



**Invasive Alien Species Legislative Review and Gap Analysis
Phase 1: Terrestrial Plants and Insects**

A report prepared for the
Invasive Species Alliance of Nova Scotia
by
LJM Environmental Law and Consulting
May 2010

Funded by the Invasive Alien Species Partnership Program,
a Government of Canada Initiative



LJM Environmental Law & Consulting Report

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ON Invasive Alien Species Legislative Review and Gap
 Analysis
 Phase I: Terrestrial Plants and Insects

28 May 2010

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For official legislative provisions, consult the relevant federal and provincial statutes and regulations.

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I. Introduction

The Invasive Alien Species Legislative Review and Gap Analysis Phase I: Terrestrial Plants and Insects was completed in May 2010 by LJM Environmental Law for the Invasive Species Alliance of Nova Scotia. Formed as an ad-hoc group in 2007, the Invasive Species Alliance of Nova Scotia (ISANS) has grown into a non-profit group of individuals and organizations focused on improved communication and information sharing to better address the threat of invasive alien species at the provincial level.

LJM Environmental Law was established in 1995 as one of the first law practices in Nova Scotia devoted exclusively to environmental law and policy. Lisa Mitchell, the principal of LJM and author of this Report has a degree in law and a Masters in Environmental Studies, along with over fifteen years of experience working in the field of environmental law.

The Invasive Alien Species Legislative Review and Gap Analysis Phase I: Terrestrial Plants and Insects Report (the “Report”) provides a summary overview of federal and provincial (Nova Scotia) statutes and regulations which contain direct or indirect authorities to prevent the introduction of, control and eradication of invasive alien species (terrestrial plants and insects) in Nova Scotia. The Report is supported by two appendices that specifically identify the legislative provisions referenced in the Report. A third appendix to the Report identifies the statutes and regulations that may be used to manage invasive alien species in Nova Scotia and sets out the constitutional basis for the legislation, the area regulated, the Minister responsible and a brief summary of its purpose.

Funding for this Report was provided by the Invasive Alien Species Partnership Program (IASPP), a Government of Canada Initiative.

II. Background

The ISANS Steering Committee has repeatedly identified a provincial legislative review as a high priority. With the exception of the Chief Inspector under the *Weed Control Act*, the government of Nova Scotia does not currently have any staff officially responsible for the identification and management of invasive alien species (IAS). The responsibilities of individual government departments related to IAS are unclear to the public, as well as to other government departments. ISANS sees a number of benefits resulting from this legislative review, including:

- clarification of roles of government agencies and private landowners with respect to IAS management;
- provision of a tool for governments and landowners to understand and comply with existing legislation;
- informing stakeholders and the public about government and citizen roles related to IAS;
- identification of how existing legislation could be used more effectively to manage IAS;
- compilation of all related information in one document/location;
- contribution to early detection and rapid response (EDRR) of new IAS; and
- provision of a tool for informing provincial policy related to IAS.

The Report was developed to assist ISANS, provincial and municipal governments, private landowners, and the public in identifying the primary legislative authorities and responsibilities of federal and provincial (Nova Scotia) government departments in the management of IAS (terrestrial plants and insects).

In 1992, Canada became a signatory to the *Convention on Biological Diversity* (CBD). Article 8(h) of the Convention states:

Each Contracting Party shall, as far as possible and as appropriate:
(h) Prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species.

Commitments made in the CBD together with commitments made by Canada as a signatory to the *International Plant Protection Convention* (IPPC) provide a mandate to the federal government to prevent the introduction and spread of IAS in Canada.

In 2004, the federal government introduced *An Invasive Alien Species Strategy for Canada* (the “Strategy”). The scope of the Strategy is broad and inclusive, covering all IAS regardless of species type, where they originated, or how they were introduced into Canada.

