

From Timber Administrator to Steward of the Forest:
Forestry and the Evolution of Forest Management

Managing Ontario's vast swaths of forest has traditionally been a top priority for the provincial government. In fact, as one observer has noted, "In many respects, the development of the province, especially in its nascent stages, has been dictated by the nature of its forests."¹ Although facilitating the growth and success of the forest industry has been one of the provincial government's main concerns for centuries, its long-standing approach to overseeing the exploitation of its timber eventually threatened its ability to achieve these very objectives. Indeed, its unwillingness to rein in decades of reckless harvesting and wasteful practices left Ontario's once mighty forestry sector weakened and vulnerable by the early twentieth century. While the rise of professional forestry and silvicultural practices helped mitigate these destructive trends, the creation of the Ontario Ministry of Natural Resources (MNR) from the merger of the Department of Lands and Forests and the Department of Mines and Northern Affairs in the early 1970s saw the provincial government truly solidify its commitment to "modern" forest management. Today, the Ministry uses "sustainable forest management" practices in order to ensure "the long-term health of Ontario's forests while providing social, economic, and environmental benefits to Ontarians."² Surveying the history of forestry and forest management in Ontario helps explain how and why the Ministry emerged as an advocate of such progressive principles and truly earned the title of acting as the province's woodland steward.

Ontario is home to four distinct forest regions. The Boreal Forest Region is the province's and the country's largest forest type, with an area of 50 million hectares that comprises two-thirds of Ontario's woodlands. Extending from the northern reaches of the Great

¹ Mark Kuhlberg, *In the Power of the Government: The Rise and Fall of Newsprint in Ontario, 1894-1932* (Toronto: University of Toronto Press, 2015), 17.

² "Sustainable forest management," *Government of Ontario*, <https://www.ontario.ca/page/sustainable-forest-management> (accessed 16 November 2016).

Lakes-St. Lawrence Forest Region to the Hudson Bay Lowlands, the Boreal Forest Region is dominated by black spruce and a handful of other coniferous and deciduous species. Next, the Great Lakes-St. Lawrence forest region, the second largest in Ontario, covers central Ontario and the southern parts of northern Ontario, and features a variety of coniferous and deciduous trees such as sugar maple, red oak, white pine, and hemlock. The smallest and most southern forest region, the Deciduous Forest Region, borders portions of Lakes Ontario, Erie, and Huron, and includes a diverse range of deciduous species – with exotic sounding names such as paw-paw and horse chestnut – as well as some conifers. Finally, the Hudson Bay Lowlands (also known as the Coastal Plain of the Boreal Forest) is Ontario’s northernmost forest region. Its expansive wetlands and muskeg landscape contain often stunted versions of a few trees species, principally tamarack, black spruce and white birch. Despite the differences that exist between these regions, Ontario’s forests nonetheless share one important characteristic: about 90 per cent of them are publicly owned and are commonly referred to as Crown lands.³

The concept of Crown ownership of land and natural resources in Ontario dates back centuries, having been transferred from Europe by both the French and British monarchies as they established colonies across North America. It dictated that the Crown (i.e., government) retained ownership of all natural resources found within the colony and was therefore responsible for enacting legislation and policies designed to manage them as it saw fit.⁴ After Britain defeated France in the Seven Years’ War (1756-1763), it gained title to over 400,000 square miles of forest in what would eventually become the province of Ontario. Consequently,

³ Kuhlberg, 18; “Ontario’s forest regions,” *Government of Ontario*, <https://www.ontario.ca/page/forest-regions> (accessed 17 November 2016); “Sustainable forest management,” *Government of Ontario*, <https://www.ontario.ca/page/sustainable-forest-management> (accessed 17 November 2016).

⁴ H.V. Nelles, *The Politics of Development: Forests, Mines, and Hydro-Electric Power in Ontario, 1849-1941* (McGill-Queen’s University Press, 2005), 2-3.

during “the century and a half that followed, the density of the forest at last began to give way under the blows of the lumbermen’s and settler’s axes.”⁵ That being said, initially the Crown was primarily interested in fostering farming in the area by granting land to prospective settlers.⁶

Nevertheless, Ontario’s lumber industry boomed from the mid-nineteenth to the early twentieth century, pushing the provincial government to implement a series of legislative and bureaucratic reforms designed to cope with this increased activity. The demand for Canadian lumber initially came from Britain, which needed wood to build its navy and for commercial purposes after it had lost access to Scandinavian suppliers during the Napoleonic Wars (1803-1815). By the mid-nineteenth century, the rapidly expanding United States had emerged as Canada’s primary trading partner in forest products.⁷ The Department of Crown Lands - formed in the late 1820s - was the main vehicle through which the government regulated this burgeoning industry. From 1841 to 1867 it “was the biggest and most loosely knit of all the Government departments” and was “steadily enlarged until [it] covered the whole field of natural resources.”⁸ More importantly, the timber licensing system that had been developed in Upper Canada and the administrative apparatus that had formed around it were maintained by the newly created Ontario government from 1867 onward. Under this arrangement, outlined in pieces of legislation such as the *Crown Timber Act, 1849*, the provincial government sold Crown timber licences. These contracts “initiated a landlord-tenant relationship between [the government] and the tree

⁵ Richard S. Lambert and Paul Pross, *Renewing Nature’s Wealth: A Centennial History of the Public Management of Lands, Forests and Wildlife in Ontario, 1763-1967* (Toronto: Ontario Department of Lands and Forests, 1967), 2-6.

