Given that the province barely possessed enough Crown Land to accommodate Mersey, the government accelerated the buy-back of Crown Land as an incentive to future potential pulp and paper companies.

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<sup>75</sup> Sandberg, L. Anders. Forest Policy in Nova Scotia: The Big Lease, Cape Breton Island, 1899-1960. Fredericton, New Brunswick: Acadiensis Press, 1992.

**Cape Breton Highlands National Park**

In 1940, the provincial government expropriated about 71,460 hectares of the Big Lease, a little less than one-third of the original lease, to create the Cape Breton Highlands National Park. Compensation for the expropriation translated to \$5.58 per hectare; well above the \$1.56 per hectare that the Department of Lands and Forests was normally allowed to pay to buy back Crown Land.

**The Oxford Paper Company Buy-Back**

In 1956, the provincial government pursued Stora Kopparberg (hereafter Stora). A major tract of Crown Land was needed for lease to the Stora venture and the government accelerated its buy-back program. The provincial government played an active role in repossessing the Big Lease owned by the Oxford Paper Company. The desire to attract Stora placed the government under considerable political pressure to settle with Oxford and the provincial government paid just over twice the amount per acre for the buyback than it did in 1940, even though the Big Lease was now 17 years closer to its 30-year renewal/termination date.

**Stora Kopparberg**

In 1957 the Stora Kopparberg Corporation, formed NS Pulp Limited (NSP) and the NS government signed the NS Pulp Limited Agreement, leasing 520,000 hectares of Crown Land on Cape Breton Island and the Counties of Pictou, Antigonish and Guysborough. In 1959, Stora committed to build a pulp mill. The provincial government gave inducements in the form of:

- revised tax laws (e.g., the payment of grants in lieu of taxes);
- stumpage rates set at \$1 per cord, the same rate given the Mersey Company 30 years earlier<sup>76</sup>;
- a 131 hectare site for the mill;
- forest inventory surveys for NS Pulp;
- low electricity rates; and
- the assurance of transferability of the new lease.

In 1970, the agreement with Stora was revised when it agreed to build one, and possibly two newsprint machines. Its license areas were to be increased with each new machine. A portion of stumpage rates was to be used to finance silviculture programs by Stora to ensue the required and sustainable harvest from Crown lands.

In the early 1980s, Stora received federal and provincial funding support through federal/provincial agreements to salvage a budworm-killed wood and of the provincial government contributed \$10 million towards an on-site electrical generator.<sup>77</sup>

In 1993, Stora received a \$15.4 million loan from the provincial government to help it cope with new pollution laws and the recession.<sup>78</sup>

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<sup>76</sup> The government argued that the low stumpage rate was driven by the fact that the alternative market of the day was to ship pulpwood offshore. Current stumpage rates are still relatively low but the government has instituted supplemental stumpage agreements to increase the effective rate of return for timber from Crown Land.

<sup>77</sup> May, Elizabeth, "At the Cutting Edge", Toronto, Key Porter Books, 2005, page 146.

<sup>78</sup> Ibid.

**Neenah Paper Company of Canada**<sup>79, 80</sup>

In 1965, Scott Paper, through the Scott Maritime Pulp Agreement Act, was given a:

- lease of 100,000 hectares;
- five-year income tax holiday;
- 20-year tax break on all land owned or leased by the company and on its mill site; and a
- \$5 million subsidy to Scott's new operations.

The province also agreed to own and operate Scott's waste treatment facility.

Neenah Paper Company of Canada pays stumpage based on the standard NS stumpage formula. When Neenah purchased the mill from Kimberly-Clark, the purchase included licenses to Crown Land formerly held by Kimberly-Clark, which reduced the risk of the transaction.

**The Politics of Pulpwood Marketing in NS, 1960-1985 (Peter Clancy)****Unfair Competition**<sup>81</sup>

The 520,000-hectare lease of Crown Land to NSP, a subsidiary of Stora Kopparberg, at a low stumpage rate of \$1 per cord, had serious financial and supply implications for small private pulpwood producers, who were the most significant source of wood. Cheap Crown stumpage would set the ceiling for private stumpage sales. Subsequent events confirmed that the private woodlot owners were in competition with the government's timber pricing as much as they were with those of the pulp and paper companies.

**The Political Economy of NS's Forest Improvement Act, 1962-1986 (Glyn Bissix and L. Anders Sandberg)****Revising Forest Inventories**

Proof that the NS forest could support additional pulp mills was a precondition for the establishment of new pulp mills. Senior civil servants were reluctant to give assurances that a second or third pulp mill could be supported.

Forest inventories were revised upward before the agreement with Stora to build a pulp mill on Cape Breton Island.

