



Aquaculture Regulation in Nova Scotia:

Overview of the Regulatory Framework and Considerations for Regulatory Reform

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by

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East Coast Environmental Law (ECELAW) is a non-profit organization with charitable status. Our overarching objective is to provide public interest environmental law assistance to Atlantic Canadians. To reach this objective, ECELAW is working towards the goal highlighted in its vision statement: ECELAW envisions a future where innovative and effective environmental laws and the fair application of those laws, provide Atlantic Canadians with a clean, healthy environment, which will make a positive contribution to the quality of life of its present and future inhabitants and visitors.

This Report was produced with financial support from the Sage Environmental Program.

East Coast Environmental Law would like to thank the following individuals for their assistance with the development of this Report:

- Susanna Fuller, Ecology Action Centre
- Inka Milewski, Conservation Council of New Brunswick
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Executive Summary

Aquaculture has a long history in Nova Scotia, but its evolution to commercial aquaculture has been fairly rapid over the past three decades. Finfish (primarily Atlantic salmon) is the highest revenue generating form of aquaculture in the province and the open-net style of production it relies upon raises the greatest environmental concerns. Chemicals, fish feed and fish waste that accumulate in the aquaculture environment tend to degrade and pollute the surrounding aquatic environment. The escape of farmed fish and the potential for disease and interbreeding with wild fish is also a concern.

The public perception of aquaculture in the province is mixed. A report undertaken on behalf of the provincial government indicated that the average citizen is comfortable with aquaculture and has little concern over potential negative impacts. At the same time, there is strong opposition by local community members where open-net finfish operations exist or are proposed and some are calling for a moratorium on the industry. There have been ongoing concerns raised by environmental and conservation organizations over certain industry practices for many years.

The role of the federal government in the regulation of aquaculture is unsettled. Several federal laws apply to aquaculture related activities, including the *Fisheries Act*, the *Navigable Waters Protection Act* and the *Canadian Environmental Assessment Act*. However, all of these statutes have been or are being amended by the current federal government. The application of the laws is being narrowed, the result being no application to aquaculture in some cases. There is also an ongoing debate over whether the provinces have any constitutional authority to regulate aquaculture. In the province of British Columbia, the debate has resulted in a decision by the British Columbia Supreme Court that aquaculture is outside the authority of the provincial government and related laws in the province have been struck down.

Despite this debate, the role of the provincial government in the regulation of aquaculture in Nova Scotia is still intact under the *Fisheries and Coastal Resources Act (FCRA)*, but regulatory reform is underway. The FCRA prohibits unlicensed aquaculture operations but the Minister has broad discretion in determining what operations receive a license. This discretion has been submitted to two legal challenges, both of which found in favour of the discretion. Much of this Report is focused on highlighting some of the key concerns with the current regulatory framework for aquaculture, including conflicting mandates, broad discretion, lack of public engagement and limited assessment of environmental impacts.

There is a desire by federal and provincial governments to facilitate the growth of the aquaculture industry. These goals are evident in the federal government's National Aquaculture Strategic Action Plan Initiative (2010) and the provincial government's

Aquaculture Strategy (2012). However, there are also environmental concerns regarding current and future aquaculture development. For example, the *Cohen Report* released in 2011 considered the decline of wild Sockeye Salmon in the Fraser River and noted that there is a likelihood that diseases and pathogens from salmon farms may harm wild salmon. Commissioner Cohen concluded that too little research on these effects has been done and many knowledge gaps exist. In Atlantic Canada, Cooke Aquaculture has been charged under the *Fisheries Act* with release of a deleterious substance in the form of a cypermethrin-based pesticide into the waters of New Brunswick. It is alleged that the prohibited pesticide was used to control sea lice in a salmon farm operation and its use resulted in the death of a significant number of lobster in the area.

Aquaculture, like so many industrial activities, has the potential to engender substantive economic growth while at the same time inflicting significant environmental harm. Therefore, there is a strong need for appropriate regulation of the industry to ensure that it operates sustainably, especially where the government supports industry growth. This Report provides an outline of the industry in Nova Scotia and an overview of the current federal and provincial regulatory framework. The Report identifies seven specific areas of consideration in the context of strengthening provincial regulation to make the industry more environmentally sustainable. This Report does not provide an in-depth analysis of aquaculture regulation in Nova Scotia; rather it provides an overview to serve as a foundation for that analysis, discussion and future regulatory reform.

1.0 Overview of Aquaculture in Nova Scotia

1.1 Introduction

Aquaculture in Nova Scotia dates back over 100 years. First Nations groups would transfer fish between streams to keep populations viable, and Mi'kmaq groups began planting oysters and creating small ponds to keep populations of fish and eels for food. As of 2010, there were 380 licenced aquaculture sites in the province, farming a variety of finfish and shellfish.¹

Atlantic salmon and mussel farming are the two most lucrative markets for aquaculture in Nova Scotia. Mussel farming takes place along the eastern and southern coasts of the province and is generally considered a sustainable industry.

Salmon aquaculture is active in the Bras d'Or lakes, Annapolis Basin, Shelburne Harbour, and St. Margaret's Bay.² The most common form of salmon aquaculture, and the style implemented in Nova Scotia, is open-net (sometimes referred to as 'open-pen'). In an open-net system, the aquatic species are reared within an enclosure in a natural waterway and there is free exchange between the fish and the surrounding natural environment.

It is the practice and regulation of open-net finfish aquaculture in Nova Scotia that is the primary subject of this Report.

1.2 Overview of the Industry and its Contribution to the Economy

Nova Scotia's aquaculture industry employs approximately 750 people and contributes more than \$57 million to the provincial economy.³ Salmon is the most valuable product, accounting for over 80 percent of revenues produced in Atlantic Canada.⁴

Of the three companies operating in Nova Scotia, Cooke Aquaculture is the largest and has the largest salmon farming operation in Atlantic Canada, employing about 140 Nova

¹ Nova Scotia Fisheries and Aquaculture, *Aquaculture: Frequently Asked Questions* (2010), online: <www.gov.ns.ca/fish/aquaculture/faq.shtml>.

² Parliamentary Information and Research Service, *Aquaculture in Eastern Canada (Background Paper)*, (Ottawa: Library of Parliament, 2010) at 4.

³ *Province Invests in Good Jobs, Strong Rural Communities*, Press Release, Premier's Office June 21, 2012, online: <www.novascotia.ca/news/release/?id=20120621002>.

⁴ Nova Scotia's *Aquaculture Strategy: Creating Sustainable Wealth in Rural and Coastal Nova Scotia*, at page 5 online: www.gov.ns.ca/fish/NS-Aquaculture-Policy.pdf [Aquaculture Strategy].

Scotians. Cooke is a significant exporter in the industry, processing and selling more than 160 million pounds of Atlantic salmon and four million pounds of trout each year.⁵

A large portion of the aquaculture revenues in Nova Scotia come from operations run by Cooke or one of its subsidiaries.⁶ Cooke Aquaculture has indicated that they are planning a \$150 million expansion in Nova Scotia over the next few years and they have reported that this increase will create over 400 full-time jobs.⁷ The provincial government has pledged \$25 million towards this project.⁸ The project would add two large salmon farms in St. Mary's Bay near Digby, plus three salmon farms and a new processing plant in Shelburne.⁹

Salmon aquaculture expanded rapidly during the 1980's and 1990's but has declined somewhat during the past ten years.¹⁰ The planned expansion by Cooke fits with recent comments by industry representatives who have indicated that recent growth in American demand for aquaculture products will support industry expansion.¹¹

Sales and production statistics for finfish aquaculture in Nova Scotia indicate fairly rapid growth between 1994 and 2000 with a significant drop in both areas after 2000. Since that time there has been a steadily increasing trend. The number of employees has remained stagnate over the same time period.¹² Appendix B to this Report graphs these statistics for more information.

Finfish aquaculture is an important economic driver in Nova Scotia. The business and revenues produced by the industry are significant and appear to have growth potential. However, like many resource-based industries, aquaculture carries with it environmental

⁵ *Province Invests in Good Jobs, Strong Rural Communities*, Press Release, Premier's Office June 21, 2012, online : <www.novascotia.ca/news/release/?id=20120621002>.