⁶ *Ibid.*, 17.

⁷ A.R.M. Lower, *The North American Assault on the Canadian Forest* (Toronto: The Ryerson Press, 1938), xxi; Kuhlberg, 21.

⁸ Lambert and Pross, 100-102.

harvesters.” In other words, the latter had to follow certain guidelines in order to retain the right to cut wood on public lands that they leased and did not own (they only owned the timber).⁹

In the midst of all of this economic growth, the health of Ontario’s forests ultimately began to deteriorate and this inevitably had an impact on the nature of the forest industry itself. To be sure, lumbering went through a period of remarkable prosperity in the province. From 1867 to 1899, for instance, the government of Ontario collected over \$29 million in bonuses, dues, and ground rent from the industry, representing nearly 30 per cent of the total provincial revenue.¹⁰ Yet by the turn of the century Ontario’s forests had “been stripped of practically all their virgin pine,” forcing the lumber industry to operate “in an increasingly unfavourable economic environment.”¹¹ By the 1890s, however, a new forest industry had begun to emerge in Ontario: pulp and paper. The provincial government started entering into agreements with pulp and paper companies in the mid-1890s, and soon thereafter mills were established across northern Ontario. Moreover, spruce trees, previously viewed as a mere “weed” species, became imbued with an unprecedented value because they were ideal raw materials for the production of newsprint and other paper products. The Canadian pulp and paper industry grew at a remarkable clip during the early twentieth century, with the province of Ontario serving as one of its main centres of production. Unfortunately, by the early 1930s nearly every pulp and paper firm in Ontario was in receivership.¹²

⁹ Kuhlberg, 23; Nelles, 11-13.

¹⁰ Nelles, 18.

¹¹ Lower, 185.

¹² Mark Kuhlberg, “An Accomplished History, An Uncertain Future: Canada’s Pulp and Paper Industry Since the Early 1800s” in *The Evolution of Global Paper Industry, 1800-2050: A Comparative of Analysis*, ed. Juha-Antti Lamberg, Jari Ojala, Mirva Peltoniemi, and Timo Särkkä (Springer, 2012), 102-109; Kuhlberg, *In the Power of the Government*, 29; Lambert and Pross, 250-276.

While the decline of the pulp and paper industry had more to do with poor economic rather than environmental conditions, the idea of adopting scientific forest management strategies in Ontario's woodlands slowly gained momentum during this period. As an article featured in *The Globe* in November 1907 aptly asserted, "Canada has it in her power to make herself the paper-making country of the world, if her statesmen will unite in prudent legislation that will guard her forests against depletion by injurious cutting of young trees."¹³ That same year, the University of Toronto created its Faculty of Forestry, the first school of its kind in Canada, and a move which, in theory, demonstrated a growing interest in silviculture in both the public and private spheres. In practice, however, forestry companies were "still under the impression that [their] fibre resources were far greater than they would turn out to be" and therefore had "little incentive to hire foresters." Furthermore, the provincial and federal governments themselves were not overly eager to employ these individuals within the bureaucracy, nor did they yet feel the need to endorse measures which would compel the industry to do so.¹⁴

Nevertheless, the twentieth century certainly witnessed the rise of environmentalism in Ontario, eventually prompting the formation of the Ministry of Natural Resources (MNR) and a revolution in the administration of the province's forests. In the early 1900s, after a series of restructurings by the Ontario government, the Department of Lands and Forests (DLF) replaced the Department of Crown Lands.¹⁵ Following the end of the Second World War, the DLF began conceiving of natural resource management in a more progressive manner, eventually gaining a sense of "biological expertise" within its ranks which led to a general shift in emphasis "from

¹³ "Canada's Opportunity," *The Globe*, 9 November 1907, page 17.

¹⁴ Mark Kuhlberg, *One Hundred Rings and Counting: Forestry Education and Forestry in Toronto and Canada, 1907-2007* (Toronto: University of Toronto Press, 2009), 23-34.

¹⁵ Lambert and Pross, 313-314.

protection and conservation to scientific management.”¹⁶ The environmental movement of the 1960s only added to this phenomenon, with the general public and governments across North America for the first time expressing serious, widespread concerns about the future health of the planet.¹⁷ By the early 1970s, Ontario Premier William “Bill” G. Davis acknowledged the need to respond to these sentiments within his own province.¹⁸ In 1972, the MNR (the title “Forestry was not originally included) was created through the amalgamation of the DLF and the Department of Mines and Northern Affairs. Although the MNR was formed as part of a more general reorganization of the provincial government, its creation still marked a significant step by the Ontario government toward embracing modern natural resource management principles.¹⁹

Forestry and forest management in particular experienced a major transformation under the MNR during the 1970s. The process began with numerous government-issued reports which sought to redefine the role of both the government and industry within this sector. First, in 1970, the Ontario Economic Council released “A Forest Policy for Ontario,” a study that the DLF had commissioned. Among its multiple proposals, all of which sought to maximize the long-term economic benefits accruing from Ontario’s forest industry, the report suggested that a new land tenure system be established “which would create for the companies involved greater interest in the economics of silviculture and land management.”²⁰ Likewise, two years later the Ministry’s Division of Forests produced a comprehensive report called *Forest Production Policy Options*

¹⁶ Ibid., 453-454.

