

# Back to the Future: Re-conceptualizing the Small Tree Act (STA) for Future Forest Prosperity in Nova Scotia

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### Back to the Future: Re-conceptualizing the Small Tree Act (STA) For Future Forest Prosperity in Nova Scotia

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#### **Abstract**

Nova Scotia has a long history of enacting forest conservation legislation and failure to implement its provisions. This has led to periodic public inquiries, revamping statutes, enactment and repeal, but largely exploitation, as usual. A recent independent review of Nova Scotia forestry led to a call to adopt ecological forestry in a "triad" management framework favoring an ecosystem and biodiversity approach. A key question is whether this revised approach will have any greater success in stewarding forest conservation and rural development than the legislative and policy reforms before it? Given that the contemporary forest conservation issue can be summarized as harvesting too many young forest stands and that the new management prescription appears to underestimate the complexity of forestry's political economy, this article argues that the simplicity of Nova Scotia's Small Tree Act first introduced in 1942, which was speciously maligned, may be the best way forward in sustaining a healthy forest industry that is resilient to the vagaries of political-economic cycles, the machinations of policy implementation history, and the emerging challenges of climate change. The article outlines salient features of the recent forestry report, provides a brief history of Nova Scotia's forest conservation legislative failure, and then delves deeply into the policy workings of the Small Tree Act. The article concludes by applying three theoretical lenses to this policy process: (1) the political and industrial processes that ensured this legislation's demise, (2) the context of market and state failure, and (3) the lessons to be learned.

**Keywords**: forest conservation policy, Nova Scotia, forest biodiversity, ecosystem management

#### 1.0 Introduction

Nova Scotia has a long history of enacting forest conservation legislation but failure to implement its provisions. This has led to periodic public enquiries, revamping statutes, enactment and repeal, but largely business as usual. A recent independent review of Nova Scotia forestry by William Lahey (2018a), a law professor and university president, led to a call to adopt ecological forestry in a "triad" management framework. A key question is whether this revised approach will have any greater success in stewarding forest conservation than the legislative and policy

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reforms before it? The answer may already be obvious. On March 14, 2019, the Minister of Lands and Forestry introduced an *Act to Provide for the Conservation and Sustainable Use of Biodiversity* in Nova Scotia with great fanfare in the legislature (Lands and Forestry, 2019). Two years later, on March 23, 2021, however, it substantially backtracked after a concerted and highly orchestrated publicity campaign citing government intrusion into the rights of private landowners to manage its own forests. In a business-as-usual reversal, provincially scaled forest management legislation emphasizing conservation, biodiversity, and sustainability on all forest lands was reduced to 30% that are Crownlands, unless having landowner consent (Premier's Office, 2021).

Given that Lahey's mandate was to balance environmental, social, and economic objectives, he concluded and recommended to government that there be given:

priority to protecting and enhancing ecosystems and biodiversity. In other words, I have concluded that protecting ecosystems and biodiversity should not be balanced against other objectives and values as if they were of equal weight or importance to those objectives or values. Instead, protecting ecosystems and biodiversity should be the objective (the outcome) of how we balance environmental, social and economic objectives and values in practicing forestry in Nova Scotia ... the primary reason is that ecosystems and biodiversity are the foundation on which the other values, including the economic ones, ultimately depend (Lahey 2018a, p. iii).

Lahey's call to action implied a substantive cultural and philosophical transition within the Nova Scotia government, the Department of Lands and Forestry, and the forest industry. Lahey's triad approach to forest management has three elements: (1) substantial protected forest landscapes largely free of human interference, (2) forests dedicated to high production allowing intensive forestry practices, and (3) other forests balancing forestry production with ecological integrity. This inferred a management philosophy of integrated natural resource and environmental management at broad landscape and provincial scales with its many social, economic and ecological challenges and interrelationships (Ewert et al., 2004).

In December 2018, the government provided its official response to the Lahey Report, and surprisingly, given its environmental focus and the historical context of the past sixty years, accepted its major recommendations and promised to explore ways to implement its embedded implications (Department of Lands and Forestry, 2018). Interestingly, according to Lahey (2018a):

direct observation and other data suggest that the forests of Nova Scotia are comparatively young and that, outside of protected areas, there is a very limited proportion of older trees, and that the population of trees between 50 and 120 years of age is relatively small. These observations align with other observations and data indicating that a high proportion of young, small trees are being harvested (p.12).

His focus on small trees draws attention to the failure of previous forest conservation legislation to take a firm hold in Nova Scotia, and specifically to legislation that focused on the problem of harvesting immature forests first introduced in 1942. This was the Small Tree Act (STA) (Department of Lands and Forests [DLF], 1950).

Given the most recent reversal in forest policy, this paper then takes a step back from contemporary concerns to examine previous attempts at forest conservation and the foundations of the present forest industry in Nova Scotia by briefly reviewing the published critical literature and then examine in depth the political machinations of the Small Tree Act first introduced in 1942 and revised and proclaimed in 1946. This act was characterized as the only legislation to legitimately set out to conserve the forests and to sustain and integrate environmental, social, and economic welfare (R. S. Johnson, former Chief Forester for Bowater's Mersey, personal communication, April 1996; D. Eldridge, Commissioner. Commission Forest Enhancement-NS. of communication, September 1987; R. Burgess, Deputy Minister of DLF 1969-1977, personal communication, August 1987). Paradoxically, its eventual demise suggests that it is indeed possible to transform an industry over time when the political will and financial resources are harnessed but not necessarily for conservation objectives. The challenge for Nova Scotia, if Lahey's vision is to be realized, is to garner sufficient public and industry support that can engender sufficient political will to dismantle the socio-political economic institutions established over the past sixty years. These institutions entrenched forest exploitation to feed forest fibre demand for its pulp and lumber mills along with the socio-political influences buttressing these policies.

The Small Tree Act era denotes, for the first time in Nova Scotia, recognition of a finite and diminishing forest resource. This awareness followed the rise in forest production from 10,000 cords in 1930 to over 55,000 cords in 1941 (Johnson, 1985), and the evidence of serious depletion gleaned from periodic provincial forest inventories. Unfortunately, this seemingly authentic conservation attempt coincided with a series of socio-economic crises that thrust forest conservation efforts in direct opposition to stimulating the provincial economy. This led to the government devising rather furtive measures to undermine the Small Tree Act's legitimacy, enact replacement legislation—the Forest Improvement Act (1962, 1965, 1967, 1968-1986 – Statutes of Nova Scotia, 1965), which after years of industry turmoil was replaced by the Forest Enhancement Act (Statutes of Nova Scotia, 2010).

#### 2.0 Methodology

The examination of the STA policy process used an investigative research approach recently codified by Layder (2018). It began with the general question as to why forest conservation legislation was apparently ineffective at ground level. Beginning with a close read of the initial enactments and their later amendments, this was juxtaposed with an overview of the prevailing political economy chronicled by Frank (1988) and later by Miller (1993), Conrad (1993), and Stanley (1993). As no clear answers could be found in academic and industry sources or media accounts, the investigation deepened by approaching key actors using both a snowball sampling strategy and actor identification from industry documents and press accounts. This sampling included previous departmental ministers and deputy

ministers, forest extension professionals, industry executives, particularly from the pulp and paper producers, sawmills owners, woodlot owners, and haulage contractors. While not all interviews focused exclusively on the STA or provided new insights into the political economy of forest management, additional documents and potential interview sources were identified. As layers of data emerged from ongoing analysis, fresh hypotheses were posited and refined while some notions fell by the wayside when triangulation with known facts proved unreconcilable. Interview protocols were continuously revised to explore themes uncovered with previous interviews. A recurring theme, nevertheless, was that in order to fully appreciate the challenges of implementing forest conservation, it was necessary to take the long view of forest policy and forestry within the context of forest land tenure, the varying forestry ecology from one end of the province to the next, the predominant Acadian Forest (mixed species transitional zone) and the Boreal Forest in northern Cape Breton requiring varying ground level approaches to harvesting and reforestation.