⁶ For a list of Cooke Aquaculture subsidiaries see Appendix A.

⁷ Nova Scotia, Premier's Office, *Province Invests in good Jobs, Strong Rural Communities*, online: <<http://novascotia.ca/news/release/?id=20120621002>>.

⁸ This investment includes a \$16 million interest-bearing loan, of which \$4 million can be forgiven based on research, development, and commercialization of innovation in the industry, and a \$9 million forgivable loan through the Nova Scotia Jobs Fund and JobsHere.

⁹ Atlantic Provinces Economic Council, *Report Card: Examining the Growth of Aquaculture in Canada* (2012).

¹⁰ *Report of the Standing Committee of Fisheries and Oceans, Closed Containment Salmon Aquaculture*, 41st Parliament, 1st Session, March 2013, online:

<<http://www.parl.gc.ca/HousePublications/Publication.aspx?DocId=5994887>>. [*Standing Committee Report*].

¹¹ *Supra* note 7 at p. 3.

¹² Nova Scotia, Fisheries and Aquaculture, *Aquaculture Statistics* (2012), online: <<http://www.gov.ns.ca/fish/aquaculture/stats/>>.

risks that are not borne by the industry and are, therefore, not reflected in the cost or economic potential of the product.

The role of the regulator is key in this context to balance the development of the industry with the need to manage the externalized costs to the environment, and future generations.

1.3 Costs to the Environment Caused by Open-Net Finfish Aquaculture

If aquaculture is considered by government and business to be a worthwhile economic pursuit, the environmental costs associated with the industry must be considered. Numerous concerns have been identified, most of which involve habitat degradation and threats to wild fish stocks.

A recent report released by the *Federal Standing Committee on Fisheries and Oceans* (“Standing Committee Report”) identifies the following as impacts from open-net salmon farming:

- The transfer of sea lice between wild and farmed salmon as the wild salmon migrate past open-net aquaculture sites;
- Contaminants (including fish waste and excess feed, pesticides, antibiotics, feed additives, antifouling agents, etc.) polluting the local aquatic environment, altering habitat and harming other species;
- The transfer of infectious diseases such as infectious salmon anemia (ISA); and
- The risk of escaped farmed salmon breeding with or out-competing wild salmon.¹³

The 2012 Report of the *Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River* (“Cohen Report”) also considered some of the ecological concerns associated with open-net aquaculture.¹⁴ Although the mandate of the Commission focused on the sustainability of the Fraser River sockeye salmon, there are numerous findings and recommendations that have broader application to open-net aquaculture operations in Canada. In particular, the *Cohen Report* concludes that there is a likelihood of harm to Fraser River sockeye salmon from open-net salmon farms and that the potential harm is of a serious or irreversible nature:¹⁵

I accept the evidence that management practices taken within net pens are intended to reduce the risk of disease as much as possible and to keep both farmed and wild fish healthy. However, I cannot determine on the evidence

¹³ *Standing Committee Report*, *Supra* note 10 at 11.

¹⁴ The Governor in Council set the Cohen Commission in motion on November 5, 2009. The final report of the Cohen Commission was released on October 29, 2012.

¹⁵ *Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River*, vol 3 (Ottawa: Public Works and Government Services Canada, 2012) at 17 [*Cohen Report vol 3*] at 22.

before me whether those measures ensure that the risk of serious harm from disease and pathogen transfer is a minimal one.

...too little research has been done on the effects of salmon farms and related diseases and pathogen...the evidence before me shows plausible mechanisms for harm and many knowledge gaps.¹⁶

The potential for harm and the need for more research and information on the impacts of open-net finfish aquaculture are themes in both the *Standing Committee Report* and the *Cohen Report*.

Some of the most significant concerns associated with aquaculture can be addressed by a shift from open-net systems to closed containment. Closed containment aquaculture refers to a number of technologies that seek to isolate the rearing environment from the natural environment in order to reduce or eliminate the interactions between the two.¹⁷

Although closed containment is generally considered to have a smaller ecological footprint than open-net aquaculture it is not without environmental impact. For example, the carbon footprint generated by a closed containment facility drawing electricity, pumping in water, filtering waste, among other actions, is significant. How sustainably these activities can be undertaken is directly related to the source of electricity.¹⁸

Consideration 1

Despite millions of dollars dedicated to aquaculture research through the federal AquaNet program, both the recent *Standing Committee Report* and the *Cohen Report* have identified unanswered questions and a need for more research and information on the ecological impacts of open-net finfish aquaculture. In the face of this uncertainty, government should consider a precautionary approach to development and regulation of the industry.

1.4 Public Perception of Aquaculture in Nova Scotia

The perception of aquaculture and its contribution to a sustainable economy in Nova Scotia is mixed. The applications for new open-net finfish operations have met with significant opposition from community members and concerned organizations and individuals. As an example, the Association for the Preservation of the Eastern Shore (APES) was created in response to applications for three open-net salmon farms, but has grown to include

¹⁶ *Ibid* at 23.

¹⁷ *Standing Committee Report*, *Supra* note 10 at 4.

¹⁸ *Standing Committee Report*, *Supra* note 10 at 13.

“...hundreds of concerned residents and business people from a variety of sectors on the Eastern Shore, including the Sheet Harbour Chamber of Commerce, tourism operators, people in the building trades, fishermen and international marketers of lobster and other wild species, as well as representatives of various parks and wilderness groups.”¹⁹

APES participates in the broader Atlantic Coalition for Aquaculture Reform, which includes non-government organizations, fisheries associations and concerned citizens who came together in 2010 to collectively express their concern over the expansion of open-net aquaculture in Nova Scotia and New Brunswick.²⁰ The Atlantic Salmon Federation has also been vocal in their opposition to open-net finfish aquaculture.

Many of these organizations and others have signed a petition seeking a five year moratorium “on open pen finfish aquaculture until the process for granting or renewing licences is transparent and repaired of its flaws, and until independent objective science and economic analysis can show that there will be no harm to existing industries and the coastal and estuarine environments of Nova Scotia.”²¹

In an effort to better understand the public’s perception of aquaculture, the government of Nova Scotia hired a consultant in 2010 to conduct a random telephone survey of 673 residents across Nova Scotia to measure knowledge and perceptions of aquaculture. In the final report entitled *Public Confidence in Aquaculture: A community Engagement Protocol for the Development of Aquaculture in Nova Scotia*, the consultant noted that one of the constraints to growth of the industry in Nova Scotia is a lack of public support for aquaculture projects and community opposition to local proposals:

In Nova Scotian communities, the level of support for aquaculture is reportedly lower than in the rest of Atlantic Canada, and proponents often find greater opposition to projects than they do in other provinces. As a result, some proponents of projects in Nova Scotia have made the move to

¹⁹ Taken from the homepage of the Association for the Preservation of the Eastern Shore website online: <nsapes.ca/association-preservation-eastern-shore>.

²⁰ The Atlantic Coalition for Aquaculture Reform consists of Fundy North Fishermen’s Association, Grand Manan Fishermen’s Association, Fundy Weir Fishermen’s Association, Ecology Action Centre (Nova Scotia), Fundy Baykeeper/CCNB (New Brunswick), St. Mary’s Bay Coastal Alliance Society (Nova Scotia), the Friar’s Bay Development Association (Campobello), Friends of Shelburne Harbour (Nova Scotia), and a number of concerned coastal residents.

²¹ Taken from the Stop Ocean Based Farms Moratorium, online: <<http://nsapes.ca/moratorium>>.

other provinces where they have felt more welcome.²²

However, following completion of the survey, the consultant concluded that Nova Scotians are generally comfortable with aquaculture, have little concern about environmental impacts, and do not believe that the industry conflicts with other uses of the coastal zone.²³ These conclusions appear to be at odds with the initial constraints identified by the industry and the provincial government, as well as media coverage and the initiatives by numerous groups and concerned citizens described above.