The Invasive Alien Species Strategy for Canada seeks to protect Canada’s aquatic and terrestrial ecosystems, and their native biological diversity and domestic plants and animals, from the risks of invasive alien species.¹

The definitions of “alien species” and “invasive alien species” in the Strategy reflect these broad intentions.

Alien species are species of plants, animals (including fish), and micro-organisms introduced by human action outside their natural past or present distribution.²

Invasive alien species are those harmful alien species whose introduction or spread threatens the environment, the economy, or society, including human health. Alien bacteria, viruses and fungi, and aquatic and terrestrial plants, mammals, birds, reptiles, amphibians, fish and invertebrates (including insects and mollusks) can all become invaders.³

In an effort to incorporate the Strategy into policy, planning and legislation at the federal and provincial levels, two key initiatives were undertaken. The *Action Plan for Terrestrial Plants and Plant Pests* (the “Terrestrial Action Plan”) and the *Canadian Action Plan to Address the Threat of Aquatic Invasive Alien Species* (the “Aquatic Action Plan”) were both completed in 2004.

The Terrestrial Action Plan was supported by a baseline policy analysis of federal legislation, completed by Environment Canada in 2004. This analysis is provided in Appendix 3 of the Terrestrial Action Plan and its focus is on the legislative framework for import control of IAS.⁴

¹ An Invasive Alien Species Strategy for Canada, 2004 at page 7.

² An Invasive Alien Species Strategy for Canada, 2004 at page 5; see also Decision VI/23 of the Convention on Biological Diversity.

³ An Invasive Alien Species Strategy for Canada, 2004 at page 5; see also United States National Invasive Alien Species Council Management Plan, 2001.

⁴ Action Plan for Invasive Alien Terrestrial Plants and Plant Pests, 2004, 4.3 Appendix 3: Strengthening Canada’s Federal Legislative Framework for Regulating the Importation of Alien Plants and Plant Pests – A Preliminary Analysis. <http://www.inspection.gc.ca/english/plaveg/invenv/action/phase1e.shtml#a4.2>

The Terrestrial Action Plan recommended that the preliminary work done by Environment Canada be developed into a comprehensive legal analysis to evaluate all existing legislative and regulatory coverage relating to invasive alien plants and plant pests in Canada. This analysis is to include an assessment of operational capabilities and recommend means by which gaps may be filled and by which a comprehensive, integrated federal/provincial legal framework be established.⁵

Research indicates that the only other province to produce an overview or analysis of legislation relevant to the management of IAS is British Columbia. The Invasive Plant Council of British Columbia prepared A Legislative Guidebook to Invasive Plant Management in British Columbia in 2007. The Guidebook provides an excellent summary overview of the federal and provincial (British Columbia) legislative frameworks for invasive plants. As noted in the title, the information is limited to invasive plants only and it includes only a narrative overview of the relevant statutes and regulations. Specific provisions of the statutes and regulations are not identified or analyzed.⁶

III. Scope

This Report (Invasive Alien Species Legislative Review and Gap Analysis Phase I: Terrestrial Plants and Insects), provides the most comprehensive overview and analysis of federal and provincial (Nova Scotia) legislation on the management of IAS to date. It is the only initiative to cover the regulatory framework in Nova Scotia and it builds extensively on previous work in the federal sphere by including a more detailed presentation and analysis of federal legislation.

Phase I of this Report focuses on terrestrial plants and insects. Phase II of this Report will focus on aquatic organisms.

Due to a lack of clarity surrounding some pieces of legislation, and the potential for the introduction of new or amended legislation, this Report should be considered a living document, itself subject to revision.