A brief review of the sparse Nova Scotian forest management literature for the STA period is examined, while a thorough overview of the contemporary conditions of the forests and forestry in Nova Scotia (with extensive references) can be found in the addendum to Lahey's report (2018b). The STA era review is followed by a summary of the main features of this legislation through its various iterations, and then a reflective piece is offered that examines this political economy process through three analytical lenses. As this era signaled the dawn of the pulp industry intensification period, the data is examined through a policy gestation framework proffered by Hall et al. (1972). They posit three general factors that they claim invariably impact the policy gestation process and other factors that may be influential and sometimes crucial. This is followed by a discussion of state and market failure as described by Mayntz (1983). In conclusion, this study returns to the lessons that can/should be drawn from this period of forest conservation policy and the legislative eras that followed to suggest points to ponder for contemporary policy decision-makers.

#### 3.0 The Critical Nova Scotia Forest Management Literature

In the early nineties, Sandberg compiled a monograph of forest management issues in Nova Scotia and New Brunswick entitled "Trouble in the Woods" (1992a). While earlier descriptive and chronological accounts were written about Nova Scotia forestry, largely by forest industry veterans, this was analytical and critical rather than descriptive. Sandberg characterized the management style of both maritime governments concerning forestry as "client states". This was a derivative from colonial times when merchant ventures monopolized resource exploitation and funneled exports back to sponsoring nations for quick profits. For the more contemporary Nova Scotia context, Sandberg defined client state as a state entity, in this case a provincial government, that was:

highly dependent on resource rent for overall revenue .... [It] continues to be presented with opportunities to move in a variety of directions but remains financially dependent on, and ideologically committed to a few large monopoly capitalist firms (Sandberg, 1992a, p. 2).

Clancy (1992), a contributor to the Sandberg monograph, tracked the politics of pulpwood marketing in Nova Scotia from 1960-1985, tracing the development of three largely intact monopsonies clustered around each of the well-established (by the early eighties) multinational pulp processors. Each monosomy presented a potent bargaining force, bolstered by court challenges striking down forest level collective bargaining to keep pulpwood pricing artificially low. Bissix and Sandberg (1992) co-authored a second monograph contribution, documenting the rise and fall of the Forest Improvement Act (FIA 1962–86). This legislation replaced the Small Tree Act. This account chronicled the tripartite struggle represented on the one hand by the increasingly influential pulp processing sector advocating technocentric solutions to forest production, such as clearcutting, highly mechanized forest harvesters, and fast-growing monoculture plantations. A second hand characterized by independent lumber producers, holding true to less harsh harvesting techniques such as shelterwood treatments, greater mixed species, and older-aged forests that depended largely on localized markets. In the FIA era, both were now increasingly pitted against a third hand, the emerging environmentalists, gaining strength from national and international advocacy associations such as the Sierra Club, and the first-hand knowledge of urbanites increasingly aware of forest conditions as access to the countryside proliferated. In the government's efforts to placate all three interests, particularly the environmentalists, this legislation remained acrimonious for over two decades and because it was never fully proclaimed and never implemented at the forest level, served inadvertently or deliberately the increasingly powerful pulp sector by offering a *de facto* laissez-faire legislative framework.

Given that Lahey argues that the sustainable way forward for forest management in Nova Scotia is to establish biodiversity and ecosystem management as the dominant hierarchical value to govern forest management decision-making, it is important to note that when Bissix and Rees (2001) examined seven ecosystem Nova Scotian prototypes, including the workings of the FIA (that they suggested approximated a quasi-ecosystem approach), they concluded that the case studies examined clearly indicated "that ecosystem management efforts cannot succeed over the long-term, where resource exploitation pressures far exceed the drive for conservation and where the political will and capacity for statutory control to enhance conservation is weak" (p. 581). This is particularly challenging as the Nova Scotia peninsula, dominated by 85% forest cover, is fragmented by diverse ownership and management that includes 30,000 small woodlot owners managing 50,000 small woodlots, large vertically integrated provincial and multinational woodfibre processors, and a relatively small proportion of Crown Land, nowadays 30%, much of which is licensed long-term to processors.

## 3.1 The Environmental, Political and Social Economy of Nova Scotia's Small Tree Act

The political workings of the Nova Scotia Small Tree Act in the nineteen forties, fifties, and sixties witnessed the transformation of the provincial forestry to an intensive industrial-based harvesting regime that predominates to this day. It is a regime that is belatedly recognized as unsustainable with serious environmental, social and economic consequences. The STA is seen by several forest historians as the only Nova Scotian forest legislation (past and present) that legitimately pursued to reverse decades and even centuries of highgrading (taking the best and leaving the rest), resulting in a degraded forest. This account chronicles the efforts by the provincial government to push for its rescission and the countervailing drive for

renewed forest conservation legislation. It provides evidence that, on the one hand, appeared to bolster ground level forest conservation regulations but, on the other hand, given the brute force of economic development imperatives, substantially undermined them. What is especially interesting are the multinationals' and government's efforts to rescind the STA: even though it was no longer actively enforced. While their efforts failed to completely dominate the forest policy agenda given their combined economic and political strength, it will be seen that pulpprocessing expansion in Nova Scotia was fundamental to the government's forest management policy and broader industrial development. It will also be seen that the government's principal concerns were to accommodate pulp sector interests rather than acknowledge deepening forest conservation issues. During this pulp sector expansion period, the multinationals were largely viewed as white knights by the political administration: their interests were considered to be the only viable option for industrial transformation and future prosperity. Importantly, despite the recently established multinationals' influence in shaping forest policy, the sawmillers and professional foresters combined forces to pressure DLF to replace rather than rescind the STA--a measure that evidence suggests was not the government's original intent and seemingly not a preferred alternative.

#### 3.2 The Socio-political Context

Since early colonial times in Nova Scotia, forest conservation policy was marginalized by a pervasive forest exploitation/production imperative (Goldsmith, 1980). This undermining of forest conservation objectives began with the Broad Arrow Act in the early eighteenth century, continued with the implementation of the Small Tree Act and characterizes present day conservation legislation and practice (Hawlbolt & Bulmer, 1958; Creighton, 1988; Goldsmith, 1977; Hawbolt, 1955; Lahey 2018a&b). Despite steadily declining forest quality, it is important to note that production continued to climb throughout the twentieth century. This was largely made possible by mining immature stocks and pioneering previously inaccessible forests (Goldsmith, 1977). It was not until after the Second World War, however, that unprecedented exploitation generated sufficient concern about a degrading forest resource that measures were taken to enact specifically dedicated forest conservation legislation. A revision of the Small Tree Act, first introduced in 1942, was proclaimed in 1946 and enforced on a very limited scale during the late forties and early fifties.

Despite its limited application, the STA had support as it was considered by some key forest managers to be the only forest conservation policy in the history of Nova Scotia to have appreciable ground level impact (Burgess, personal communication, 1987). Hawbolt (1955), for example, wrote in the Canadian Geographic Journal that: "This Act ... has altered the course of forestry in the Province. ... Despite its many problems ... the indirect results and benefits have been tremendous." Don Eldridge, a former woodlands manager with the Eddy Company during the early sixties, suggested that:

Had they left the Small Tree Act in place it would probably have been better than the Forest Improvement Act. ... But it would appear that two pulp companies [Stora and Scott] were coming on stream and they were going to have to cut small trees (personal communication, 1987).