It is clear that aquaculture, and in particular the practice of open-net finfish aquaculture, is controversial in Nova Scotia. Given its known and potential impacts on the environment, its ability to contribute to the provincial rural economy and concerns about regulation of the industry and its practices, it is not surprising that the public perception is mixed.

The *Cohen Report* and the *Standing Committee Report* recognize a need for greater government transparency and a role for members of the public. The *Cohen Report* comments on the federal regulatory oversight for aquaculture stating that, "...DFO needs to be even more transparent and should allow non-government and non-industry researchers to have access to the fish health database for the purpose of original analysis."²⁴ The Report specifically references the many public submissions received on a lack of transparency in the provision of information to the public. Recommendation 13 of the Report states that DFO should give non-government scientists timely access to primary fish health data collected through routine monitoring.²⁵

The *Standing Committee Report* commented on the need for more transparent research and information:

However, much scientific research remains to be carried out, and made publicly available, in order to instill greater public confidence in the environmental management of the aquaculture industry and to move the debate forward in identifying areas where improvement is needed.²⁶

The concern over lack of transparency is not limited to the federal regulator. Concerned citizens and organizations have repeatedly commented on the failure of the provincial Minister of Fisheries and Aquaculture to share data on the aquaculture sector:

²² Lura Consulting, *Public Confidence in Aquaculture: A community Engagement Protocol for the Development of Aquaculture in Nova Scotia*, (2010) at 3.

²³ *Ibid* at 1.

²⁴ *Ibid* at 19.

²⁵ *Cohen Report*, vol.3, *Supra* note 15 at 19-20.

²⁶ *Standing Committee Report*, *Supra* note 10 at 12.

Belliveau and his staff have repeatedly refused to supply fishermen and community organizations with scientific data supporting the placement of industrial salmon pens in bays and harbours throughout the province.²⁷

Consideration 2

An informed citizenry is key to ensuring an industry that is sustainable both economically and environmentally. Government regulators need to give due consideration to the transparency of information. Providing concerned citizens access to information and data collected by the government without financial or other barriers should be considered an important element of any regulatory framework.

²⁷ *Rough senate ride for Belliveau at Fisheries Committee*, Responsible Aquaculture, February 14, 2013, online: responsibleaquaculture.wordpress.com/2013/02/14/rough-senate-ride-for-belliveau-at-fisheries-committee/.

2.0 The Federal Regulatory Framework for Aquaculture

2.1 Federal Jurisdiction

Section 91(12) of the *Constitution Act, 1867* gives the federal government the authority to regulate in the area of Sea Coast and Inland Fisheries.²⁸ In 2009, the British Columbia Supreme Court (BCSC) found that aquaculture in that province is a ‘fishery’ and therefore within the full authority of the federal government to regulate (“Morton Decision”).²⁹ The *Morton Decision* does not apply to other provinces and, therefore, management of aquaculture in British Columbia is somewhat different than management on the East Coast. Regardless of location, the federal Department of Fisheries and Oceans (DFO) is the lead agency in management of aquaculture for the federal government and the federal and provincial governments play a role in the regulation and management of aquaculture.³⁰

On the East Coast, the provincial government has lead regulatory authority while in BC the federal government has lead regulatory authority. In BC, licensing of aquaculture is governed by the *Pacific Aquaculture Regulations* under the federal *Fisheries Act*. In Nova Scotia, licensing of aquaculture operations is governed by the *Fisheries and Coastal Resources Act*, under the provincial Minister of Fisheries and Aquaculture.

The federal and provincial governments have made it clear through the *National Aquaculture Strategic Action Plan Initiative* (NASAPI) that they seek future expansion of aquaculture in Canada and that this will be partly facilitated by streamlining aquaculture regulations. The focus of the DFO on the future development of the industry, in the face of their role as a regulator with the goal of protecting fish and fish habitat, has raised alarm bells. The *Cohen Report* criticized the DFO for suffering from conflicting institutional mandates. On the one hand, the DFO is supposed to maintain a sustainable aquaculture industry, while on the other hand it is promoting the commercialization of the very same.³¹

²⁸ *The Constitution Act, 1867*, 30 & 31 Vict, c 3, s. 91.

²⁹ *Morton v British Columbia (Agriculture and Lands)*, 2010 BCSC 299. In this case, the BCSC determined that the regulation of certain aquaculture practices is outside (*ultra vires*) the Provincial Crown’s authority, and as such, that the licensing of salmon farms is a federal rather than a provincial responsibility. The case has been appealed by Marine Harvest Canada. The company is seeking clarification on whether domesticated salmon raised in net pens are a public resource or owned by the company (*Farmed salmon giant appeals court ruling that hands industry jurisdiction to Ottawa*, Vancouver Sun, March 9, 2009).

³⁰ *National Aquaculture Strategic Action Plan Initiative, East Coast Marine Finfish Sector, Strategic Action Plan 2011 – 2015*, November 9, 2010, An Initiative of the Canadian Council of Fisheries and Aquaculture Ministers (CCFAM) at 2.

³¹ *Commission of Inquiry into the Decline of Sockeye Salmon in the Fraser River*, vol. 1 (Ottawa: Public Works and Government Services Canada, 2012) at 418 [*Cohen Report, vol.1*].

There is a concern that the mandate to promote and grow the industry will outpace the mandate to ensure that the industry is ecologically sustainable.³²

Although the federal government reiterated a commitment to improved aquaculture management in its most recent *Sustainable Development Strategy*, recent amendments to several key federal environmental statutes, described below, lead one to question the commitment of the government of Canada in this regard.³³

Aquaculture has traditionally been subject to provisions of the federal *Fisheries Act*, the *Navigable Waters Protection Act* and the *Canadian Environmental Assessment Act*. The sections that follow provide an overview of each of these statutes in the context of aquaculture regulation. The sections also describe how each of these statutes has been or will be substantially amended following 2012 federal budget implementation statutes. These changes will reduce the role of the federal government in the regulation of aquaculture and, in particular, in the protection of the marine environment from the potential adverse effects of aquaculture. It is likely that these changes will shift this regulatory burden to the provinces.

2.2 Fisheries Act

As described above, DFO is the lead federal agency in the management of aquaculture in Canada. Sections 35 (habitat protection) and 36 (pollution prevention) of the *Fisheries Act* address habitat protection and pollution prevention. Both of these provisions have been used to manage open-net aquaculture operations.

Section 35 of the Act prohibits any person from carrying on a work, undertaking or activity that results in the harmful alteration or disruption, or the destruction, of fish habitat.³⁴ In accordance with section 35, DFO reviews all proposals for aquaculture sites to ensure that the operation will not damage fish habitat.

Section 34 defines fish habitat:

“fish habitat” means spawning grounds and nursery, rearing, food supply and migration areas on which fish depend directly or indirectly in order to carry out their life processes;³⁵

³² *Cohen Report, vol. 3, Supra* note 15 at 12.

³³ Sustainable Development Office, Environment Canada, *Planning for a Sustainable Future: A Federal Sustainable Development Strategy for Canada*, (Ottawa, 2010) at 59.

³⁴ *Fisheries Act*, R.S.C., 1985, c. F-14, s. 35 [FA].

³⁵ *Ibid* at s. 34.

If impacts on fish habitat cannot be avoided, DFO will identify the ‘appropriate regulatory response’ based on the scale of the effects and the sensitivity of the fish and fish habitat.³⁶ This may result in a recommendation to the provincial government regarding the risk to fish or fish habitat associated with licensing the operation or it may require authorization by DFO to allow harmful alteration, disruption or destruction (HADD) of fish habitat.