¹⁷ Mark S. Winfield, *Blue-Green Province: The Environment and Political Economy of Ontario* (UBC Press, 2012), 21.

¹⁸ “Public concern growing on environment: Davis,” *The Globe and Mail*, 24 August 1971, page 5.

¹⁹ *The Ministry of Natural Resources Act, 1972*, Statutes of Ontario 1972, Chapter 4, 67-71; Bruce W. Hodgins and Jamie Benidickson, *The Temagami Experience: Recreation, Resources, and Aboriginal Rights in the Northern Ontario Wilderness* (Toronto: University of Toronto Press, 1989), 249-250.

²⁰ “A Forest Policy for Ontario: A Report of the Ontario Economic Council,” (Toronto: Queen’s Publisher, 1970), 3-4.

for Ontario. In order to meet the projected demand for Ontario's timber in the coming decades, the document argued, the provincial government must make a "decision whether to invest funds in silviculture to meet this demand or to produce less, or more, wood." It therefore offered a number of policy options to meet this objective.²¹

However, the most important report of this type came in 1976 when Kenneth A. Armson, Professor of Forestry at the University of Toronto, completed a landmark study on behalf of the Ministry entitled *Forest Management in Ontario*. Often cited as the "Armson Report," it called for a fundamental change in how the Ontario government cared for its woodlands. Its most noteworthy recommendation involved the adoption of "Forest Management Agreements" (FMAs) between the provincial government and private forest companies. Under these contracts, the latter was given greater responsibility for forest management in exchange for far more secure tenure over the public lands on which they operated. One of the primary reasons why FMAs would have a positive impact, Armson argued, was because "more effective management is likely when those concerned with the planning and implementation of harvesting operations also have the responsibility for full forest management."²²

Unsurprisingly, all of the above-mentioned findings elicited a series of policy revisions by the Ontario government intended to improve the management of Crown forests. In 1972, the *Forest Production Policy Options for Ontario* was approved by the provincial Cabinet. It affirmed a Crown land forest production level of 25.8 million cubic metres and all the related activities necessary to achieve this goal, thereby securing "a significant and relatively stable level

²¹ "Forest Production Policy Options for Ontario," *Ministry of Natural Resources*, (1972).

²² K.A. Armson, "Forest Management in Ontario," (Ontario Ministry of Natural Resource, 1976), 22.

of funding for forest management in Ontario.”²³ Three years later, the *Environmental Assessment Act* was passed in order to allow for “the betterment of the people of ... Ontario by providing for the protection, conservation and wise management in Ontario of the environment.” The Act introduced the use of “environmental assessments,” studies which would be produced by companies at the government’s request prior to undertaking major natural resource projects. These would then be submitted to the Ministry of the Environment for approval before development could proceed.²⁴ Although this legislation did not fall under the MNR’s authority, it nonetheless had a notable influence over how it conducted its own business. Most significantly, in 1979 the government of Ontario amended the *Crown Timber Act* based largely on the recommendations put forth in the landmark Armson Report. The revised law authorized the use of FMAs, the first of which was signed in 1980. The FMAs that followed resulted in a major increase in regeneration activities and silvicultural operations throughout the province, opened the door for public involvement in forest management and planning, and also called for the conducting of regular forest audits.²⁵

From its earliest days, one of the central focuses of the MNR’s Division of Forests (later known as the Forest Resources Group) pertained to forest management and research. These two areas were treated as joint endeavours in order to “produce optimum and continuous industrial, social and environmental benefits from public forests and to encourage and assess similar production on private lands in Ontario.”²⁶ In this capacity the MNR’s forest research and management programs focused largely on tree biology and forest ecology in an effort to improve

²³ Anne Koven, “Policy Networks and Paradigm Change in Ontario Forest Policy, 1988-2014,” (PhD Diss., University of Toronto, 2015), 186.

²⁴ *The Environmental Assessment Act, 1975*, Statutes of Ontario 1975, Chapter 69, 475-499.

²⁵ *The Crown Timber Amendment Act, 1979*, Statutes of Ontario 1979, Chapter 92, 595-599; Koven, 187.