Robert Burgess, who succeeded Creighton as deputy minister of Lands and Forests, believed the STA was the first forest conservation act in Nova Scotia to positively affect ground level forest conservation. The STA succeeded, he suggested, by "slowing down the exploitation of immature forests" (Burgess, personal communication, 1987).

Given the STA's apparent ground level proficiency when implemented, the question looms as to why there was an attempt to replace it with rather innocuous legislation in 1962. The answer appears tied not so much to the STA's technical attributes or imperfections but to the government's industrial expansion objectives. The prevalent economic and social conditions in the late forties and throughout the fifties made forestry expansion appealing. An economic development report by Arthur D. Little Incorporated in 1956, in fact, cited few viable alternatives. It should be noted that at this time, Nova Scotia's steel industry was nearly bankrupt and the coal industry was in a serious slump.

Because of its Atlantic seaboard orientation, Nova Scotia enjoyed an economic respite from the Great Depression with its Second World War contributions, but when the war ended in May 1945, the Province began a substantial economic decline. The federal government concentrated its industrial renewal efforts around the Great Lakes in the late fifties while largely neglecting the Atlantic Provinces. "While the war had brought the Maritimes temporary material prosperity and the post-war period a degree of social security, both had accelerated the region's growing vulnerability to and dependence upon central-Canadian public and private policy" (Millar, 1993, p. 345). The fifties was the decade of unfulfilled promise of equitable regional development through federal government policy. While the "Atlantic Revolution" as it was coined was largely unfulfilled during this decade, it nevertheless, according to Conrad (1993), established as an idea, if not yet a practice, the "goal of Canadian national policy" (p. 419). It posited a legitimate role for state intervention in a predominantly capitalist culture. By 1960 the coal industry was then in sharp decline, and the steel industry could no longer compete with central Canada because of distance to markets, haulage rates, and the high costs of modernization.

Later, in the sixties, government intervention took hold. In 1967 the federal government established a Crown corporation in Cape Breton to keep the coal mines operating, which was soon followed by the Nova Scotia government establishing a similar Crown corporation to maintain the steel industry. The coal industry's weakness was especially significant in forestry expansion calculations. From 1958 to 1959, coal production declined from 50 million to 40 million tons putting miners out of work and creating considerable pressure to bolster forest industry employment. The completion of the Canso Causeway in 1955 (a large public works project employing previously unemployed miners) also added to this pressure (Department of Trade and Industry, 1963). The setbacks of these traditional industries persuaded the Nova Scotia government to vigorously pursue pulp industry expansion that eventually led to a series of negotiations with 'out-of-province' multinationals.

#### 3.3 The Pulp Industry Enhancement Program

As an outgrowth of the relative optimism for the pulp sector, the government courted a string of multinationals in the mid-fifties where initial negotiations were apparently rather one-sided. The government, in its wisdom, offered the multinationals numerous concessions setting the seeds for future discontent throughout the forest industry (Burgess, personal communication, 1987).

National and international competition to attract multinational investment, combined with the dismal performance of traditional Nova Scotian industries and the performance of non-Nova Scotian investors within the province, gave the multinationals 'testing Nova Scotia's waters' a substantial negotiating edge over the government. Beyond the basic limitations of inter-provincial and global competition, the province had other notable and significant bargaining weaknesses: it had little ready cash, there were serious unemployment problems, and Nova Scotia had a history of poor labor relations—especially in industrial Cape Breton. To cap this, Nova Scotia had cumbersome school catchment and county-based forest taxation processes that made prospective woodfibre processing investors apprehensive over forest operations that crossed county boundaries (Johnson, 1986). Adding to these difficulties, it was a matter of public record that the government came tantalizingly close to signing a deal with Scott Paper in 1956. Rather than establish a pulpmill in Nova Scotia, Scott called an abrupt halt to negotiations and chose instead to initially locate in British Columbia (Creighton, 1988). Unfortunately for Nova Scotia, this publicized bargaining failure revealed how far the government was prepared to go to accommodate foreign investors, especially in their demands for legislative change and infrastructure support.

Despite its rather dismal bargaining posture, the provincial government was never completely without its own bargaining resources. A key attraction was Crown forests; this proved to be a major selling point. The two multinational companies that finally settled in Nova Scotia in the fifties and sixties secured significant economic concessions (Creighton, personal communication, 1987). Both received mill construction subsidies and tax holidays as well as extensive infrastructure support, including access roads to their mills. Scott Paper also secured what was later to become a very controversial and politically costly pollution treatment concession that lingers to this day (Baxter, 2017). Stora on the other hand, obtained lucrative long-term, low-cost Crown land stumpage guarantees. In addition to these subventions, both multinationals gained generally inexpensive, compliant, and unorganized woodlands labor as well as favorable marketing arrangements. From a forest conservation perspective, each of these concessions proved to be significant, although unfortunately, their impacts were generally negative as far as forest conservation was concerned. Despite all these benefits for the multinationals, it was freedom from unwieldy forest practices legislation and regulations embodied in the STA that was a trump card in their arsenal (Henley, Minister of Lands and Forests. Oct. 1978 – 1983, personal communication, August 1987).

There is little doubt that Stora, a Swedish-based multinational, took full advantage of the province's bargaining weaknesses before building a pulpmill on Cape Breton Island. The evidence indicates that the province went to great lengths to attract Stora after its earlier setback with Scott Paper (Creighton, 1988). As Burgess, a former deputy minister put it:

We tried to get Scott to come in to start off with and they wanted to come in the fifties. But when they turned us down ... we turned to Nova Scotia Pulp [Stora]--the Swedish outfit. We worked tooth and nail to get them to set up a Kraft process to handle our poor-quality material we had up there [on Cape Breton Island] (Burgess, personal communication, 1987).

Despite the Provincial Government's eventual successes in attracting investment, it is clear that it bent over backwards to entice the multinationals to Nova Scotia. And in doing so, it compromised future policy options, distorted pulpwood, and lumber markets, and compromised much of the future potential of forest conservation legislation, Later in the mid-fifties, as Burgess alludes, the Provincial Government began negotiations with Stora with considerable zeal. They, in fact, went to extraordinary lengths to court Stora and, in doing so, risked considerable financial resources and alienation of the sawmillers as well as Bowaters Mersey—the longtime pulp processor in the province. It seems that both the Nova Scotian Government and Stora were rather cavalier in their negotiations; they followed few standard negotiating practices. Sovez (1988) recounts that the provincial government failed even to check the credentials of 'Stora's agent' to whom they eventually paid millions in consulting fees. Soyez explains that in the early stages of negotiations, this so-called 'official representative' had no negotiating authority from Stora, although the provincial government assumed he had. It is interesting to note that even without official blessing, Stora gave no order for this individual to desist. When negotiations finally got on track 'officially' and agreements were finally negotiated, it became quite evident that the government had taken substantial political as well as financial risks to nurture Stora's interest. Among other things, it expended considerable financial resources and staff time to reclaim the Oxford Lease on Cape Breton Island from Bowaters Mersey so they could reassign this stumpage to Stora on very favorable terms (Johnson, 1986; Sandberg, 1992b). Although this so-called 'give away' worked for the government's short-term interests by convincing Stora to build a Kraft pulpmill, in time, its favorable concessions built considerable resentment within the Nova Scotia forest sector.