As an example, DFO recently advised the government of Nova Scotia that a proposed open-net salmon operation proposed for the Eastern Shore would have a moderate impact on wild salmon populations. Following this advice, the Nova Scotia Department of Fisheries and Aquaculture declined the license application.³⁷

Section 36 of the *Fisheries Act* prohibits the release of a deleterious substance into water frequented by fish.³⁸ If an aquaculture operation releases a deleterious (i.e. harmful) substance into water frequented by fish, this section may be invoked to stop the activity. A deleterious substance may include decaying fish, certain pesticides, or even the erosion of metals. A deleterious substance may be released if there are Regulations in place to authorize the release; however, there are no such regulations currently in place for aquaculture.³⁹

In November 2011, section 36 of the *Fisheries Act* was used by Environment Canada to charge Cooke Aquaculture executives with the release of a deleterious substance in the form of a prohibited cypermethrin-based pesticide into the waters of New Brunswick in the years 2009 and 2010. This pesticide, which may have been used to control sea lice at aquaculture facilities, is alleged to have been the cause of a massive lobster kill.⁴⁰ At a December 2012 hearing in St. Stephen, N.B., a provincial court judge set dates for the judge and jury trial to proceed. A month-long preliminary inquiry was to begin January 14, 2013, and a hearing was to be held on February 15, 2013, to set an agenda for the trial.⁴¹ The hearing date was set back to April 2013 but in advance of the hearing, on April 26, 2013, Kelly Cove, a division of Cooke Aquaculture, plead guilty to the charges and was ordered to

³⁶ DFO, Aquaculture, Frequently Asked Questions, online: <www.dfo-mpo.gc.ca/aquaculture/faq-eng.htm>.

³⁷ *Fish Farm Application Not Approved for Shoal Bay Nova Scotia Department of Fisheries and Aquaculture*, Press Release, March 13, 2013, online: <novascotia.ca/news/release/?id=20130313004>.

³⁸ *FA*, *Supra* note 34 at s. 36.

³⁹ *Ibid* at s. 36(4).

⁴⁰ The Chronicle Herald, *Business goes on at Cooke Aquaculture despite environmental charges* (2011), online: <thechronicleherald.ca/business/30018-business-goes-cooke-aquaculture-despite-environmental-charges>.

⁴¹ SouthCoastToday.ca, *Trial date closer for Cooke execs* (2013), online: <<http://www.southcoasttoday.ca/content/trial-date-closer-cooke-execs>>.

pay a \$500,000 fine, which is the largest in N.B. and in the top three in Canada for an environmental violation under the *Fisheries Act*.⁴² The charges against Cooke's CEO, vice-president and the regional production manager for Kelly, were withdrawn.

On June 29, 2012, the federal government passed the *Jobs, Growth and Long-Term Prosperity Act* ("Jobs and Growth Act"), which included substantive amendments to the *Fisheries Act* and other statutes. Some of the amendments are in force while others will not come into force until a date ordered by the Governor in Council. The collective application of all amendments is expected to narrow the focus of the Act from all fish species to the protection of only 'commercial, recreational and Aboriginal fisheries', thereby reducing broad protection for all fish and fish habitat. Additional amendments made by the *Jobs and Growth Act* will require proof of 'serious harm' in order to demonstrate damage to fish habitat.⁴³

The amended section 35(1) will state:

No person shall carry on any work, undertaking or activity that results in serious harm to fish that are part of a commercial, recreational or Aboriginal fishery, or to fish that support such a fishery.⁴⁴

Serious harm to fish includes death or any permanent alteration or destruction of fish habitat.⁴⁵ A disruption to fish habitat is not included in the definition and, therefore, is likely not considered serious harm. Open-net finfish operations that currently require authorization under section 35 of the *Fisheries Act* may not be considered to cause death or permanent alteration or destruction and, therefore, will no longer require authorization under the *Fisheries Act*. In effect, fewer open-net finfish operations will be subject to the habitat protection provisions of the *Fisheries Act*.

Regarding section 36 on pollution prevention, the *Jobs and Growth Act* has amended that section by adding subsections 36(5.1) and 36(5.2). These amendments do not have any direct impact on the application of 36(3), which prohibits the deposit of a deleterious

⁴² Personal Communication with York Friesen, Director Environmental Protection Branch, Environment Canada, Atlantic Region, 12 March 2013. For information on guilty plea see CBC News, *Aquaculture company on the hook for \$500K for pesticide use* (accessed April 26, 2013) online: <http://www.cbc.ca/news/canada/new-brunswick/story/2013/04/26/nb-cooke-aquaculture-lobster-pesticide.html>.

⁴³ *Jobs, Growth and Long-term Prosperity Act*, S.C. 2012, c. 19.

⁴⁴ *Ibid* at ss. 142(2) to (4).

⁴⁵ *Ibid* at s. 133(3).

substance; however, the new provisions will provide the Minister with greater discretion to authorize exemptions, allowing for deposit of deleterious substance.⁴⁶

2.3 Navigable Waters Protection Act

The *Navigable Waters Protection Act* (NWPA) was created to protect the public right to navigation and marine safety in the navigable waters of Canada. The definition of 'navigable water' is broad and inclusive. Generally, any body of water large and deep enough to allow a small craft such as a canoe to pass over would meet the definition.⁴⁷

Section 5 of the NWPA states:

5(1) No work shall be built or placed in, on, over, under, through or across any navigable water without the Minister's prior approval of the work, its site and the plans for it.⁴⁸

Any person seeking to place a finfish cage or related structure for aquaculture in navigable waters must apply for and receive approval from the Minister of Fisheries and Oceans.

On December 14, 2012, the federal government passed the *Jobs and Growth Act, 2012* a 400 plus page statute that included a multitude of amendments to the *Navigable Waters Protection Act*, including a change in name to the *Navigation Protection Act* (NPA).⁴⁹ The amendments are not yet in force but it is anticipated that they will change the broad protection for all navigable waters to a narrow focus on navigation and the flow of commerce.

Section 5(1) of the NWPA will be replaced with:

5(1) An owner who proposes to construct, place, alter, repair, rebuild, remove or decommission a work — other than a designated work — in, on, over, under, through or across any navigable water that is listed in the schedule shall give notice of the proposal to the Minister.⁵⁰

⁴⁶ *Cohen Report, vol.3, Supra* note 15 at 78.

⁴⁷ DFO, *Interim Guide To Application And Site Marking Requirements For Aquaculture Projects In Canada Under the Navigable Waters Protection Act*, online: <www.dfo-mpo.gc.ca/aquaculture/ref/AAPasm-eng.htm>.

⁴⁸ *Navigable Waters Protection Act*, R.S.C., 1985, c. N-22.

⁴⁹ *Jobs and Growth Act*, S.C. 2012, c. 31.

⁵⁰ *Ibid* at s. 318.

The key change to this provision is in the reference to ‘navigable water that is listed in the schedule’. The Schedule of navigable waters includes 62 rivers, 3 oceans and 97 lakes.⁵¹

As one environmental law advocate group commented:

... the NPA would exclude 99.7 per cent of Canada’s lakes and more than 99.9 per cent of Canada’s rivers from federal oversight. For the few navigable waters that remain regulated under the NPA, the protection offered by the law will be significantly weakened.⁵²

The limited application of the Act will mean that works, including placement of fish pens and nets, in smaller bodies of waters will not be assessed for potential impacts on use of the waterway.

2.4 Canadian Environmental Assessment Act

The *Canadian Environmental Assessment Act* (CEAA) is the federal government’s environmental impact assessment (EIA) legislation. The CEAA applied to any project undertaken by the federal government or where federal government action, including a regulatory decision, triggered the CEAA. Once the Act was triggered the provisions were used to determine the type of EIA that would be required. Open-net finfish operations triggered CEAA because of the federal permit required under section 5 of the *Navigable Waters Protection Act*.⁵³ These operations were the subject of a screening level EIA under the CEAA.

On June 29, 2012, when the federal government passed the *Jobs, Growth and Long-term Prosperity Act*, it repealed the *Canadian Environmental Assessment Act* and replaced it with the *Canadian Environmental Assessment Act, 2012* (CEAA 2012). Under the new regulatory regime, federal environmental impact assessment applies to a specific list of designated projects,⁵⁴ or projects specially designated by the Minister of Environment.⁵⁵ The list of designated projects can be found in *Regulations Designating Physical Activities* under CEAA 2012, which came into effect on July 6, 2012. A Schedule to the Regulations includes a list of the physical activities to which CEAA 2012 applies. If the project is not on the list, a

⁵¹ Schedule to the *Navigation Protection Act*, 2012, c. 31, s. 331, online:

<http://www.parl.gc.ca/HousePublications/Publication.aspx?Language=E&Mode=1&DocId=5765988&File=606#1>.