⁵ Action Plan for Invasive Alien Terrestrial Plants and Plant Pests, 2004, Phase 1 – Key Initiatives, Section 3.2.2 Legislation and Regulation. <http://www.inspection.gc.ca/english/plaveg/invenv/action/phase1e.shtml>

⁶ Invasive Plant Council of BC, Report # 3, December 2007, A Legislative Guidebook to Invasive Plant Management in BC. <http://invasiveplantcouncilbc.ca/publications/ipcbc-reports/IPC3-Legislative-Guidebook.pdf>

Part A

Provincial Overview of Legislative Authorities and Responsibilities for Invasive Alien Species (Terrestrial Plants and Insects)

The following summary provides an overview of the legislative authorities and responsibilities for invasive alien species (terrestrial plants and insects) provided to provincial Ministers. The goal of this summary is to clarify the role that each of the Ministers may play in the management of invasive alien species in Nova Scotia. Appendix A, entitled Jurisdictional Tables, provides a more detailed overview of ministerial authorities and responsibilities identified in this part.

This part is divided into two sections. Section 1.0 identifies: (1.1) which Ministers have direct or indirect responsibility for invasive alien species in the province; (1.2) under what circumstances the provincial government has relatively broad regulatory control of invasive alien species; (1.3) the geographical areas in the province where the government can control invasive alien species; and (1.4) which plant and animal species the government can protect from invasive alien species.

Section 2.0 is a brief narrative overview of each of the relevant provincial statutes, including a preliminary assessment of authorities that support management of invasive alien species and limitations on those authorities.

1.0 Provincial Authorities and Responsibilities

1.1 Responsible Ministers

The following provincial Ministers have direct or indirect responsibility for invasive alien species:

1.1.1 Minister of Natural Resources

The Minister of Natural Resources is responsible for six statutes that may be used to control and/or eradicate invasive alien species in Nova Scotia. In each case the authority of the Minister is limited to a specific area (forests, provincial parks, beaches) or to specific species (wildlife, endangered species). Within these limitations the Minister has fairly broad authority to control and/or eradicate invasive alien species when they are identified. In some cases the Minister is required by legislation to implement management plans that could prevent the introduction of invasive alien species.

1.1.2 Minister of Agriculture

The Minister of Agriculture is responsible for six statutes that may be used to manage invasive alien species. Four of the six statutes are very specific, intended to protect only a narrow group of agricultural industries (bees, cattle, potato, agricultural marshland). The Minister's authority under the *Weed Control Act*, although narrow in its application (designated noxious weeds only), can be applied to ensure that action is taken to prevent the spread of noxious weeds that may spread to agricultural land or inflict economic harm or ill health on Nova Scotians.

1.1.3 Minister of Environment

The Minister of Environment is responsible for two statutes that may be used to prevent the introduction of, control or eradicate invasive alien species. The protection of biodiversity is a recognized theme in both statutes and therefore provides a strong foundation for invasive alien species management. The umbrella statute, *Environment Act*, has been used to manage invasive alien species through the approval process, and includes many additional opportunities for regulatory development in this regard.

1.1.4 Minister of Service Nova Scotia and Municipal Relations

The Minister of Service Nova Scotia and Municipal Relations is responsible for the *Municipal Government Act*. The role of the Minister in the management of invasive alien species under this Act is merely as an oversight to municipal by-law making authorities on weed control. This Report does not examine municipal by-laws.

1.1.5 Minister of Transportation

The Minister of Transportation is responsible for one statute, *Public Highways Act* that may be used to eradicate or control invasive alien species in a narrow context. Although the mandate of the Minister is limited to public highways, the Department has been active in establishing programs to manage invasive alien species within this mandate. These activities have also contributed to the identification and monitoring of invasive alien species on a broader scale.