One clear measure of how far government was willing to go to support its pulp enhancement policy can be gauged from a meeting of government officials. According to Haliburton, Premier Stanfield was desperately keen on swiftly sealing the deal with Stora with minimal political fallout. Haliburton recalled that the Premier wanted: "this declaration from the Department [of Lands and Forests] expressing their confidence that we could support a [second multinational] pulpmill" (E.D. Haliburton, Minister of Lands and Forests, July 1959 - May 1968, personal communication, April 1986). Resistance from certain elements within the DLF bureaucracy, however, was politically embarrassing. The most damaging opposition came from credible senior DLF civil servants such as Creighton and Hawbolt (Creighton, personal communication, August 1987; Lloyd Hawbolt, retired Special Assistant to the Deputy Minister and former Chief Forester, Department of Lands and Forests, personal communication, August 1987). Both Creighton, the deputy minister, and Hawbolt, the Department's senior entomologist, were concerned that Stora's mill would overstretch what was widely perceived as a badly depleted forest resource. This 'depleted' view had gained credibility with the publication of the province's forest inventories (Hawbolt & Bulmer, 1958). Outside government, Bowaters had also made overtures concerning forest over-exploitation that had stirred public interest. In response to Bowaters fretting, Burgess later complained that [Bowater's] Johnson continually: "preached that you're going to ruin the province bringing another company in, we're going to be out of wood". Burgess recounted that in response to these constant overtures:

One day in exasperation, Stanfield said, you get those people of yours 'thick and sweat' down to the [Hotel] Nova Scotian and lock em up until they come up with an answer (Burgess, personal communication, 1987).

G.I. (Ike) Smith, a lawyer by profession, subsequently called this meeting and according to Haliburton drilled the DLF staff for answers about the adequacy of Nova Scotia's forest stocks to sustain an additional mill. In the end, when forced to back up their opposition to industrial expansion with 'irrefutable' evidence on woodfibre shortages, the bureaucrats present conceded. Interestingly Haliburton noted that neither Creighton nor Hawbolt were at this meeting. This was odd given that Creighton was the DLF's senior manager and a highly respected professional forester, and Hawbolt was the senior author of the province's 1958 forest inventory study. To leave out either made little sense except perhaps to skew the final analysis! Whether Creighton and Hawbolt were left out, purposely or not, the conclusions drawn, not surprisingly, led to a subsequent invitation to Stora to establish a pulpmill. The results from this meeting successfully counteracted, at least for the time being, Bowaters', Creighton's, Hawbolt's and others' opposition to pulp sector expansion (Burgess, personal communication, 1987; Creighton, personal communication, 1987). The subsequent announcement of newly found forest reserves was understandably met with some derision by sawmillers who dubbed this declaration as G.I. [Smith]'s 'new forest'! (Murray Prest, former sawmill owner and present landowner, Sheet Harbour, personal communication, August 1987).

Despite this undermining of forest conservation, concerns there were successful counter pressures. One effort made by the two senior professional foresters from Bowaters Mersey championed a legislative renewal initiative to replace the STA. Although the government's forest policy initiative seemed at first glance to favour the whole pulp sector, the new policy of pulp-industry expansion was vigorously opposed by the Bowaters Mersey Pulp and Paper Company. This state of affairs set one multinational against the others. Bowaters' opposition seemingly stemmed from the prospect of increased competition for pulpwood as well as its inauspicious treatment at the hands of government in executing the details of its pulp expansion policy. In this circumstance, Bowaters was pressured to give up the lease on Cape Breton Island to make way for Stora's new forest operations. While there may have been some concern about Bowaters motives in supporting forest conservation legislation, both Ralph Johnson's and Lief Holt's professional reputations quelled most of them. Under the auspices of the Canadian Institute of Forestry: Nova Scotia (CIF:NS), they worked diligently to promote renewed forest conservation legislation. Johnson claims that he actually introduced the idea of new forest conservation legislation to replace the increasingly maligned STA to the CIF:NS membership (Johnson, personal communication, April 1996). Whatever Bowaters' primary motivation and whoever was the initial architect, it is clear that Bowaters, as a corporation, found it increasingly difficult to directly influence provincial forestry policy. Not only was the repossession of the Cape Breton Island lease a major irritation and clear evidence of their loss of government favor, but a promised compensatory Crown land license closer to home-base never materialized either (Haliburton, personal interview, 1986).

The government facilitated its new pulp expansion policy by fending off opposition from established forestry interests whenever possible. Eventually, however, it succumbed to pressure and 'officially' supported CIF:NS's legislative renewal

initiative. This was to replace the so-called 'outdated' STA legislation with more 'technically sound' conservation provisions. What is so baffling in this whole process of legislative renewal, however, was the substance of the replacement legislation: the 1962 Forest Improvement Act. Its provisions and subsequent workings quickly put into question the legitimacy of the whole legislative renewal process. George Henley, a member of the Progressive Conservative caucus at the time, was one who questioned the government's real intentions. He claimed:

We took the STA out as the pulpmills were coming in. And he [G.I.Smith] just thought there would be some kind of act that would appease the [lumber trade]. The lumber trade was still large at that time and he thought he would appease the lumberman and lessen the tension between the pulpmill operators and the lumber mills (Henley, personal communication, April 1986).

Although the government's bargaining efforts were protracted and often arduous, it eventually led to pulp sector expansion.

By 1959, pulpwood production ranked second in importance to lumber products in the province and by 1961 pulpwood volume actually exceeded lumber production (Government of Nova Scotia, 1959 and 1963; Canadian Pulp and Paper Association, 1984, p. 5). Notwithstanding this rather impressive economic performance, it was the pulp sector's ability to shape forest practices policy that is especially significant. As will be seen, on the surface, the multinationals appeared to support forest conservation efforts, but the weight of evidence indicates that the new pulp companies, aided by the government, continually undermined ground level conservation by persistent criticism of the STA.

#### 3.4. The Small Tree Act

For the most part, the STA's strength was its simplicity. The Act's main element was a girth limit of 10 inches diameter below which felling targeted species was either prohibited or controlled. Despite the advantage of simplicity, the Act had technical limitations: for example, as written, it did not allow for clearing scrub trees. Another alleged but unfounded weakness was its supposed disregard for Balsam fir: the dominant species of Cape Breton Island. This particular species was not covered in the Small Tree Act: its omission was not a legislative oversight, however, but a well-calculated exclusion (Creighton, personal communication, 1987). At the time of STA formulation, the Cape Breton Highlands contained one of the world's largest although natural monocultures of Balsam fir (Hawbolt, personal communication, 1987). As older age Balsam fir forests are highly susceptible to disease infestation, especially from the spruce budworm, forest managers were deliberately free to harvest this species basically when and how they pleased (Creighton, personal communication, 1987). According to Creighton, the then incumbent deputy minister, this species was purposely omitted from the STA to stimulate harvesting activity. Despite this apparently sound rationale for exclusion, this provision was challenged during the 1962 FIA legislative debates by the then successor administration as a substantive weakness.

In addition to this rather wily tactic, the administration made several other efforts to discredit the STA. One alleged weakness identified in the 1962 legislative debates, for example, was the STA's inability to curtail extensive clearcutting. Approvals for clearcutting were, however, at the discretion of the minister rather than a general enabling section in the STA (Day, former Department of Lands and Forests extension forester, personal communication, March 1986; Dwyer, Department of Lands and Forests Extension Forester, personal communication, March 1986). Interestingly, as reported in 1958, only 4.2 percent of forest land was examined under the STA from 1952–57. Although this inspection rate was not impressive, theoretically taking over a hundred years to examine all private forestlands, the rate of clearcutting approvals was of most concern. The minister approved clearcuts on 56.6 percent of the lands examined under the STA, and only 11.6 percent of inspected forests were actually restricted to the 10inch limit. If there was an issue with STA implementation, it appeared to be that the minister failed to fulfil a legislative duty to control clearcutting under its regulations!