⁵² Ecojustice, *Legal backgrounder: Bill C-45 and the Navigable Waters Protection Act* (RSC 1985, C N-22) October 2012, online: <www.ecojustice.ca/files/nwpa_legal_backgrounder_october-2012/at_download/file_at_page_2>.

⁵³ *Navigable Waters Protection Act*, R.S.C., 1985, c. N-22, s 5(1).

⁵⁴ *Canadian Environmental Assessment Act*, SC 2012, c 19, s 52, s 14(1).

⁵⁵ *Ibid* at s. 14(2).

federal EIA is not required. The list of ‘designated projects’ does not include aquaculture projects.⁵⁶ As a result, all aquaculture projects in Nova Scotia that were to receive a federal EIA were deemed to no longer require one.

To understand the overall impact of the changes, the shift from CEAA to CEAA 2012 cut the overall number of active federal assessments from about 3000 in April 2010 to 70 in July 2012, the first month of CEAA 2012.⁵⁷ Between 2002 and July 6, 2012, there were 35 CEAA screenings of proposed aquaculture operations/activities in Nova Scotia, since that date there have been no CEAA screenings. Effectively the demise of CEAA marks an end to federal environmental impact assessment for open-net finfish aquaculture, including an end to the mandated public consultation that was part of the screening process.⁵⁸ Given proposed aquaculture projects are not subject to EIA by the provincial government, the amendments to CEAA mean there is no EIA for aquaculture in Nova Scotia.

Consideration 3

The extensive changes to federal legislation will impact the extent of regulatory oversight for the aquaculture industry in Nova Scotia. Provincial government regulators need to consider these changes and ensure that they have in place the regulatory authority and capacity necessary to fill the void left by the federal changes.

⁵⁶ *Regulations Designating Physical Activities*, SOR/2012-147, s 2.

⁵⁷ Janice Walton, 2012, *New Federal Environmental Assessment Regime Now in Force*, Blakes Law Bulletin, 11 July 2012, online: <www.blakes.com/english/view_bulletin.asp?ID=5345>.

⁵⁸ The following two CEAA screenings were triggered under the former CEAA and then cancelled when CEAA 2012 was passed: Proposed Aquaculture Site for the Culture of Atlantic Salmon in Beaver Harbour, Halifax County, NS (Provincial Lease 1372); and Marine Finfish Aquaculture (Lease 1370) - Shoal Bay.

3.0 The Provincial Regulatory Framework for Aquaculture (Nova Scotia)

3.1 Provincial Jurisdiction

As described in section 2.1 of this Report, the regulation and management of aquaculture is shared between the federal and provincial governments with some confusion created by the 2009 *Morton Decision* in British Columbia. Although the *Morton Decision* does not directly impact the regulation of aquaculture in Nova Scotia, it has raised questions about the Constitutional authority of provincial governments to take on the lead role. As it currently stands, the provincial Minister of Fisheries and Aquaculture has the primary regulatory authority to manage aquaculture in Nova Scotia. That authority is provided through the *Fisheries and Coastal Resources Act*.

The federal government is actively involved in aquaculture development in Nova Scotia and there are a number of agreements and protocols in place to facilitate collaboration among federal and provincial governments. A Memorandum of Understanding (MOU)⁵⁹ between the federal government and the Nova Scotia government exists for the development of commercial aquaculture in Nova Scotia. The province is also part of a MOU between the federal government and the four Atlantic Provinces to work toward a harmonized regulatory and policy environment.⁶⁰

Nova Scotia, through the Canadian Council of Minister of Fisheries and Aquaculture Ministers, was part of the development of the *National Aquaculture Strategic Action Plan Initiative* (NASAI). Following the agreement on the NASAI, five strategic action plans were produced including an *Action Plan for East Coast Marine Finfish* ('Action Plan').⁶¹ The Action Plan includes an array of topic areas from environmental management, to public engagement to fish health. The Action Plan demonstrates cooperation and coordination among federal and provincial government. One of the key commitments under the Action Plan was production of the *Aquaculture Sustainability Reporting Initiative*. A first report was released in 2012, providing a broad and general overview of the industry and its practices but providing little real data on environmental impacts.⁶²

⁵⁹ A MOU is a bilateral or multi lateral policy agreement between departments, where parties agree to cooperate according to the provisions set out in the MOU. Although these documents are not legally binding, they are useful to understand the cooperation that exists with respect to fisheries and aquaculture.

⁶⁰ *Aquaculture Strategy*, *Supra* note 4 at 7.

⁶¹ Canadian Council of Fisheries & Aquaculture Ministers, *National Aquaculture Strategic Action Plan Initiative (NASAPI) 2011-2015; East Coast Marine Finfish Sector Strategic Action Plan*, (2010).

⁶² *Aquaculture in Canada 2012 A Report on Aquaculture Sustainability* DFO/2012-1803, Cat. No. Fs 45-1/2012E ISBN 978-1-100-10131-3.

3.2 *Fisheries and Coastal Resources Act*

The *Fisheries and Coastal Resources Act* (FCRA) was passed in 1996 in an effort to consolidate and revise the law respecting the fishery and to promote and implement programs that will sustain and improve the fishery, including aquaculture.⁶³

This Report does not propose to provide a detailed explanation of how the *Fisheries and Coastal Resources Act* operates. What follows is a preliminary analysis of some key concerns with the current regulatory framework for aquaculture, including conflicting mandates, broad discretion, lack of public engagement and limited assessment of environmental impacts.

3.2.1 The Mandate of the Minister of Fisheries and Aquaculture

The Minister of Fisheries and Aquaculture is responsible for aquaculture projects and the general supervision and management of the *Fisheries and Coastal Resources Act*.⁶⁴ The purpose section of the FCRA is multipart and includes references to improving development of the industry, sustaining the industry, and assisting in the increase of production. The purpose section does not include a statement about the need to sustain or protect the environment; however one could argue that the goal of regulation is to balance industry development with broader public interests, such as environmental protection. Not unlike the federal government's conflicting mandate, the Department of Fisheries and Aquaculture (DFA) also has a conflicting mandate, as the primary regulator and the key promoter of the aquaculture industry. As described in the *Cohen Report*, it is a difficult balance to play the role of both promoter and regulator:

On a broader level, DFO suffers from conflicting institutional mandates – on the one hand to regulate salmon farms for the conservation of wild salmon, and on the other hand to promote salmon farm development and products.⁶⁵

The industry, the public and the environment would be better served if the mandate to promote the industry were separate from the mandate to regulate the same industry.

Consideration 4

Government regulators need to consider the impact of housing regulatory decisions for industry management in the same department as industry promotion. The real and

⁶³ *Fisheries and Coastal Resources Act*, SNS 1996, c. 25, s.2 [FCRA].

⁶⁴ *Ibid* at s. 5.

⁶⁵ *Cohen Report vol.1, Supra* note 31 at 418.

perceived consequences of this approach should be reviewed, evaluated and open to public discussion.

3.2.2 Licensing and the Role of Public Consultation

Part V of the FCRA prohibits operation of an aquaculture site without a license.⁶⁶ In some instances, an aquaculture lease is also required. Licenses and leases are issued under the authority of the Minister who is required by the Act to consult with other government departments prior to making a decision.⁶⁷ After an application for a license has been made, provincial staff will review the application, conduct a technical review and a network review. The technical review, done by the Nova Scotia Department of Fisheries and Aquaculture, looks at the technical, biological, environmental and financial feasibility of the project. Several provincial and federal departments concurrently perform the network review.

Although the Minister is required by the Act to consult with other government departments, he or she is not required to consult with the public, including those who may be directly affected by the issuance of the license:

47. Before making a decision with respect to the application, the Minister
- (a) shall consult with
 - (i) the Department of Agriculture and Marketing, the Department of the Environment, the Department of Housing and Municipal Affairs and the Department of Natural Resources, and
 - (ii) any boards, agencies and commissions as may be prescribed;⁶⁸

The Minister may refer the application to a private sector, regional aquaculture development advisory committee for comment and recommendation.