²⁶ *Minister of Natural Resources: Annual Report (1978)*: 5.

the state of Ontario's forests through regeneration and its un-treed areas through afforestation. One crucial aspect of this work involved breeding and producing various species of trees and seeds and distributing them across the province in order to aid with forest restoration initiatives. For example, the Ministry focused a good deal of energy on developing fast-growing tree species in order to meet the needs of industry and the farming community in southern Ontario.²⁷ Pest control was also an important part of the Ministry's forest management mandate. For example, a severe eastern spruce budworm outbreak - which began in the late 1960s and eventually covered a total area of about 37 million acres by 1978 - prompted the MNR to conduct small-scale chemical spraying programs across northern Ontario to protect the valuable timber that this insect was attacking. Other minor pest problems prompted similar action in the southern part of the province.²⁸

The other arm of the Forest Resources Group, the Timber Sales Branch, was responsible for overseeing the orderly allocation of Crown timber to the provincial forest industry. This process included reviewing and approving forest management plans, granting licences to private forest companies, measuring the quantity of harvested timber, and generally monitoring conditions which could affect the vitality of Ontario's forest industry.²⁹ Moreover, the Branch emphasized its responsibility to administer Crown timber "in accordance with forest management principles and industrial requirements," and explained that "Crown timber harvesting licences provide the Province's forest industry with the legislative authority to harvest Crown timber on an annual, allowable harvest basis."³⁰ Over the course of this decade, hundreds

²⁷ *Minister of Natural Resources: Annual Report (1973): 4; Minister of Natural Resources: Annual Report (1976): 4; Minister of Natural Resources: Annual Report (1977): 5.*

²⁸ *Ministry of Natural Resources: Annual Report (1979): 11.*

²⁹ *Ministry of Natural Resources: Annual Report (1975): 6.*

³⁰ *Ministry of Natural Resources: Annual Report (1977): 7.*

of millions of cubic metres of Crown timber was harvested in Ontario under the Ministry's auspices. In 1979, the Branch stated that it had granted timber harvesting licenses to over 800 mills in the province, which in that year produced nearly 4 million cubic metres of lumber to meet the rising demand for wood in the housing and remodeling industries. The pulp and paper industry also experienced a modest boost at this time. In addition, the MNR announced its intention to aid the forest industry's development through various joint programs with the federal government and the Ontario Ministry of Industry and Tourism.³¹

The year 1980 witnessed one of the worst forest fire seasons in Ontario's history, prompting the MNR to modernize and improve upon its fire management systems over the course of the decade. While legislation such as the *Act to Protect Forests from Fire* (1878) and the *Forest Fires Prevention Act* (1917) had laid the early groundwork for fire control systems in Ontario, by 1980 it was clear that much-needed change was in the offing.³² Indeed, with nearly 1,800 fires destroying approximately 558,486 hectares of forest which required a "superhuman" effort to suppress, the Ministry quickly realized it needed to be better prepared for future outbreaks.³³ For example, in 1984 it unveiled a new fire management system which made each of its five regional fire centres directly responsible for fire control in its own area, whereas previously this had been the duty of each MNR district. It was believed that "assigning firefighting responsibility according to region, rather than by district, has made forest management throughout Ontario better co-ordinated and more flexible."³⁴ Technological advancements were also a key component of the Ministry's new forest fire management program. In 1987, for instance, it introduced the Ontario Fire Management Information System,

³¹ *Ministry of Natural Resources: Annual Report* (1979): 13.

³² Lambert and Pross, 203-213.

³³ *Ministry of Natural Resources: Annual Report* (1981): 7.

³⁴ *Ministry of Natural Resources: Annual Report* (1984-85): 16.

which was installed at its five regional centres to provide crucial information that would help predict and combat future forest fires.³⁵ Thanks in large part to the Ministry's ground-breaking efforts, Ontario emerged as a world leader in forest fire control. In fact, in the mid-1980s the province agreed to provide technical firefighting expertise to the government of China.³⁶ The project proved to be quite successful, and was ultimately extended into 1991.³⁷

Studying the merits of scientific forestry and conducting related research reached an elevated status within the MNR during the 1980s. At the start of the decade, it explained that "Forest research has, over the years, proved to be a very important adjunct to forest management."³⁸ One way in which the Ministry confirmed its dedication to enhancing forestry research in the province came in 1981-82 when it reorganized the Ontario Forest Research Centre into the Ontario Tree Improvement and Forest Biomass Institute (OTIFBI) in the town of Maple just north of Toronto.³⁹ Within a matter of years, the OTIFBI's research had played a critical part in advancing the MNR's reforestation program, allowing for "improved greenhouse and nursery practices ... and better survival and growth after planting in the field."⁴⁰ In 1984-85, for example, more than 66 million trees were transferred from the Ministry's nurseries and greenhouses for planting in and regenerating Ontario's forests, while it was later reported that the OTIFBI itself produced approximately 160 million tree seedlings per year.⁴¹ The OTIFBI would eventually move to Sault Ste. Marie and become the Ontario Forest Research Institute. Another huge boost to the MNR's research programme came in 1984, when the federal and Ontario

³⁵ *Ministry of Natural Resources: Annual Report (1987-88)*: 24.

³⁶ *Ministry of Natural Resources: Annual Report (1984-1985)*: 16-17.

³⁷ *Ministry of Natural Resources: Annual Report (1989-1990)*: 17.

³⁸ *Ministry of Natural Resources: Annual Report (1980-81)*: 14.

³⁹ *Ministry of Natural Resources: Annual Report (1981-82)*: 16.

⁴⁰ *Ministry of Natural Resources: Annual Report (1987-88)*: 18.