Aside from these criticisms, the STA did have legitimate technical weaknesses. One was that it "apply only to a lumbering operation involving more than fifty thousand board feet measure or its equivalent" (Department of Lands and Forests, 1950). This eliminated considerable aggregate areas of private forestland from the STA's purview (Sandberg, 1988). A more substantive criticism was that the STA technically prohibited removal of scrub trees or so-called 'sylvian junk'. In this regard, some industrialists argued that it would have been better to legislate their removal to raise forest quality rather than any cutting control (Haliburton, personal communication, 1986). Instead, because scrub trees rarely grew beyond the 10inch STA limit, theoretically, the STA 'protected' these low-quality forest stands in perpetuity. In practice, however, DFL extension foresters administering the provisions of the STA invariably allowed scrub tree removal.

Beyond the government's concerns over clearcutting and Balsam fir, it was quite baffling why the administration complained of an 'overwhelming bureaucratic workload' as few forests had been inspected (Nova Scotia, 1962). It was similarly puzzling why the official opposition never challenged this, given that the STA was hardly enforced after Hurricane Edna in 1954 and not implemented at all after 1957 (Haliburton, personal communication, 1986).

Haliburton, the incumbent Minister of Lands and Forests, nevertheless laid additional criticism on the STA. He cited political interference during the Liberal Government's tenure that proceeded the Progressive Conservatives' term (Johnson, 1986). This had little substance in fact as it was neither corroborated by senior career civil servants in the DLF Lands and Forests such as Creighton and Hawbolt, by DLF extension workers, nor by prominent forestland owners such as Prest (personal communication, 1987) and Wilber (mill owner and commercial forest owner, personal communication, September 1987). In fact, Ralph Johnson (personal communication, 1996) felt political interference with the STA was never an issue until the early sixties when revised legislation was on the horizon!

Notwithstanding the government's attention to both real and contrived issues with the STA, the real issues, especially concerning the traditional industry, reflected the growing apprehension about a pulp-dominated forest industry and its concomitant lack of concern for forest conservation. These underlying anxieties were first brought to the public's attention in the province's forest inventory in 1958 (Hawbolt & Bulmer, 1958), second by sawmillers' skepticism that the sawlog industry could

withstand the increased competition from pulpwood production, and third the startup of the Stora Kopparberg pulpmill in 1961. This created a sense of inevitability that pulp processing expansion would indeed overrun the forests.

It was nevertheless not so much a matter of STA inadequacy that bothered the incumbent government; it was the potential backlash over pulp sector expansion. From the government's perspective, industrial expansion raised the likelihood for additional clearcutting applications, should the provisions of the STA be reestablished that were ultimately the DLF Minister's responsibility under the STA. The political risks in keeping the STA were clear; it was untenable for an administration portraying itself as a responsible forest steward to be seen as the major agent of clearcutting. No matter how well the STA had worked previously, the government's political vulnerability became a major motivating force for legislative change (Johnson, personal communication, 1996; Holt, Woodlands Manager for Bowater's Mersey, 1965–1983, personal communication, April 1986).

In this issue blurring, Haliburton acted as 'frontman' for Premier Robert Stanfield and G.I. (Ike) Smith. Although the government's worry over political fallout was serious, this was not 'the stuff' to try to publicly legitimize legislative change. The administration was forced, therefore, to attack the STA's credibility indirectly rather than openly and positively promote its pulp industry enhancement efforts. Haliburton, for example, deflected possible criticism by directly attacking the overall worth of the STA. When the traditional forest industry countered, the government reluctantly backtracked some to endorse the CIF:NS's initiative for renewed forest conservation legislation. In the face of growing criticism of the STA, the CIF:NS passed a resolution in February 1959 urging the government to 'replace' the STA. Its objective was clearly focused on enhancing forest conservation practices rather than simply liberalizing cutting restrictions as the government had hoped. In time this initiative received support from the Nova Scotia Forest Products Association (an organization dominated at the time by sawmiller interests) and the Nova Scotia Resource Council, an organization normally advocating resource exploitation such as mining mineral resources. This broadening of support increased political pressure on the incumbent administration to pursue legislative renewal (Johnson, 1986). Although Haliburton, the incumbent Lands and Forests minister at the time, argued that the pulp enhancement objective was never purposely hidden from the public eye, he conceded that it was never clearly delineated either (Haliburton, personal communication, 1986). As a result of these overlapping and seemingly incongruous initiatives, forestry policy rather ambiguously left both sides of the conservation/expansion question, believing they enjoyed government's support.

#### 4.0 The Transition of Power--the FIA Gestation Process

This section attempts to explicate some of the interconnections in forest conservation to resource exploitation policies during the STA's final years by considering Hall et al.'s policy gestation framework (Hall et al., 1972). This analysis draws attention to three key variables that they argue are almost always present in a policy formation process. They are legitimacy, feasibility, and support: each may be both real and/or perceived. Other variables, although often important and sometimes crucial, do not always play a significant part in the policy gestation process, but together, they determine a policy issue's traction or demise. A challenge is to unravel the linkages when evidence cannot always be taken at face value.

#### 4.1 The Forest Improvement Act (FIA) Policy Gestation Phase

Although spiraling demand for forest products raised concerns about forest capacity, 'doing nothing' never seemed viable as job creation was the Progressive Conservatives' 'ticket' to power in 1956. What swayed decision-making more than possible wood fibre shortages some indeterminate time in the future, was the expanding global wood pulp market. In this context, pulp expansion was seen as 'more feasible' than other possible industrial development options, and job creation was viewed as more important than forest conservation. The dominant unit of analysis for government decision-making was not, therefore, long-term forest sustainability but shorter-term economic development potential.

Given the pulp industry agenda's emerging socio-economic weighting, it is not initially clear why renewed forest conservation legislation gained traction in the late fifties. The best evidence stems from the groundwork of the professional foresters association, the CIF:NS. In this respect and in retrospect, Haliburton, the DLF minister and Henley, a Progressive Conservative caucus member at the time, later conceded that the government lacked the necessary confidence to openly defend the pulp expansion agenda in the face of growing forest conservation concerns. Once support gelled around the CIF:NS's legislative renewal initiative, the government found itself lodged between 'a rock and a hard place'. On the one hand it needed to fast-track pulp industry expansion, but on the other, it was reluctant to challenge the forest conservation lobby publicly.

One recurring factor dampening the government's zeal for pulp industry expansion was its dismal record with large-scale foreign investors. With the exception of Bowaters, which bought into an already going concern in the province, the electorate was wary of outsiders storming the province, enticed with substantial government funding, and eventually taking the government's money and running (Conrad, 1993; Stanley, 1993; Taylor & Baskerville, 1994). This context of previously soured multinational alliances and the renewed interest in conservation created a policy dilemma. The government had few, if any, economic development options, and given the need to rid itself of legislative hurdles, revamped forest conservation legislation appeared to be a major disincentive for pulp industry expansion.

Although Hall et al. emphasize the importance of a crisis in policy gestation, in forestry, forest degradation is insipid. The incremental effects of over-exploitation can be cushioned by adaptive practices such as price adjustments, importation, technology advances, pioneering virgin forests, or socio-economic adaptation to economic slowdowns. This encourages policymakers to prevaricate and put off forest conservation initiatives to future legislatures.

Information management was particularly influential in this policy gestation process. The administration resisted opposition to pulp sector expansion by 'massaging' information to suit its political needs and went to extraordinary lengths to discredit forest inventory 'soothsayers'. It appeared to matter little that the empirical evidence from forest inventories did not support the government's assertions.