After completing the consultation required in section 47, the Minister may 'refer the application to a public hearing' in accordance with section 48.⁶⁹ The provincial *Aquaculture Strategy* identified public concern about aquaculture operations to be one of the most challenging issues facing the industry. The *Strategy* indicates that it is the responsibility of industry, government, and other groups who seek to develop sites in Nova

⁶⁶ FCRA, *Supra* note 63; see also *Aquaculture License and Lease Regulations*, NS Reg 15/2000.

⁶⁷ FCRA, *Supra* note 63 at s. 47.

⁶⁸ *Ibid.*

⁶⁹ FCRA, *Supra* note 63 at s. 48.

Scotia to respond to local concerns.⁷⁰ However, while the government commitment to address this includes better communications plans and outreach programs, there are no legal requirements for communities to be consulted prior to the issuance of a license.

To make matters worse, the recent elimination of federal environmental impact assessment for aquaculture has eliminated the public consultation that was guaranteed as part of the *Canadian Environmental Assessment Act*.

Concerned citizens have no guaranteed means of having their voices heard prior to or during the licensing of a new aquaculture site. Nor do they have any means of ensuring their concerns, when raised, are given serious consideration. A broad engagement process has begun through the provincial *Aquaculture Strategy* and needs to be continued via regulatory reform. Government needs to continue to engage the public in an open dialogue on regulatory reform for aquaculture in Nova Scotia.

Consideration 5

Government regulators should consider legislated commitments to public engagement for all proposed aquaculture projects and decision-making in Nova Scotia. Community members need to be engaged in the licensing process before a license is issued and with the same opportunities as those provided to the industry.

3.2.3 Ministerial Decision-Making and Discretion

The decision to issue an aquaculture license or lease in Nova Scotia is with the Minister of Fisheries and Aquaculture. The Minister has broad discretion to issue a license or lease, with or without conditions. The Minister may also refer the application to a public hearing or reject the application. Most licenses are issued with conditions.

For the first time in recent memory, the Minister rejected an application for an open-net salmon license following comments by the federal Department of Fisheries and Oceans that the site posed a moderate risk to wild salmon.⁷¹ However, the reality is that most proposed open-net finfish aquaculture sites that seek a provincial license receive that license despite opposition from the community, other organizations and other individuals. Section 119 of the *Fisheries and Coastal Resources Act* includes the right of any ‘aggrieved person’ to appeal a decision of the Minister on a question of law or fact or a question of mixed law and fact. To date, there have been two decided court cases in Nova Scotia questioning the Minister’s decision to allow an aquaculture site to operate. In both cases, the court

⁷⁰ *Aquaculture Strategy*, *Supra* note 4 at 13.

⁷¹ *Fish Farm Application Not Approved for Shoal Bay*, New Release, Department of Fisheries and Aquaculture, 13 March 2013, online: <novascotia.ca/news/release/?id=20130313004>.

dismissed the case, finding that the Minister has a high level of discretion in issuing a licence or lease.⁷²

Consideration 6

Broad Ministerial discretion does not serve the public interest in the regulation of aquaculture. Government regulators should consider establishing a regulatory framework for aquaculture that reduces Ministerial discretion, providing a more consistent and predictable regulatory approach.

3.2.4 Environmental Impact Assessment and Monitoring

In 2003, the province established an Environmental Management Program (EMP) for marine aquaculture and incorporated a requirement for data collection in the license conditions under sections 48 and 50 of the *Fisheries and Coastal Resources Act*. The EMP is not required by the *Fisheries and Coastal Resources Act* but rather is a policy framework that is incorporated into license conditions.

When the EMP was introduced in 2003, baseline samples were taken for approximately two years. In 2006, the Department of Fisheries and Aquaculture (DFA) released a report summarizing the mean sulphide concentrations for all of the areas sampled.⁷³ The DFA released no further results from the EMP between 2006 and 2012 and the environmental monitoring data was not made available to the public.⁷⁴

In 2011, the DFA released a new *Environmental Monitoring Program Framework for Marine Aquaculture* [2011 Framework].⁷⁵ Section 6 of the 2011 Framework states:

The principles of transparency and collaboration are tenets of responsible environmental management and described in the original 2002 EMP document (Smith et al., 2002). Therefore, one goal of the NS EMP is to release information on the monitoring results to the public.⁷⁶

Despite this statement in the 2011 Framework, repeated requests from individuals and community groups were required before the DFA released environmental monitoring data

⁷² A brief summary of the two cases can be found in Appendix C to this Report.

⁷³ Nova Scotia Fisheries and Aquaculture, *Environmental Monitoring Program Framework for Marine Aquaculture in Nova Scotia* (2011), at 12, online: www.gov.ns.ca/fish/aquaculture/ns-emp-framework-march2011.pdf [EMPFMA].

⁷⁴ Milewski, Inka, *Nova Scotia Environmental Monitoring Program for Finfish Aquaculture, An Update (2006 to 2011)*, February 2013.

⁷⁵ EMPFMA, *Supra* note 74.

⁷⁶ EMPFMA, *Supra* note 74 at 12.

in the fall of 2012 for 11 of 16 finfish licenses. The data indicates a decrease in overall environmental quality in the area of the finfish sites since the report released in 2006.⁷⁷ The environmental monitoring and sharing of data are not required by law and, therefore, cannot be enforced.

As described in Section 2.4 above, the demise of CEAA has resulted in the elimination of federal EIA for aquaculture operations.⁷⁸ In Nova Scotia, aquaculture is not listed as an 'undertaking' in Schedule A of the *Environmental Assessment Regulations* and, therefore, does not require a provincial EIA.⁷⁹ Therefore, there is currently no legal requirement for an environmental impact assessment of proposed aquaculture projects in Nova Scotia. Conditions for environmental protection, monitoring, management and remediation are often set through environmental impact assessment.

During the Federal Standing Committee hearings on closed containment, representatives of the open-net salmon aquaculture industry indicated that although production can temporarily affect the local environment, the existing environmental assessment process for each proposed salmon farm ensured that these impacts were mitigated to the furthest extent possible and that any remaining environmental effects were not significant.⁸⁰ Since the amendments to CEAA there is no environmental impact assessment process in place and the EMP framework put in place by the DFA is not a legal requirement.

Consideration 7

Government regulators should consider the role of environmental impact assessment in assessing the potential impacts posed by proposed aquaculture operations. Given the recent federal changes provincial regulators should consider the need for legally mandated EIA, ongoing environmental monitoring and mandatory reporting for all current and future aquaculture operations in Nova Scotia.

⁷⁷ *Supra* note 75 at 5.

⁷⁸ Aquaculture is not listed on the *Designated Physical Activities List under CEAA, 2012*.

⁷⁹ A facility that produces fishmeal is listed as an undertaking and requires a Class I EIA, *Environmental Assessment Regulations*, NS Reg 26/1995.

⁸⁰ *Standing Committee Report, Supra* note 10 at 11.

4.0 Summary

4.1 Concluding Comments and Overarching Factors

The NS NDP government introduced an *Aquaculture Strategy* in May 2012 to facilitate growth of the aquaculture industry. However, the *Aquaculture Strategy* also recognizes a need for improved communication with concerned citizens, better monitoring of potential adverse impacts and a more effective regulatory system for aquaculture. The Strategy states:

The industry has outgrown the existing legislation and regulations. As the industry in Nova Scotia grows, there is a need for updated policies and improved regulatory safeguards.⁸¹

The Strategy includes a commitment to undertake a legislative and policy review with an expected completion of 2013. This review illustrates that in order for the open-net aquaculture industry to be environmentally sustainable, more effective regulation is required.

Overarching Factors

In addition to the seven specific provincial regulatory considerations highlighted throughout this Report, the following overarching factors deserve consideration in the reform process.

- Respond to the *Cohen Report* and the *Federal Standing Committee Report*

The *Cohen Report* and the *Federal Standing Committee Report* feature prominently in the national public debate around open-net finfish aquaculture. However, as of late March 2013, neither the federal government nor the government of Nova Scotia have provided any formal response to the recommendations in these important Reports.⁸² ECELAW observes the need for the N.S. government to respond to these recommendations as they related to provincial regulatory responsibility and policy.