⁴¹ *Ministry of Natural Resources: Annual Report (1984-85)*: 8; "Continued research key element in growing better trees," *The Globe and Mail*, 31 May 1988, page 7.

governments signed the five-year, \$150 million Canada-Ontario Forest Resource Development Agreement (COFRDA). The two main objectives of the agreement were forest renewal and intensive forest management in Ontario. Consequently, COFRDA provided substantial financial support to hundreds of forest management projects across the province during its existence, ranging from the construction of access roads to analyzing the effects of timber harvesting on moose habitat.⁴²

Predictably, the Ministry's modern research agenda largely reshaped its overall approach to forestry and forest management. By the late 1980s, it had broken with past "government forestry programs in Ontario" which had "worked primarily to ensure the orderly flow of timber ... to meet the demand for wood and paper products," and instead it aligned itself "with the public's growing concern for environmental health." As a result, the MNR stated that its current "forest management policies and programs reflect increased forest renewal, as well as protection of fish and wildlife habitat, protection of social and cultural values, and genetic diversity within the forest."⁴³ One example of this new mentality was manifest in the Ministry's Modified Management Area Policy, which identified specific areas across the province that required additional layers of protection in order preserve forests and other resources deemed to be at risk.⁴⁴ Similarly, the MNR continued to sign FMAs with private forestry companies and also conducted regular reviews of these contracts to ensure that their guidelines were being respected. By 1989, about 70 per cent of all licensed commercial forests in Ontario were covered by FMAs.⁴⁵ Furthermore, Ken Armson, who had penned his critical report a decade earlier, was

⁴² *Ministry of Natural Resources: Annual Report (1987-88)*: 18; Koven, 187.

⁴³ *Ministry of Natural Resources: Annual Report (1989-1990)*: 12.

⁴⁴ *Ministry of Natural Resources: Annual Report (1983-1984)*: 31.

⁴⁵ *Ministry of Natural Resources: Annual Report (1989-1990)*: 13.

appointed Ontario's third Provincial Forester in 1986, a decision which only strengthened the Ministry's movement towards adopting progressive forestry principles.⁴⁶

Regardless, the Ministry still sought to fulfill its traditional duty of helping Ontario's forest industry develop and prosper. This was a particularly urgent matter due to the onslaught of a severe recession in 1982 which led to widespread layoffs at many of Ontario's natural resource employers. Moreover, with an estimated 160,000 Ontarians gaining direct and indirect employment from the province's forestry-related economic activities by the mid-1980s, supporting the industry logically remained an essential element of the MNR's work. For example, in 1982-83 it established the Accelerated Forest Improvement Program in order to provide unemployed forest industry workers with job opportunities.⁴⁷ In a similar vein, the MNR collaborated with the federal government to implement the Canada/Ontario Pulp and Paper Facilities Improvement Program (COPPFIP). This initiative offered incentive grants to Ontario's pulp and paper companies to upgrade and modernize their plants, with the federal and provincial governments contributing a combined total of \$188 million in funding over a five-year period.⁴⁸ Soon thereafter the forest industry in general began to recover from the recession. In April 1984, one newspaper proclaimed that "the industry as a whole has no intention of abandoning its longstanding commitment to a healthy Northern economy," and even credited the COPPFIP with having contributed to this revival.⁴⁹ By the late 1980s, with Ontario's economy once again on the upswing, the province's shipment of forest products was valued at about \$10-billion annually.⁵⁰

⁴⁶ Koven, 187.

⁴⁷ Winfield, 38; *Ministry of Natural Resources: Annual Report (1982-1983)*; *Ministry of Natural Resources: Annual Report (1984-1985)*: 9.

⁴⁸ *Ministry of Natural Resources: Annual Report (1983-1984)*: 28.

⁴⁹ "Forest industry recovers from recession," *The Globe and Mail*, 13 April 1984, page 8A.

⁵⁰ Winfield, 40; *Ministry of Natural Resources: Annual Report (1987-1988)*: 12.

While hardly any noteworthy pieces of legislation pertaining to forestry were passed in Ontario during the 1980s, a number of general policy reviews were undertaken which sought to improve the provincial government's approach to forest management. For example, in 1985 the Royal Commission on the Northern Environment issued its final recommendations to the government of Ontario. The commission examined a wide range of issues affecting northern Ontario, but its analysis of the forest industry was particularly potent. It contended that portions of the province's forests were "seriously threatened" by careless practices carried out in both the public and private sectors and therefore presented "a variety of measures to deal with the damage that has already been done and to halt further depletion of the forest." Many of these recommendations targeted the MNR directly, including that it "bring all company management units under [FMAs] by December 31, 1988."⁵¹ Three years later, the MNR announced its intention to replace the *Forest Production Policy* of 1972 with a new timber production policy, and it actively sought the public's input on this matter.⁵² Encouraging public involvement in all of its activities was actually a hallmark of the MNR's agenda throughout this decade, and this led to a stronger "public dialogue, particularly in ... forest resources planning."⁵³ On a lighter note, in May 1984 the eastern white pine was designated as Ontario's official tree, a choice that was celebrated and embraced by citizens across the province.⁵⁴

The 1990s ushered in a new era for the MNR's policies in general and its forest management strategies in particular. Following decades when its work appeared to be guided mainly by economic considerations, the Ministry moved to place greater emphasis on

⁵¹ *Final Report and Recommendations of the Royal Commission on the Northern Environment* (Ontario Ministry of the Attorney General, 1985), Chapter 5: 1-16.