In 1964, on the eve of the establishment of the Scott Paper pulp mill at Abercrombie in Pictou County, forest inventories were again revised upward by 74%.

In 1969, when Stora expanded its sulphite mill from 135,000 to 175,000 tons per year, installed a 160,000-ton newsprint facility, and concluded a new management agreement covering an extra 200,000 acres of Crown Lands, the annual allowable cut was increased from 30 to 62.5 feet<sup>3</sup>/hectare/year.

By this time the Minister of Lands and Forests issued warnings "that a more positive policy towards planning and safe-guarding future supplies must be adopted, otherwise the future of our forest industry is bleak".

**The Small Tree Act and Clearcutting Policies**


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<sup>79</sup> Formerly known as Scott Paper and then Kimberly-Clark.

<sup>80</sup> May, Elizabeth, op. cit. p. 139.

<sup>81</sup> Peter Clancy. *The Politics of Pulpwood Marketing in Nova Scotia, 1960-1985*. Fredericton, New Brunswick: Acadiensis Press, 1992.

The Small Tree Act (STA) of 1942 was designed to deal with the unprecedented demand and indiscriminate cuts of sawlogs during the Second World War by setting minimum diameters of trees that could be harvested. The Act continued to be enforced on a limited scale until 1962. The Act was repealed and replaced with the Forest Practices Improvement Act, which was not proclaimed until the early 1970s.

Without legislation regulating timber harvesting, clearcutting became much more prevalent. In 1965, Bowater Mersey resorted entirely to clear-cutting. As of 1966, Scott Paper confined most of its harvesting practices to clearcutting. Stora undertook clearcutting of mature and over-mature stands, as well as degraded and commercially non-valuable forests, before planting and tending species it considered more desirable.

**APPENDIX 3: COOPERATION AGREEMENT FOR FORESTRY DEVELOPMENT 1991-95  
(CAFD) PROGRAM PROFILE**



The Cooperation Agreement for Forestry Development 1991-95 (CAFD) was designed to contribute to sustained development of the NS economy. The Agreement was implemented under the umbrella of the Canada/NS Economic and Regional Development Agreement (ERDA), signed in 1984, whose goals were to:

- enhance the economic development of NS throughout all areas of the Province;
- maintain and expand stable, long-term employment opportunities and to increase real levels of earned income for Nova Scotians;
- maximize on an equitable basis for Nova Scotians the permanent net benefits from the indigenous natural resources of the Province;
- promote provincial economic growth in a manner supportive of the social and cultural well-being of its people;
- improve joint consultation and coordination between the two governments on a wide range of matters pertaining to the health and growth of the Nova Scotian economy; and
- assist NS to maximize its contribution to the long-term growth and development of the national economy.

### **Background**

CAFD 2 was preceded by a series of federal/provincial forestry initiatives. The Canada/NS Forest Resource Development Agreement (FRDA), signed on August 31, 1982, provided total funding of \$93.4 million of which Canada provided \$50.4 million and NS \$43.0 million for the seven-year period 1982-1989. This agreement supported more intensive management of the forest resource, and called for direct delivery of certain elements by the federal government and complementary activities by NS.

In 1984, Canada and NS signed the Economic and Regional Development Agreement (ERDA) and a Forest Renewal Subsidiary Agreement (FRA). The latter provided \$25.5 million for the period 1984-1987 to undertake programs and projects complementary to the ERDA; i.e., increase the level of forest management activity, expand the group management venture program, accelerate the adoption of improved technology, and increase the level of research, development and subsequent technology transfer.

The main objectives of these agreements were to ensure that the future levels of harvest required to maintain a viable forest industry could be realized, provided an appropriate level of silviculture effort was sustained.

These agreements enabled NS to develop the infrastructure and acquire the capabilities to undertake a comprehensive program of forest management for all ownership types. From 1982 to 1989 more than 48,280 ha of plantations were established, 38,920 ha of juvenile stands were spaced, and 8,480 ha of older stands were thinned or shelterwood cut. Other economic development programs were also used to support private sector capital investments.

In 1989, Canada and NS signed a Cooperation Agreement for Forestry Development (CAFD 1), a two-year subsidiary agreement under the ERDA, which provided combined funding of \$45 million during 1989-1991. During its term, approximately 20,000 ha of planting, 9,000 ha of juvenile stand spacing and 2,800 ha of thinning or shelterwood treatments were completed. The Agreement also continued to support group management venture programs, research, development of the GIS, and communication and education activity. It also provided for the recognition of and initial implementation of Federal Forest Development Policy Principles. CAFD 1 expired March 31, 1991.

The interest of both levels of government in the further development of the forestry sector to enhance economic returns and sustainable development of the resource base prompted the signing of a second CAFD. The term of the Agreement extended from April 1, 1991 to March 31, 1995.