- Address the jurisdictional instability caused by the *Morton* decision

Fallout from the 2009 BC Supreme Court decision in *Morton* has created instability in the provincial regulatory structure. Given this jurisdictional instability, there have been calls for the federal government to establish a national regulatory framework for aquaculture.

⁸¹ *Aquaculture Strategy*, *Supra* note 4 at 15.

⁸² *Will Fisheries minister act in response to the Cohen Commission?* Hill Times 23 March 2013, online: < www.hilltimes.com/policy-briefing/2013/03/18/will-fisheries-minister-act-in-response-to-the-cohen-commission/3403>.

Most recently, the *Federal Standing Committee* recommended that the Government of Canada develop a national policy and regulatory framework for aquaculture including an aquaculture act.⁸³ The provincial government has committed in the *Aquaculture Strategy* to update policies and improve regulatory safeguards. To ensure the process of regulatory reform is successful the federal government and the government of Nova Scotia need to establish a stable jurisdictional environment.

4.2 List of Considerations for Regulatory Reform in Nova Scotia

Consideration 1

Despite millions of dollars dedicated to aquaculture research through the federal AquaNet program, both the recent *Standing Committee Report* and the *Cohen Report* have identified unanswered questions and a need for more research and information on the ecological impacts of open-net finfish aquaculture. In the face of this uncertainty, government should consider a precautionary approach to development and regulation of the industry.

Consideration 2

An informed citizenry is key to ensuring an industry that is sustainable both economically and environmentally. Government regulators need to give due consideration to the transparency of information. Providing concerned citizens access to information and data collected by the government without financial or other barriers should be considered an important element of any regulatory framework.

Consideration 3

The extensive changes to federal legislation will impact the extent of regulatory oversight for the aquaculture industry in Nova Scotia. Provincial government regulators need to consider these changes and ensure that they have in place the regulatory authority and capacity necessary to fill the void left by the federal changes.

Consideration 4

Government regulators need to consider the impact of housing regulatory decisions for industry management in the same department as industry promotion. The real and perceived consequences of this approach should be reviewed, evaluated and open to public discussion.

Consideration 5

⁸³ *Standing Committee Report, Supra* note 10 Recommendation 5.

Government regulators should consider legislated commitments to public engagement for all proposed aquaculture projects and decision-making in Nova Scotia. Community members need to be engaged in the licensing process before a license is issued and with the same opportunities as those provided to the industry.

Consideration 6

Broad Ministerial discretion does not serve the public interest in the regulation of aquaculture. Government regulators should consider establishing a regulatory framework for aquaculture that reduces Ministerial discretion, providing a more consistent and predictable regulatory approach.

Consideration 7

Government regulators should consider the role of environmental impact assessment in assessing the potential impacts posed by proposed aquaculture operations. Given the recent federal changes, provincial regulators should consider the need for legally mandated EIA, ongoing environmental monitoring, and mandatory reporting for all current and future aquaculture operations in Nova Scotia.

Appendix A

Cooke Aquaculture Subsidiaries

The table below shows all Cooke subsidiaries that have been purchased over the years. Several of these companies are business-to-business companies, and thus they will not have direct relations with customers (and, thus, are harder to find information on).

Cooke Aquaculture Subsidiaries (sorted alphabetically):⁸⁴

Organization	Website
AC Covert Distributors	http://www.accovert.com/
Allavoix Corp.	
Atlantic Fish Specialties Ltd.	Referred to as True North. http://www.ic.gc.ca/app/ccc/srch/nvgt.d/estblmntNo=371386330000&profile=cmp1&app=sold&lang=eng
Atlantic Salmon of Maine	
Charlotte Feeds	http://investing.businessweek.com/research/snapshot.asp?privcapId=73508993
Cooke Aquaculture Inc.	http://cookeaqua.com/
Culimer Inc.	http://b2b-directory.ca/culimer-inc/l242
Di-Anna Aqua Inc.	http://411.ca/business/profile/1612386
Double O Fish Ltd.	http://www.ibegin.com/directory/ca/novscotia/digby/double-o-fish-farm-ltd-5885217/

⁸⁴ Cooke Aquaculture – Company Growth Timeline, online: <<http://cookeaqua.com/about-cooke-aquaculture/company-growth-timeline>>

Fairmount & Clarke	
Fundy Salmon Ltd.	http://www.ibegin.com/directory/ca/new-bay/fundy-salmon-ltd-66-back-bay-loop-r
GMG Fish Services Ltd.	http://cookeaqua.com/about-cooke-aquaculture/divisions/gmg-fish-services-l
Grand Isle Fish Farms Ltd.	
Heritage Salmon	http://www.heritagesalmon.com/about-u
Horton's Smoked Seafood Ltd.	http://www.manta.com/c/mmbqs73/hor-seafood
Jail Island Salmon	http://cookeaqua.com/about-cooke-aqua-and-services
Kelly Cove Salmon	http://www.ic.gc.ca/app/ccs/srch/nvgt.d&sbPrtl=&estblmntNo=123456059224&pofileId=501&app=sold
L&J Salmon Ltd.	
Marine Harvest (formerly Stolt Sea Farm)	http://www.marineharvestcanada.com/
Northeast Nutrition Inc. (Former Shur-Gain Aquaculture feed plant)	http://www.manta.com/ic/mt6kc14/ca/rinc http://news.google.com/newspapers?nid=24&id=48MkAAAAIIBAJ&sjid=uA4GAAAAI53
Rattling Beach Farm Ltd.	http://novascotiaincs.com/rattling-beach-limited.DSq.company.html
Saddle Island site in NS	

Salmones Cupquelan S.A.	http://www.salmonescupquelan.com/hor
Silver Bay Salmon	
Silver Hatchery	http://www.canadapages.ca/nb/silver-ha ltd_1047107.html
Shoreland Transport	http://www.manta.com/ic/mtq0xgm/ca/transport-inc
True North Salmon	http://www.truenorthsalmon.com/about

The main divisions of Cooke Aquaculture, and those most likely to be in contact with a customer or to be referred to in the media are: Kelly Cove Salmon; True North Salmon, which is responsible for the brands True North Salmon, Heritage Salmon, and Jail Island Salmon; GMG Fish Services Ltd.; Shoreland Transport; and Charlotte Feeds & Northeast Nutrition.⁸⁵

⁸⁵ Cooke Aquaculture - Divisions, online: <<http://cookeaqua.com/about-cooke-aquaculture/divisions>>

Appendix B

Graphed Statistics for Aquaculture in Nova Scotia 1994 - 2011

The following figures respectively outline total sales, total production, and total employment (finfish only) in the Nova Scotia aquaculture industry between 1994 and 2011.⁸⁶

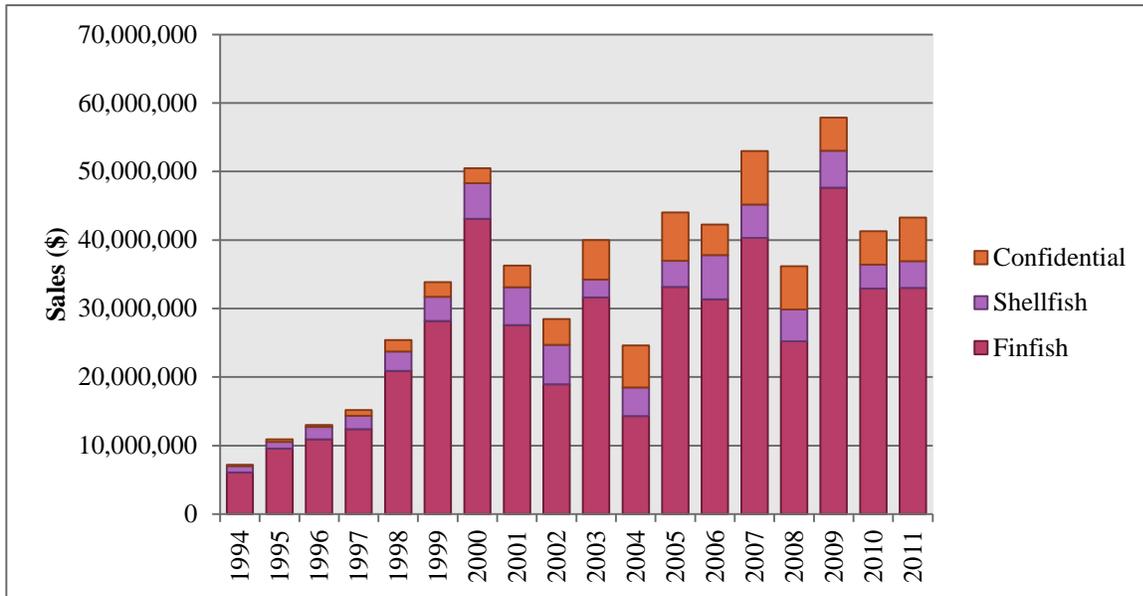


Figure 1: Total sales value of aquaculture products raised in Nova Scotia

⁸⁶ Nova Scotia, Fisheries and Aquaculture, *Aquaculture Statistics* (2012), online: <<http://www.gov.ns.ca/fish/aquaculture/stats/>>.