⁵² *Ministry of Natural Resources: Annual Report* (1989-1990): 14.

⁵³ *Ministry of Natural Resources: Annual Report* (1982): 4.

⁵⁴ *Ministry of Natural Resources: Annual Report* (1984-1985): 11.

environmental, scientific, and social factors in order to maintain and develop sustainably Ontario's rich natural wealth. For example, the government's Sustainable Forestry Initiative, launched in 1991, comprised the development of an old growth strategy, research in alternative silviculture techniques, a forest audit entitled *A Report on the Status of Forest Regeneration* conducted by an independent committee, the establishment of four pilot community forests, the development of a comprehensive forest policy framework and more. This forest policy framework became the basis for the development of the Crown Forest Sustainability Act.⁵⁵ At the same time, the Canadian economy generally struggled during these years, with Ontario's forest industry being particularly hard-hit by "rising costs, trade conflicts and ever more devastating attacks by radical environmentalists, and increasingly stiff competition from new players in the field abroad."⁵⁶ Still, in 1997-98 alone Ontario's forest industry accounted for over 60,000 jobs and about \$12 billion in sales, and therefore the MNR could not afford to adopt approaches which completely disregarded the sector's economic magnitude.⁵⁷ Thus, in the early 1990s the Forest Resources Group was restructured into the Forest Policy Branch, the Integrated Operations Branch, and the Forest Resources Branch in order to provide "leadership in forest policy direction aimed at sustaining Ontario's forest for present and future generations." More specifically, the MNR explained that "we recognize that the forest functions as a living, productive ecosystem" and therefore expressed a commitment to sustainable forestry practices, a process which involved, among other things, gaining a deeper understanding of forest ecology and formulating "a broad social consensus for forest management policy."⁵⁸

⁵⁵ Ontario Ministry of Natural Resources, *State of the Forest Report 2001* (Ontario: Queen's Printer for Ontario, 2002), i-4.

⁵⁶ Kuhlberg, *One Hundred Rings*, 231.

⁵⁷ *Ministry of Natural Resources: Annual Report (1997-1998)*: 7.

⁵⁸ *Ministry of Natural Resources: Annual Report (1991)*: 4; 13.

The main catalyst in the Ministry's shift towards sustainable forest management was the Class Environmental Assessment for Timber Management Hearings (CEATMH), a series of public meetings held in Ontario from 1988 to 1994. Described as "the largest environmental assessment ever undertaken in the province," the CEATMH brought together members of government, industry, environmental non-governmental organizations, and Ontario's citizenry to discuss how best to manage the province's Crown forests.⁵⁹ This, of course, included the MNR itself, which by the end of the hearings agreed to integrate sustainable forest management practices into its mandate. This initiative contained many elements, including an updated silvicultural research and development program, the development of a provincial timber policy, and a conservation strategy for old-growth ecosystems.⁶⁰ Furthermore, the Ontario government passed the *Crown Forest Sustainability Act, 1994 (CFSA)* shortly thereafter, legislation which fundamentally altered the province's overall forest policy. Using scientific and ecological principles, the *CFSA* aimed to "manage Crown forests to meet social, economic, and environmental needs of present and future generations."⁶¹ This required the recognition that forest management strategies should be concerned with more than merely meeting the industry's needs, and therefore must consider the impact of commercial harvesting on ecosystems and the environment as a whole.⁶² Most importantly, under the *CFSA* the Ministry officially became a "forest steward" rather than simply a woodland "manager."⁶³

Quite fittingly, just as this decade began with a major event in the history of Ontario's forests, so too did it conclude with one. In the years immediately following the CEATMH, the

⁵⁹ "Hearing to assess all aspects of forest industry in Ontario," *The Globe and Mail*, 10 May 1988, page A15.

⁶⁰ *Ministry of Natural Resources: Annual Report (1991-1992)*: 11.

⁶¹ *Crown Forest Sustainability Act, 1994*, Statutes of Ontario 1994, Chapter 25, 767-803.

⁶² Koven, 56-59.

⁶³ *Ibid.*, 13.