### **CAFD 2 Objectives and Structure**

The primary goals of the CAFD 2 were to:

- improve the rate of forest growth on all tenure classes that would permit an immediate annual allowable cut of 3.75 million m<sup>3</sup> for softwood and of 1.5 million m<sup>3</sup> for hardwood and, if maintained, increase the total softwood and hardwood AAC to 7.3 million m<sup>3</sup> by 2026 to ensure a competitive and economically viable forest industry predicated on the sustainable development of the forest resource;
- enter into cooperative arrangements with the owners of the forest resource to share in the sustainable development of that resource;
- support sustainable development and integrated resource management through research and technology transfer initiatives;
- create opportunities for the private sector in the area of improved utilization, product diversification and market opportunities, especially those related to presently underutilized species;
- better inform the various publics regarding the context, role and objectives of forest management and the efforts of Canada, NS and the private sector in this matter; and
- achieve these goals and hence contribute to reaching the broad development goals of the 1984 ERDA.<sup>82</sup>

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<sup>82</sup> John Jozsa, Ian Methven, and Mark Jamnick. *CAFD 2: Evaluation of the Canada-Nova Scotia Cooperation Agreement for Forestry Development, 1991 - 1995*. Halifax, Nova Scotia, 1995.

## **APPENDIX 4: SERVICES INCIDENTAL TO FORESTRY AND WOOD AND PAPER PRODUCTS SECTOR PROJECTS SUPPORTED BY ACOA, 1995 – MID-2006<sup>83</sup>**

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<sup>83</sup> Atlantic Canada Opportunities Agency. *ACOA's Project Information Site*. Moncton, New Brunswick. From: <http://pub.acoa-apeca.gc.ca/atip/e/content/List.asp>.