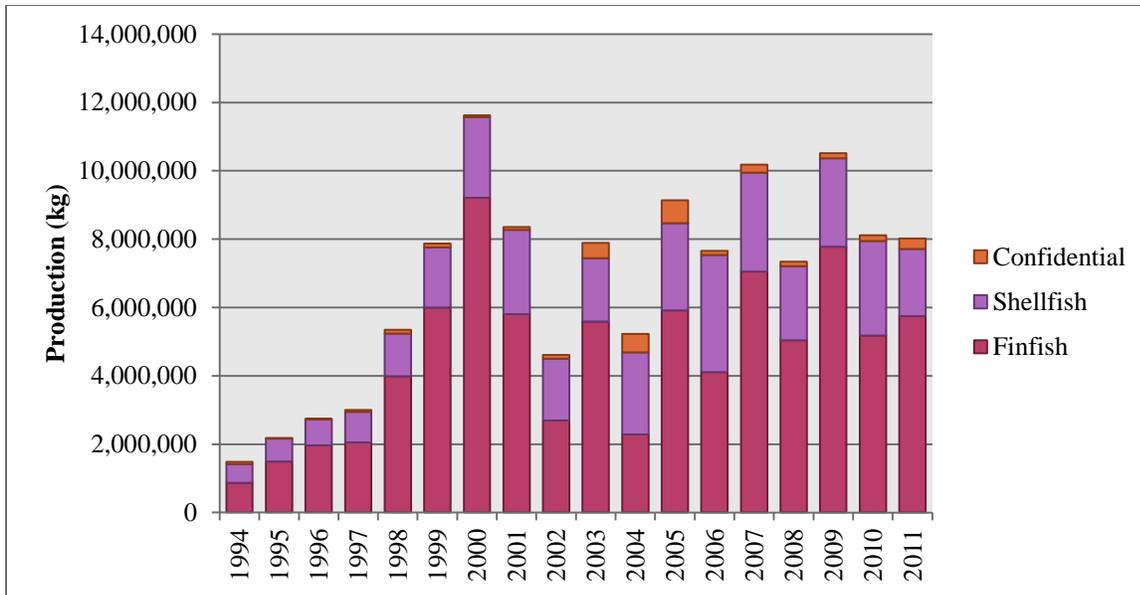


Figure 2: Quantity of aquaculture products raised in Nova Scotia

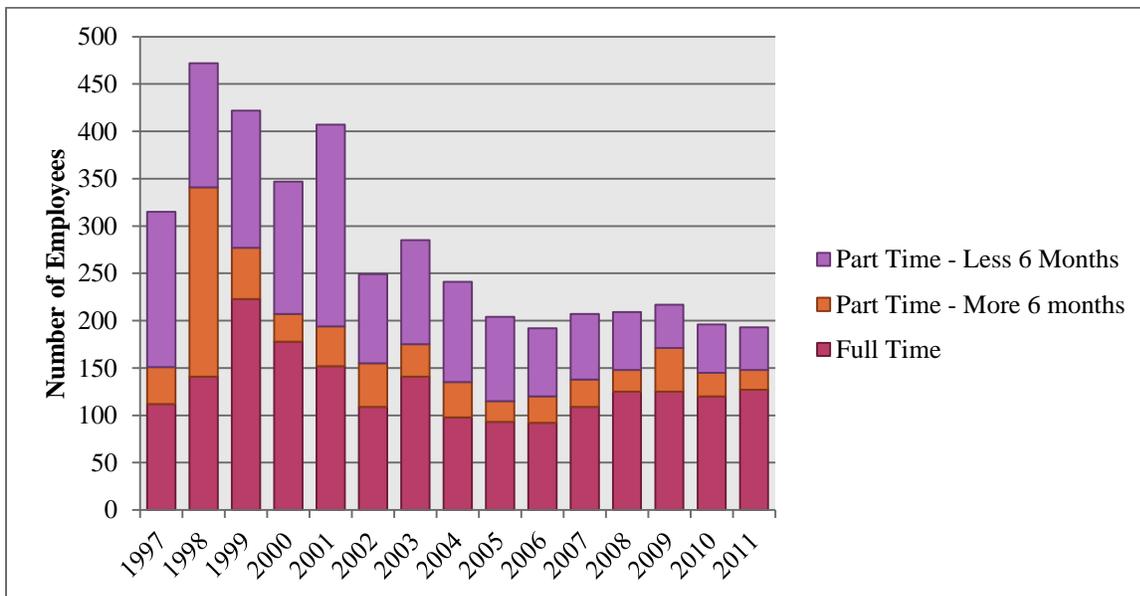


Figure 3: Number of jobs held by people in the finfish aquaculture industry in Nova Scotia

Appendix C

Case law Summary

Fisheries and Coastal Resources Act, Section 119

Brighton v. Nova Scotia (Minister of Agriculture and Fisheries)

In 2002, a group of concerned citizens used section 119 to appeal the decision by the Minister of Agriculture and Fisheries to grant a lease and license to an aquaculture operation in North West Cove, Lunenburg County.⁸⁷ The Court found that the group of citizens were ‘aggrieved persons’ based on a long record of engagement and interest.

The judge in the case determined that the role of the court was to review the Minister’s discretionary decision, not to substitute the Minister’s decision with a decision of the court. After a detailed discussion of the case law on standard of review for similar decisions, the judge found the appropriate standard of review for this case to be ‘reasonableness’.⁸⁸ In these circumstances, the Court found that the decision was not unreasonable, as the Minister’s decision was the result of “an extremely comprehensive consultative process”⁸⁹. The Court concluded that though the decision was controversial, “not every controversial decision is necessarily unreasonable”⁹⁰.

Specter v. Nova Scotia (Minister of Fisheries and Aquaculture)

In 2012, two property owners living near an aquaculture site used section 119 to appeal a decision by the Minister to grant amendments to relocate and increase the size of three aquaculture sites.⁹¹ The appellants, who were deemed by the court to be ‘aggrieved persons,’ argued that the Minister erred when he treated the applications as amendments to existing licenses and leases rather than new applications.⁹² The primary question raised in the case was whether the Minister failed to follow proper procedure in considering the applications.

The Court considered the Minister’s actions based on a ‘standard of reasonableness’, recognizing that the *Fisheries and Coastal Resources Act* provides the Minister with broad powers to promote and regulate the aquaculture industry. The Court found that the appellants did not show that the Minister’s decision to approve the amendment

⁸⁷ 2002 NSSC 160.

⁸⁸ *Ibid* at para 34.

⁸⁹ *Ibid* at para 35.

⁹⁰ *Ibid* at para 42.

⁹¹ 2012 NSSC 40.

⁹² *Ibid* at para 45.

applications was unreasonable. The Court also determined that “it is not the function of this Court, sitting in appeal of the Minister’s decision, to review the scientific and technical evidence, and resolve any inconsistencies or ambiguities which might exist”⁹³.

⁹³ *Ibid* at para 77.