Ministry made considerable strides in the realm of forest management in general and conservation in particular; for instance, in 1994 it more than doubled the total area of protected old growth red and white pine in the province, encompassing 32,000 hectares.⁶⁴ Yet the provincial government decided to take matters one step further with the 1999 Ontario Forest Accord (OFA), which contributed partly to the beginning of “a dynamic new chapter in the history of resource management in Ontario.”⁶⁵ The OFA was an agreement reached between the provincial government, forest industry, and environmental groups which sought to provide the industry with a stable supply of timber while simultaneously adhering to sustainable forest management in Ontario’s woodlands. Moreover, the OFA was part of a larger land use strategy known as Ontario’s Living Legacy, which set aside millions of hectares of parks and protected areas in the province. The Ministry played a central role in the public consultation process and negotiations that preceded the OFA, and thereafter gained an ever stronger sense of duty to manage prudently the province’s forests.⁶⁶

Since the dawn of the new millennium the Ministry of Natural Resources and Forestry (a title it officially adopted in 2014) has strongly reaffirmed its belief in the merits of sustainable forest management (SFM).⁶⁷ This concept has been linked more recently to the Ministry’s broader reliance on scientific and environmental principles which stress the significance of ecological sustainability and biodiversity in Ontario’s natural resource sector. Achieving SFM is a complex, multifaceted undertaking, but its benefits are far-reaching and well-worth the time and labour involved in realizing them. Indeed, SFM helps Ontario’s forests remain healthy and

⁶⁴ *Ministry of Natural Resources: Annual Report (1992-1995)*: 1.

⁶⁵ *Ministry of Natural Resources: Business Plan (2001)*: 1.

⁶⁶ *The Making of the Ontario Forest Accord: A Background Document* (Government of Ontario, 1999), 5.

⁶⁷ “Ontario Ministry of Natural Resources adds forestry to its title,” *CBC News*, 14 July 2014, <http://www.cbc.ca/news/canada/sudbury/ontario-ministry-of-natural-resources-adds-forestry-to-its-title-1.2706127> (accessed 6 December 2016).

productive; lends support to the forest industry and provides jobs; helps conserve and protect the environment in general and forests, wildlife, watersheds, and the atmosphere in particular; and creates recreational opportunities and stable communities across the province.⁶⁸ Throughout the early 2000s, the MNR did much to improve its forest management strategies, reframe its role within the province's forestry sector, and, perhaps most of all, leave little doubt in the minds of Ontarians that their forests are being administered in an environmentally and socially responsible manner.

A wide-ranging system of laws, regulations, and policies are presently used to implement SFM in Ontario's woodlands. Backed by legislation such as the aforementioned *CFSA* and the *Environmental Assessment Act*, the MNRF currently encourages forest companies to undergo sustainable forest management certification processes. Companies are certified by third party organizations such as the Forest Stewardship Council and are able to use certification to enhance the marketability of their products. Official forest management plans are another means by which the Ministry enforces SFM practices on Crown lands. Developed by a registered professional forester in collaboration with other relevant stakeholders, forest management plans are prepared for a 10-year period and set out rules pertaining to the location and quantity of harvesting activities, and also establish guidelines for forest regeneration in the wake of such development.⁶⁹ Overall, "Ontario's forest management regime has been ... praised for being 'the most comprehensive in Canada and instrumental in enabling licensees to achieve Forest Stewardship Certification.'"⁷⁰

⁶⁸ "Sustainable forest management: Why it is important," <https://www.ontario.ca/page/sustainable-forest-management> (accessed 2 December 2016).

⁶⁹ "Sustainable forest management," *Government of Ontario*, <https://www.ontario.ca/page/sustainable-forest-management> (accessed 5 December 2016).

⁷⁰ Koven, 14.

The MNRF's forest management methods are kept in check by a system of internal and external reviews, independent forest audits, and general public involvement which holds it accountable for its actions and helps it strive towards improving its performance. In 2001, for instance, Gord Miller, the Environmental Commissioner of Ontario, released a report that was highly critical of the Ministry's performance, specifically as it related to the *Environmental Bill of Rights, 1993*. Miller did, however, give the MNRF credit for "voluntarily posting forest management plans, which let people know how timber operations will comply with laws and other requirements for sustainable forestry practices."⁷¹ That same year, in an effort to provide for greater transparency, the Ministry began publishing its *State of Ontario's Forests (SOF)* reports, something it has since undertaken every five years. The *SOF* summarizes how the province's forests are managed for biodiversity and ecological sustainability while also meeting the MNRF's legal requirements under the Timber Class Environmental Assessment Decision and Approval and the CFSA to periodically report on the state of Crown forests. Furthermore, while the Ministry uses the *SOF* to highlight its successes, it concurrently points out areas in which it could improve. For example, in the 2012 *SOF* the MNRF admitted that "room for improvement exists on implementing ways of achieving more equal participation by Aboriginal people in the benefits provided through forest management activities."⁷² Today, the Ministry regularly produces an array of reports on forest health, management, wood supply, and more in an effort to keep the public aware of its activities.⁷³

⁷¹ Environmental Commissioner of Ontario, *A Special Report to the Legislative Assembly of Ontario: Broken Promises: MNR's Failure to Safeguard Environmental Rights*, (21 June 2001), 10.

⁷² Ontario Ministry of Natural Resources, *State of Ontario's Forests* (Ontario: Queen's Printer for Ontario), 64.

⁷³ "Forestry reports," *Government of Ontario*, <https://www.ontario.ca/page/forestry-reports> (accessed 6 December 2016).