1.2 General Areas of Regulation

A review of the legislation indicates that the provincial government has relatively broad authority to regulate invasive alien species (terrestrial plants and insects) in the following circumstances:

- Any undertaking that requires an environmental impact assessment (*Environment Act*)
- Any designated activity that requires an approval (*Environment Act*)
- Any invasive alien species that is part of a municipal weed control program (*Municipal Government Act*)
- Any invasive alien species designated as a noxious weed (*Weed Control Act*)
- Any invasive alien species deemed to be an “injurious agent” to a forest (*Forests Act*)

1.3 Geographical Areas of Protection

A review of the legislation indicates that the provincial government has the authority to regulate and manage invasive alien species in the following areas:

- Crown forests
- Provincial parks
- Beaches
- Designated wilderness areas
- Agricultural land, including designated marshland (dyke land)
- Rights of way associated with public highways

1.4 Species Protected by Regulation

A review of the legislation indicates that the provincial government has the authority to protect the following plants and animals from invasive alien species:

- Wildlife and wildlife habitat
- Listed endangered species and their habitat
- Flora and fauna in designated areas (as described in Section 1.3)
- Bees
- Cattle
- Potatoes
- Apples

2.0 Provincial Legislative Summaries by Ministry

The following section provides a brief narrative on each of the relevant statutes, including a summary of pros and limitations. Details of each of the statutes described in this section can be found in Appendix B, entitled Provincial Legislative Tables.

2.1 Minister of Natural Resources

2.1.1 *Forests Act*

Under the *Forests Act* the Minister has broad authority to study and undertake activities to protect forests, including research on the control of competing vegetation. Section 21 of the Act requires the Minister to take steps to protect forests on Crown and private lands from all “injurious agents” including insects and disease (e.g. Dutch Elm Disease Regulations). The term “injurious agent” is not defined.

Pros:

- (1) Applies to Crown and private land.
- (2) Requires the Minister to monitor forests for insects and diseases.
- (3) Requires the Minister to take action to protect forests from all “injurious agents”.

Limitations:

- (1) Applies to forests only.
- (2) Does not refer to invasive alien species specifically.
- (3) Focus is on insects and diseases.
- (4) Does not define “injurious agent”.

2.1.2 *Forest Enhancement Act*

The *Forest Enhancement Act* requires the Minister to develop forest management programs that account for insects, diseases and competing vegetation. The Minister must use forest management techniques on Crown land and recommend such techniques on private land.

Pros:

- (1) Requires forest management programs which could facilitate planning to identify and manage invasive alien species.

Limitations:

- (1) Applies to forests only.

- (2) Requirements apply to Crown forest land only (recommendations for private land).
- (3) Does not refer to invasive alien species specifically.

2.1.3 *Wildlife Act*

The *Wildlife Act* vests all wildlife in the Crown, and the Minister has the responsibility of overseeing the protection of wildlife. The Minister may develop policies and programs to protect wildlife, including policies and programs that protect wildlife and wildlife habitats. The Minister has the authority to undertake studies and carry out programs on wildlife and wildlife habitats to promote the long-term productivity, diversity and stability of forest and wetlands systems.

- Pros:
- (1) Makes the Minister responsible to oversee the protection of wildlife.
 - (2) The application of the Act is not limited to Crown land.
 - (3) There is no requirement to identify/list a species before action is taken.
 - (4) Supports diversity and stability in forest and wetland systems.

- Limitations:
- (1) Does not refer to invasive alien species specifically.
 - (2) The Minister is not required to take any action.
 - (3) The Minister's authority is limited to protection of wildlife and wildlife habitat.

2.1.4 *Provincial Parks Act*

The *Provincial Parks Act* provides the Minister with the authority to take steps to protect flora and fauna in provincial parks.

- Pros:
- (1) The Minister has broad authority to take whatever steps deemed necessary to protect flora and fauna in any provincial park.
 - (2) There is no requirement to identify/list a species before action is taken.

- Limitations:
- (1) The Minister's authority applies only within provincial parks.
 - (2) Does not refer to invasive alien species specifically.
 - (3) The Minister is not required to take any action.

2.1.5 *Endangered Species Act*

The *Endangered Species Act* requires the Minister to take steps to protect and recover species listed under the Act. The protection of species specifically includes habitat protection. The Act places the conservation of species at risk within a broader strategy to maintain biodiversity and to use biological resources in a sustainable manner. The Act also recognizes the precautionary principle and its value in taking action to minimize threats to species at risk.