ACOA Nova Scotia Project Support 1995 - mid-2006					
Year	Program*	Project Type	Assistance Type**	Total Cost (\$'000s)	Government Support (\$'000s)
1995	AAP	kiln and planing mill	RC	\$ 423.6	\$ 79.8
	AAP	mobile sawmill	C	\$ 38.4	\$ 15.4
	BDP	mobile sawmill	RC	\$ 165.8	\$ 43.1
	BDP	expand sawmill and buy kiln	RC	\$ 81.0	\$ 32.4
	AAP	mobile sawmill	C	\$ 43.1	\$ 16.4
	AAP	establish wood products operation	C	\$ 241.0	\$ 7.2
	AAP	buy wood splitter and storage building	C	\$ 31.7	\$ 11.7
	G&C ACOA Export	NGO operations support	C	\$ 65.0	\$ 65.0
	AAP	wood flooring operation feasibility study	C	\$ 16.0	\$ 8.0
	TBPD	wood products technology development mission	C	\$ 34.8	\$ 4.6
AAP	kiln drying technology assessment	C	\$ 213.9	\$ 86.9	
1995 Total				\$ 1,354.2	\$ 370.4
1996	BDP	lathe for hardwood products	RC	\$ 32.4	\$ 16.2
	BDP	kiln and mill expansion	RC	\$ 1,866.0	\$ 490.0
	BDP	expand sawmill, harvesting and trucking	RC	\$ 178.0	\$ 89.0
	BDP	sawmill equipment purchase	RC	\$ 45.0	\$ 22.5
	BDP	expand sawmill	RC	\$ 41.0	\$ 20.5
	BDP	expand sawmill and buy equipment	RC	\$ 157.8	\$ 78.9
	BDP	modernize sawmill and buy mobile sawmill	RC	\$ 262.3	\$ 66.4
	BDP	establish wood products manufacturing operation	RC	\$ 76.0	\$ 38.0
	BDP	establish woodworking operation	RC	\$ 26.0	\$ 4.3
	BDP	establish wood products manufacturing operation	RC	\$ 58.8	\$ 27.0
	BDP	buy forestry training equipment	C	\$ 68.0	\$ 51.0
	BDP	buy lumber manufacturing equipment	RC	\$ 79.0	\$ 29.5
BDP	buy wood products manufacturing equipment	RC	\$ 120.0	\$ 60.0	
1996 Total				\$ 3,010.3	\$ 993.2
1997	BDP	establish sawmill	RC	\$ 40.0	\$ 20.0
	BDP	expand sawmill and purchase equipment	RC	\$ 192.0	\$ 93.5
	BDP	establish forestry consulting and silviculture operation	RC	\$ 7.1	\$ 2.7
	BDP	buy bandsaw and planer	RC	\$ 251.4	\$ 79.9
	BDP	establish woodworking operation	RC	\$ 23.0	\$ 6.5
	BDP	symposium on hardwood product development	Grant	\$ 12.5	\$ 4.5
	BC	mechanized equipment training for forestry industry	C	\$ 197.3	\$ 78.6
	BDP	expand lumber manufacturing	RC	\$ 182.0	\$ 71.3
BDP	expand lumber manufacturing	RC	\$ 40.0	\$ 20.0	
1997 Total				\$ 945.3	\$ 377.0
1998	BDP	expand sawmill and buy planer	RC	\$ 58.0	\$ 29.0
	BDP	establish operation to design & manufacture wood products	RC	\$ 242.7	\$ 121.4
	BDP	establish pulpwood cutting operation	RC	\$ 40.0	\$ 20.0
	BDP	establish woodchip manufacturing operation	RC	\$ 1,369.0	\$ 274.3
	BDP	establish co-op wood product manufacturing operation	C	\$ 187.4	\$ 50.0
	BDP	expand forestry training and buy equipment	C	\$ 40.0	\$ 30.0
	BDP	host forestry show	C	\$ 165.0	\$ 93.8
	BDP	expand lumber manufacturing and build kiln	RC	\$ 80.0	\$ 40.0
BDP	feasibility study for wood product	RC	\$ 31.2	\$ 24.1	
1998 total				\$ 2,213.3	\$ 682.6
1999	BDP	hardwood product manufacturing equipment	RC	\$ 208.0	\$ 62.4
	BDP	expand sawmill and purchase wood processor	RC	\$ 395.0	\$ 118.5
	BDP	expand pressure treating operation	RC	\$ 250.0	\$ 125.0
	BDP	expand custom woodworking operation	RC	\$ 44.7	\$ 12.6
	BDP	forestry exhibition sponsorship	C	\$ 22.6	\$ 10.0
1999 Total				\$ 920.3	\$ 328.5
2000	BDP	kiln for softwood lumber	RC	\$ 215.0	\$ 107.5
	BDP	sawmill equipment	RC	\$ 108.0	\$ 54.0
	BDP	buy wood chipper	RC	\$ 13.0	\$ 6.5
	BDP	expand sawmill & wood products manufacturing operation	RC	\$ 2,429.6	\$ 500.0
	BDP	expand lumber manufacturing operation	RC	\$ 139.0	\$ 41.7
	BDP	expand lumber manufacturing operation	RC	\$ 139.0	\$ 27.8
BDP	expand lumber manufacturing	RC	\$ 69.1	\$ 29.5	
2000 Total				\$ 3,112.7	\$ 767.0
2001	BDP	modernize hardwood product manufacturing facility	RC	\$ 538.6	\$ 258.5
	BDP	expand millwork operation	RC	\$ 60.0	\$ 25.0
	BDP	HRD program	RC	\$ 700.0	\$ 500.0
2001 Total				\$ 1,298.6	\$ 783.5
2002	BDP	expand woodcraft operation	RC	\$ 30.0	\$ 15.0
2002 Total				\$ 30.0	\$ 15.0
2003	BDP	establish wood products operation	RC	\$ 134.8	\$ 50.0
	AIP - Trade	wood symposium	C	\$ 13.7	\$ 8.2
2003 Total				\$ 148.5	\$ 58.2
2004	BDP	kiln for hardwood	RC	\$ 45.0	\$ 12.5
	BDP	buy wood products manufacturing equipment	RC	\$ 36.1	\$ 18.0
	AIP -Trade	export support session for wood products industry	C	\$ 71.7	\$ 42.7
	AIP -Trade	support sessions for quality control in wood products industry	C	\$ 71.3	\$ 21.0
2004 Total				\$ 224.0	\$ 94.3
2005	BDP	expand sawmill, harvesting and trucking	RC	\$ 148.0	\$ 66.5
	AIP - Technology Advancement	training for hardwood lumber grading	C	\$ 30.4	\$ 15.2
2005 Total				\$ 178.4	\$ 81.7
2006	BDP	secondary hardwood processing facility	RC	\$ 241.2	\$ 123.1
	BDP	expand wood treating operation	RC	\$ 1,200.0	\$ 250.0
	BDP	establish hardwood product manufacturing operation	RC	\$ 241.2	\$ 123.1
2006 Total				\$ 1,682.4	\$ 496.2
<b>1995 - mid-2006 Total</b>				<b>\$ 15,118.0</b>	<b>\$ 5,047.5</b>
* Program:	AAP = ACOA Action Program				
	AIP = Atlantic Innovation Program				
	BC = Business Climate				
	BDP = Business Development Program				
	TBPD = Technology Based Product/Process Development				
** Assistance Type:	C = Contribution				
	RC = Repayable Contribution				



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