Of course, the MNRF's own research agenda has exerted influence over the nature of Ontario's forest policy and management systems during the past decade and a half. Forestry-related research was an especially important part of the Ministry's work from 2009 to 2011, as responsibility for overseeing the business and economic functions of Ontario's forest industry was temporarily transferred to the Ministry of Northern Development and Mines while the MNRF retained its authority over scientific and ecological matters.⁷⁴ Along with its traditional focus on issues like silviculture and insect control, the MNRF's researchers have recently delved into some new areas of study which could very well revolutionize Ontario's natural resource and energy sectors. For example, from as early as 2007 the MNRF expressed its intention "to conduct research and develop partnerships for forest bio-mass and bio-refinery developments."⁷⁵ Forest biomass - organic matter composed of otherwise unmarketable wood residues left over from the forest industry's activities in the bush – can be used to produce energy, building materials, chemicals, and more, and the Ministry currently promotes it as one way to help develop an environmentally-friendly and stable economy for Ontario.⁷⁶

The MNRF continues to work hard to protect Ontario's forests from forest-related hazards, particularly forest fires. In 2001, the Ministry upgraded its fleet of firefighting aircraft considerably, allowing it to achieve a forest fire attack success rate of 94 per cent in what was a particularly severe fire season.⁷⁷ In fact, it has actually been able to exceed this success rate every year from 2003 to 2012.⁷⁸ In addition, years after its collaborative project with the Chinese government came to an end, the Ministry still remains a world leader in forest firefighting and

⁷⁴ Koven, 200.

⁷⁵ "Results-based Plan," *Ministry of Natural Resources* (2007-2008): 9.

⁷⁶ "Forest industry development," *Government of Ontario*, <https://www.ontario.ca/page/forest-industry-development> (accessed 7 December 2016).

⁷⁷ *Ministry of Natural Resources: Business Plan* (2000-2001): 5.

⁷⁸ *Ministry of Natural Resources: Annual Report* (2011-2012): 14.

regularly offers its support and expertise to countries seeking aid. In the late summer of 2000, for instance, it sent over 700 firefighters to the western United States to combat a dozen large fires which threatened 1,000 homes in Montana and Idaho. The MNRF helped fight and supervise the battle against the fires by offering guidance to both Canadian and American firefighters.⁷⁹ Such cross-border efforts are coordinated through the Canadian Interagency Forest Fire Centre. More recently, the MNRF invested in the modernization of its fire management facilities in cities across Ontario. For example, in 2011-12 it announced the construction of “a \$6.2 million state-of-the-art flight training centre for pilots of CL-415 heavy water bombers” in Sault Ste. Marie. This allowed the Ministry to save time and money as it would no longer have to send its pilots to Quebec to be trained.⁸⁰

Ontario’s forest industry has struggled in recent years, prompting the Ministry to offer it various means of support. From 2004 to 2008, the province’s forest sector experienced a major economic downturn, with annual harvesting levels dropping by 43 per cent. Furthermore, employment in the industry declined by 11 per cent each year from 2001 to 2006. The government of Ontario responded by investing nearly \$700 million during this period to revitalize it.⁸¹ The MNRF has also made adjustments to its policies and programs in order to address this problem. Indeed, while its forest management regime has received much acclaim, it has also been subject to criticism on the grounds that it is too complex and costly for companies operating in the province.⁸² In 2005, the Ministry introduced its Ontario Forest Sector Competitiveness Strategy, a program which provided additional funding and sought to foster

⁷⁹ *Ministry of Natural Resources: Annual Report (2001-2002)*: 5.

⁸⁰ “Results-based Plan,” *Ministry of Natural Resources (2011-2012)*: 14.

⁸¹ Ontario Ministry of Natural Resources, *State of Ontario’s Forests* (Ontario: Queen’s Printer for Ontario), 5.

⁸² Koven, 14.

stronger business-government relations within Ontario's forest sector.⁸³ The government of Ontario eventually committed over \$1 billion to this initiative, while associated programs like the Forest Sector Prosperity Fund and Loan Guarantee attracted nearly \$500 million in new private sector investments by 2010.⁸⁴ Today, the MNRF supports the forest industry and its development in Ontario through numerous measures. The Ontario Wood Promotion Program, for example, promotes collaborative efforts between governments, companies, and the public to support the forest and wood products industry.⁸⁵

Finally, the defining aspect of the MNRF's approach to forest management in the twenty-first century has been its effort to create a generally healthier environment for present and future generations. Its interest in forest biomass is actually just one element in its efforts to achieve its wider goal to uphold environmentally-sound ideals through its management of Crown forests. Among other things, this includes promoting the use of renewable energy, combatting climate change, and preserving Ontario's biodiversity.⁸⁶ Indeed, by emerging as Ontario's forest steward, the MNRF has been able to have an overall positive impact on the province's natural resources and landscape, and will undoubtedly continue to do so moving forward.

⁸³ "Published Results-based Plan," *Ministry of Natural Resources* (2006-07): 11-12.

⁸⁴ "Results-based Plan," *Ministry of Natural Resources* (2009-10): 32.

⁸⁵ "Forest industry development," *Government of Ontario*, <https://www.ontario.ca/page/forest-industry-development> (accessed 6 December 2016).

⁸⁶ "Results-based Plan," *Ministry of Natural Resources* (2012-13): 6; "Published Results-based Plan," *Ministry of Natural Resources* (2006-07): 12.