It is difficult to categorize the dominant management style of Nova Scotia's forest management prior to the Second World War and the STA era as forest practices were obscured by relatively low technology ground level practices. There was also relative abundance, access was restricted, and markets were predominantly

localized. The expansion of the pulp processing industry in the fifties and early sixties, however, brought new approaches that were increasingly driven by technology and economic efficiency, requiring reliance on clearcutting, faster-growing trees, shorter harvesting cycles, and increasing species and age uniformity. As its influence on provincial forestry policy grew, this increasingly threatened the political power base of the traditional industry. Although forest practices such as clearcutting were more visually obvious than selection cutting, categorizing forestry ideology was risky. The counterargument that clearcuts degraded the environment was that it could rid the province of 'sylvian junk' (Routledge, 1981). Time would tell, however, that increased pulpwood extraction did little to address this issue as there was no financial incentive to harvest poorquality resources. Consequently, sylvian junk remained.

In this era of increased standardization, the established industry pushed for greater industrial and biological diversity. They focused on attaining forest practices codes that restricted harvest exploitation to mature forest stands. This strategy, although couched in conservation rhetoric, also clearly favored sawlog production. Despite this rhetoric, the government and the new industrialists viewed the established industry as 'Luddite', it was seen as outdated, obstructive, and incapable of stimulating a depressed provincial economy. In support of the new multinationals, it is interesting to note that although extensive pulpwood processing activity was new within the boundaries of the province, large amounts of pulpwood were previously exported by Hollingsworth and Whitney and others to New England (Johnson, 1986; Creighton, personal communication, 1987; Johnson, personal communication, 1996). It was not necessarily the production of pulpwood per se and its associated forest practices that bothered traditional operators, therefore, it was more likely that increased competition for roundwood concerned them most. Nevertheless, the pulp industry's ever-increasing appetite for clearcutting undermined support for the Small Tree Act.

Importantly for increased conservation support, other forest values such as countryside travel, aesthetics, recreation, and water conservation gained greater political significance (Creighton, personal communication, 1987). With increased concern for forest amenity, those advocating more diversified forest conservation policy gained political allies. This demand caused Creighton, who was the DLF deputy minister at the time, to write that the parks' program "proved so popular that every MLA was clamoring for a park in his constituency, whether along the Trans-Canada or not" (Creighton, 1988, pp. 110–112). In response to this increased demand, federally funded Trans-Canada Highway camping and picnic parks and later provincial parks were established (Creighton, 1988, pp. 110–112).

Despite the growing demand for amenity services in forest management, it remains difficult to explain why successive versions of the STA's replacement legislation—the FIA—were framed around multiple-use concerns when overwhelming socio-political support centered on industrial development. One explanation lies with the established forest industry's strategy to obstruct pulp sector expansion and the emergence of multiple forest values advocates such as Creighton who championed the rising tourism industry. A more plausible but perhaps more cynical view is that the political administration simply paid lip service to these interests.

#### 4.2 The STA: Market or State Failure?

The workings of the STA, as with the FIA that followed, were highly convoluted and tied to the pulp industry expansion policy in complex and sometimes obscure ways. Whereas STA establishment can be viewed as the state responding to the market's failure to conserve forests leading to and during the Second World War, its demise can also be considered as a state correction to re-establish better market conditions. Consistent with this view, the STA's mere existence, even if only sparsely applied in its early years, created sufficient concern among the industrial newcomers to be seen as a potential barrier to industrial and market innovation. In this context, pulp industry expansion can be seen as an advancement of the free market whereby outmoded industries such as the sawmill industry are replaced over time by more efficient and socially beneficial industries. Pulp expansion's justification was that it provided value-added economic growth that substituted roundwood exports for relatively well-paid factory jobs within the boundaries of Nova Scotia, and additional and widespread employment in forested rural areas. From a social and political perspective, this compensated for lost employment in the coal mining and steel making industries in industrial Cape Breton. From a forest conservation viewpoint, pulp industry expansion was now justifiable as wood shortage projections had been dismissed publicly by Lands and Forests staff; and ridding the Province of sylvian junk by increased clearcutting would make room for a healthier future forest.

This view, however, ignores the large subsidies that each new mill garnered, the environmental side effects of pulp processing expansion, and the important role of the state in moderating market forces to enhance social stability, maintain environmental quality, and ensure the long-term interests of future generations. The greatest need for jobs, for example, was in the industrial area of Cape Breton around Sydney, but Stora's establishment in Port Hawkesbury within the Straight of Canso, some 140 kilometers distant, essentially required building a new town and the importation of labor. This, in reality, did little to alleviate Sydney's chronic unemployment problem; likely ignored because of past labor strife. Pulp industry expansion failed then to address social instability where it was most needed. Instead, it created air and water pollution at the mill site, and, in reality, continued to further denude an already stressed forest. While time would tell that conventional market forces were incapable of solving the sylvian junk problem, this was not evident at the time and consequently continued as a policy selling point. The culmination of large pulpmill subsidies, the siting of pulpmills away from employment needs, and the deliberate attempt to remove forest conservation safeguards can best be seen then as a culmination of both state and market failure.

There were additional factors that contributed to a fusion of state and market failure. During this era, the taxation of forestlands was problematic for corporations attempting to standardize business strategies across county lines. Various incentive systems, on the other hand, distorted market forces to advantage the new multinationals. For example, the provision of new highway infrastructure to the Port Hawkesbury mill was provided to induce Stora to the province. Favorable Crown land stumpage fees on long-term leased lands greatly distorted established markets, particularly depressing prices for small woodlot suppliers that further encouraged unsustainable forest exploitation. The notion that security of tenure encourages forest conservation practices was seemingly countered by low stumpage fees and the transfer of the Big Lease to Stora (Sandberg, 1992b).

In general, it is clear that at this time that the government's actions were ambivalent in terms of state intervention. They felt, on the one hand, it was necessary to intervene in the market to stimulate production levels but, on the other, back away when pressures came for environmental protection. It is quite clear, nevertheless, that optimizing the state apparatus and the market was not a prime concern of government; it was more interested in stimulating the economy by enticing the multinationals. If need be, this would be done at the expense of the forest environment. While there was good evidence that forestry production was already unsustainable and pulp processing expansion would simply add to this, opposition to expansionary forest policies was never strong enough to ward off its penetration.

#### 4.3 STA Lessons for Contemporary Forest Management

Lahey's prescription for future forest sector prosperity is far-reaching, but just wishing for positive change does not guarantee it. This is particularly true as the pulpwood socio-economy is now well entrenched. Lahey calls for a transformation in attitude and practice to embrace a triad biodiversity and ecosystem management regime. Can state intervention and market adaptation succeed in Nova Scotia's present-day socio-economic environment? There are indicators signaling an appetite for change. As Lahey points out, the global pulp supply is saturated, there is increasing competition from faster-growing trees elsewhere and new technologies, pulpmills are under considerable pressure to abate pollution, and the provincial industry, which was comparatively resilient, recently suffered its first major mill closure (Nova Scotia Transition Advisory Team, 2012). This is coupled with evolving public attitudes to the environment largely because of climate change. Could these changes signal a new beginning in forest management? Are there lessons to be learned from the STA's waning years?

The most profound lesson is that socio-economic transformation can occur in Nova Scotia's forestry sector with committed state intervention. But as Bissix and Rees (2001) argue, only if there is political will, and this is buttressed by appropriate incentives. During the STA era, two factors dominated. First was the political appetite for change which was precipitated by the broader economic crisis. This thirst for action was predicated on the series of mega industrial project failures; there was, nevertheless, no widely accepted forestry crisis. Second, there was Nova Scotia's ace bargaining chip and investment incentive, its forest resource. In today's context, the public's demand for environmental accountability increases the support for greener economies, including forestry. However, nowadays, there appears to be no obvious tangible incentive.

The call for ecosystem management is a noble one but wrought with challenges, as explained by Bissix and Rees (2001). Nova Scotia's land tenure, particularly forest lands, is highly fragmented. In colonial times, land grants were deliberately patchy, some parcels conveniently located with others more remote, some never visited or surveyed. Crownlands were largely remnants, the lands left that settlers did not claim, or from tax seizures and government buybacks. They remain highly disintegrated. To overlay ecosystem management on present land tenure patterns is hugely challenging socially, politically and economically as forest holdings boundaries rarely coincide with ecosystem boundaries (Townsend, 2008; Harper et al., 2000). It is much easier to conduct ecosystem management with a single owner and manager than with multiple owners with multiple interests. In Nova Scotia,

massive financial incentives, perhaps forceful government edicts or both would be necessary to re-align forest operations to a centralized ecosystem plan.

While Lahey calls for greater transparency in forest management, this account of the STA clearly points to behind-the-scenes policy manipulation, corporatism, and obfuscation. Subsequent forest policy deliberations fared no better, whether that be in the FIA era or more recently within the FEA and Forestry Act period. Or to more recent times, when for two years of enthusiastic and painstaking public consultation policy proposals were jettisoned by industry backroom lobbying (Bancroft & Crossland, 2010). The recent government response to Lahey's appeal for greater transparency focuses on forest quality outcomes focused largely on independent peer-reviewed assessments occurring sometime in the future. This is important but setting ecosystem management in progress requires immediate action at the socio-political level, particularly when going beyond Crownland management. Shorter-term transparency requires a focus on immediate socio-economic management strategies and their implementation: their 'outputs' rather than distant 'outcomes'.

Past experience, even recent experience, strongly suggests meaningful transparency is unlikely. This STA account highlights a litany of behind-the-scenes policy manipulations, most notably conjuring up the 'new forest'. Attempts to bring forestry actors of different stripes using district and provincial forest improvement boards in the later FIA era to lay common ground on forest practices failed miserably. And a number of public enquiries over recent years have failed to deliver. As in the case of the *Our Common Ground* forest management public enquiry (Department of Natural Resources, 2009), originally tasked to consider a broad range of forest values, this initiative simply ground to a halt when enquiry commissioners, drawn from different forest management interests, failed to agree. They published competing reports with the powerful industry, once again, going behind the scenes to favor policy influence.

Beyond land tenure, the elephant in the room is the future impact of natural disturbances such as drought, floods, forest fires, hurricanes and insect infestations. All of these are predicted to get worse with climate change (Taylor et al., 2017). As Lahey suggests, the industry's resilience is likely to be better the more forests harbor greater biodiversity using a management strategy approaching ecosystem management.

Lahey largely assumes a future industry similar to the present, with pulpwood and lumber dominating. This implies an industry mix favoring plantations and monocultures more susceptible to natural disturbances. If a biodiversity and ecosystem transition is desirable, who should pay, who can pay, who will pay, and how will these financial transactions be implemented? It seems unreasonable for forest landowners alone, especially small woodlot owners, to be laden with the full costs when the environmental benefits are widespread. Can carbon taxes be redistributed to sufficiently incentivize ecosystem cooperation? Can Nova Scotia attract carbon offsets to help finance such a forest management strategy? Is the marketplace, most often internationally dominated, prepared to pay premium prices for environmentally friendly commodities such as forest products that are otherwise undifferentiated? None of these questions appear adequately addressed in either the Lahey report or the government response.

The Ivany Report of 2014 laid out a general blueprint for provincial socio-economic development, a strategy largely accepted by government (Ivany et al., 2014). This report called for immediate steps to transform the economy, to become more entrepreneurial, less reliant on raw resource exports, more in province value-added processing, greater effort in exporting finished goods, and with its higher education institutions taking a stronger technology and educational development lead. So far, few incentives have emerged to initiate such a transition.

Given the complexity of Nova Scotia's forest management land tenure and the government's backtrack in March 2021, it would seem that ecosystem management is a step too far, unless some innovative and viable way to pay for this transition emerges. Nevertheless, the reality remains that there is an over preponderance of small trees, and a strong argument can be made that, as a general rule, harvesting healthy trees later can add value to the forest economy over the longer-term, advance ecological resilience, and enhance general environmental quality. Where intact forest ecosystems exist, whether found in cooperative small woodlots, industrial holdings, or Crownlands, much can be done to improve forest practices at ground level to enhance biodiversity, soften harmful silviculture and intensive harvesting impacts to closely approximate ecosystem management.

Could a modified small tree act be effective in today's world or would it create a nightmarish bureaucracy? The STA of the past was never proven ineffective at ground level and issuing harvesting permits was never that onerous as it was hardly enforced. Several conditions are different now. The present forest tax system could be adjusted to incentivize preferred forest practices and zoning can reflect the goals of the triad forest management system. In addition, geographical information technologies now simplify the art and science of conducting forest inventories, reporting processes, and ground level compliance mechanisms. In addition, the monopsonies, so powerful in the eighties, appear to be crumbling with the demise of the Bowaters mill.

In conclusion, to return to Lahey's own conclusion that protecting ecosystems and biodiversity must be given greater priority than other objectives, and to assess success on outcomes, is to project ecological accountability way too far into the future. Such an undertaking is an ideal recipe for forest sector obfuscation and procrastination, business as usual and downloading, as before, forest conservation solutions to future generations. The central thesis of this paper is that the forest management question must be defined first and foremost as a socio-political and economic issue with biodiversity as the end goal. This is where solutions must be clearly strategized for the near and medium terms to effectively bring about Lahey's long-term vision of outcomes.

#### References

- Bancroft, R., & Crossland, D. (2010, February). *Forests: Restoring the health of Nova Scotia's forests*. (Report). Nova Scotia Department of Natural Resources. https://novascotia.ca/natr/strategy/pdf/phase2-reports/Forests-Health.pdf
- Baxter, J. (2017). *The mill: Fifty years of pulp and protest*. Lawrencetown Beach, Nova Scotia, Canada: Pottersfield Press.
- Bissix, G. C., & Sandberg, L. A. (1992). The political economy of the Forest Improvement Act, 1962–1986. In L. A. Sandberg (Ed.), *Trouble in the woods*, (pp. 168–197). Fredericton, New Brunswick, Canada: Acadiensis Press.

- Bissix G. C., & Rees, J. A. (2001). Can strategic ecosystem management succeed in multi-agency environments? *Ecological Applications*, 11(2), 570–583. https://doi.org/10.1890/1051-0761(2001)011[0570:CSEMSI]2.0.CO;2
- Canadian Pulp and Paper Association. (1984). Reference Tables. Ottawa: OCLI Worldcat Identities.
- Clancy, P. (1992). The politics of pulpwood marketing in Nova Scotia. In L. A. Sandberg (Ed.), *Trouble in the woods*, (pp. 142–167). Fredericton, New Brunswick, Canada: Acadiensis Press.
- Conrad, M. (1993). The 1950's: The decade of development. In E. R. Forbes, & D. A. Muise (Eds.), *The Atlantic Provinces in Confederation*, (382–420). Toronto, Ontario, Canada: University of Toronto Press.
- Creighton, W. I. (1988). Forestkeeping: A history of the Department of Lands and Forests in Nova Scotia 1926–1969. Halifax, Nova Scotia, Canada: Nova Scotia Department of Lands and Forests.
- Department of Lands and Forest. (1950). The Small Tree Act: An act to amend and consolidate c. 6 of the Acts of 1942, April 1946. Province of Nova Scotia.
- Department of Lands and Forestry. (2018). *Government response to the Independent Review of Forest Practices in Nova Scotia*. Halifax, Nova Scotia, Canada: Province of Nova Scotia.
- Department of Natural Resources. (2009). *Our common ground: The future of Nova Scotia's natural resources*. Halifax, Nova Scotia, Canada: Government of Nova Scotia.
- Department of Trade and Industry. (1963). *Nova Scotia: An economic profile*. Halifax, Nova Scotia, Canada: Province of Nova Scotia.
- Ewert, A. W., Baker, D. C., & Bissix, G. C. (2004). *Integrated resource and environmental management: The human dimension*. Oxfordshire, United Kingdom: CABI.
- Frank, D. (1988). The Cape Breton Coal Industry and the Rise and Fall of the British Empire Steel Corporation. In P.A. Buckner, & D. Frank (Eds.), Atlantic Canada after Confederation. The Acadiensis Reader: Volume Two, 2<sup>nd</sup> Ed. (204-235). Fredericton, Acadiensis Press.
- Goldsmith, F. B. (1977). *Nova Scotian forests: A discussion paper*. Halifax, Nova Scotia, Canada: Institute for Environmental Studies, Dalhousie University.
- Goldsmith, F. B. (1980). An evaluation of a forest resource: A case study of Nova Scotia. *Journal of Environmental Management*, 10(1), 83–100.
- Government of Nova Scotia. (1959). *Nova Scotia: An economic profile*. Halifax, Nova Scotia, Canada: Economics and Statistics, Nova Scotia Department of Finance.
- Government of Nova Scotia. (1963). Nova Scotia: An economic profile. Halifax, Nova Scotia, Canada: Economics and Statistics, Nova Scotia Department of Finance.
- Hall, P., Land, H., Parker, R., & Webb, A. (1972). *Change, choice and conflict in social policy*. London: Heinemann.

- Harper, D. B., Bonner, F. J., & Fisher, B. E. (2000). *Land designation and ownership in Nova Scotia: Open File Map 2000-1*. Halifax: Minerals and Energy Branch: Department of Natural Resources, Government of Nova Scotia. https://novascotia.ca/natr/meb/download/dp044.asp
- Hawbolt, L. S., & Bulmer, R. M. (1958). *The forest resources of Nova Scotia*. Halifax, Nova Scotia, Canada: Nova Scotia Department of Lands and Forests.
- Hawbolt, L. S. (1955, August). Forestry in Nova Scotia. *Canadian Geographic Journal*, 5(14).
- Ivany, R., Christmas, D., D'Entremont, I., Fuller, S., & Bragg, J. (2014, February). Now or never: An urgent call to action for Nova Scotians: The report of the Nova Scotia commission on building our new economy. Halifax, Nova Scotia, Canada: One Nova Scotia.
- Johnson, R. S. (1986). *Forests of Nova Scotia*. Halifax, Nova Scotia, Canada: Four East Publications.
- Lahey, W. (2018a). An independent review of forest practices in Nova Scotia: Executive summary, conclusions and recommendations. Halifax, Nova Scotia, Canada: University of King's College. <a href="https://novascotia.ca/natr/forestry/Forest\_Review/Lahey\_FP\_Review\_Report\_ExecSummary.pdf">https://novascotia.ca/natr/forestry/Forest\_Review/Lahey\_FP\_Review\_Report\_ExecSummary.pdf</a>
- Lahey, W. (2018b). An independent review of forest practices in Nova Scotia: Addendum. Halifax, Nova Scotia, Canada: University of King's College. https://novascotia.ca/natr/forestry/Forest\_Review/FP\_Addendum.pdf
- Lands and Forestry (n.d.). Biodiversity Act helps to protect ecosystems. [News release]. *Government of Nova Scotia*. https://novascotia.ca/news/release/?id=20190314004
- Layder, D. (2018). *Investigative research: Theory and practice*. Toronto: Sage Publishing.
- Little, A. D. Inc. (1956, January). *Industrial development in Nova Scotia*. Halifax, Nova Scotia, Canada: NS Department of Trade and Industry.
- Mayntz, R. (1983, April). The conditions of effective public policy: A new challenge for policy analysis. *Policy and Politics*, 11(2), 123–143. <a href="https://doi.org/10.1332/030557383782718779">https://doi.org/10.1332/030557383782718779</a>
- Miller, C. (1993). The 1940s; War and Rehabilitation. In E. R. Forbes, & D. A. Muise (Eds.), *The Atlantic Provinces in Confederation*, (306-345). Toronto, Ontario, Canada: University of Toronto Press.
- Nova Scotia Legislative Debates. (1962, April 9). 1361. Government of Nova Scotia.
- Nova Scotia Transition Advisory Team. (2012). *Our community, our future: Final report*. Nova Scotia Department of Economic and Rural Development and Tourism. https://novascotia.ca/news/release/?id=20121207008
- Premier's Office (2021, March 23). *Changes to Biodiversity Act*. [Press Release]. https://novascotia.ca/news/release/?id=20210323009
- Routledge, H. (1981). *The forest landscape*. Port Hawkesbury, Nova Scotia, Canada: Nova Scotia Forest Industries, Stora.

- Sandberg, L. A. (Ed.). (1992). *Trouble in the woods: Forest policy and social conflict in Nova Scotia and New Brunswick*. Fredericton, New Brunswick, Canada: Acadiensis Press.
- Sandberg, L. A. (1992). Forest policy in Nova Scotia: The Big Lease, Cape Breton Island, 1899–1960. In L. A. Sandberg (Ed.), *Trouble in the woods* (pp. 65–89). Frederickton, New Brunswick, Canada: Acadiensis Press.
- Sandberg, L. A. (1988). Swedish forestry legislation in Nova Scotia: The rise and fall of the Forest Improvement Act, 1965–1986. In D. Day (Ed.), *Geographical perspectives on the Maritime Provinces* (pp. 184–196). Halifax, Nova Scotia, Canada: Saint Mary's University.
- Soyez, D. (1988, September). Stora lured abroad? A Nova Scotia case study in industrial decision-making and persistence. *The Operational Geographer*, 6(2), 11–15.
- Stanley D. (1993). The 1960's: The illusions and realities of progress. In E. R. Forbes, & D. A. Muise (Eds.), *In the Atlantic Provinces in Confederation* (421–459). Toronto: University of Toronto Press.
- Forest Act, SC 1989 (amended 1992), c. 18; SC 1998, c. 18, s.559; SC 1998, c.29; SC 2010, c.2, s.101.
- Statutes of Nova Scotia, Forest Enhancement Act, Chapter 9, Acts of 1986.
- Statutes of Nova Scotia, Forest Improvement Act, Chapter 7, 1965.
- Statutes of Nova Scotia, Forest Enhancement Act, Chapter 9, Acts of 1986.
- Taylor, G. D., & Baskerville, P. A. (1994). *A concise history of business in Canada*. Toronto: Oxford University Press.
- Taylor, A. R., Boulanger, Y., Price, D. T., Cyr, D., McGarrigle, E., Rammer, W., & Kershaw Jr., J. A. (2017, December). Rapid 21st century climate change projected to shift composition and growth of Canada's Acadian Forest Region. *Journal of Forest Ecology and Management*, 405, 284–294. https://doi.org/10.1016/j.foreco.2017.07.033
- Townsend, P. (2008, July). Forest biomass of living, merchantable trees in Nova Scotia [Figure 2, p. 11]. Halifax, Nova Scotia, Canada: Department of Natural Resources, Government of Nova Scotia.