- Pros:
- (1) Specifically recognizes the importance of biodiversity.
 - (2) Recovery/management plans for listed species must be prepared.
 - (3) Recovery/management plans must include identification of habitat.
 - (4) Recovery/management plans are monitored and subject to a five year review.

- Limitations:
- (1) The requirements only apply to species at risk (listed under the Act) and their habitat.

- (2) Most of the Minister's authority relating to habitat is limited to core habitat, as defined by the Act.
- (2) The authority of the Minister to take or require actions to be taken on private land is limited.

2.1.6 *Beaches Act*

The *Beaches Act* dedicates all beaches to the present and future generations of Nova Scotians. The Act enables the creation of regulations for the preservation, control and management of beaches, and the preservation and protection of flora and fauna located on a beach. No such regulations currently exist.

- Pros:
- (1) The regulatory authority to protect flora and fauna on beaches is broad and could include protection from invasive alien species.
- Limitations:
- (1) The authority to protect flora and fauna can only be effected through regulation.
 - (2) Does not refer to invasive alien species specifically.
 - (3) The application of the Act is limited to beaches.

2.2 Minister of Agriculture

2.2.1 *Agriculture and Marketing Act*

The *Agriculture and Marketing Act* provides the Governor in Council (i.e. Cabinet) with broad regulation-making authority to eradicate, control or prevent the introduction into the Province or the dissemination of plant disease, insect or pest that have been declared by the Governor in Council (GIC) to be subject to the Act. Currently the apple maggot, San Jose scale and certain contagious bee diseases have been declared.

- Pros:
- (1) The regulation-making authorities to deal with plant disease, insects and pests are very broad and include application on private land.
- Limitations:
- (1) Applies to plant diseases, insects and pests that are declared by the GIC under the Act.
 - (2) Action will only be taken via regulation.
 - (3) Does not refer to invasive alien species specifically.
 - (4) Focused on the protection of commercial agriculture.

2.2.2 *Bee Industry Act*

The *Bee Industry Act* regulates the beekeeping industry. Under the Act, Inspectors are granted powers to treat or disinfect bees and beekeeping equipment and power to keep bees or beekeeping equipment at a specified location where a disease or pest is discovered. The Act is specific to beekeeping and only diseases, insects and parasites designated by the Bee Industry Regulations are subject to the Act.

- Pros:
- (1) Provides broad powers to Inspectors to take action to prevent the spread of disease or pests.
 - (2) Requires actions to be taken by any beekeeper.
 - (3) Beekeepers are required to report any designated pest or disease.

- Limitations:
- (1) Only diseases and pests designated by Regulation are subject to the Act.
 - (2) Limited to the beekeeping industry.
 - (3) Does not refer to invasive alien species specifically.

2.2.3 *Cattle Pest Control Act*

The *Cattle Pest Control Act* provides the Livestock Health Services Board with the power to formulate and implement treatment programs for the warble fly.

Pros: (1) Ensures treatment programs for the warble fly.

Limitations: (1) Applies only to the warble fly in cattle.

2.2.4 *Potato Industry Act*

The *Potato Industry Act* provides the Minister the authority to order steps to be taken to prevent the spread of insects, pests and diseases that are destructive or injurious to potatoes. The Governor in Council may make regulations to prevent the introduction and spread of any insect, pest or disease. The Potato Industry Regulations exercise this authority for bacterial ring rot.

Pros:

- (1) Applies to any insect, pest or disease that is injurious to potatoes, designation of a specific insect, pest or disease is not required.
- (2) The Minister has broad authority to order any person who owns potatoes infested with an insect, pest or disease to take steps to prevent spread of such.

Limitations: (1) The application of the Act is limited to the potato industry.

2.2.5 *Weed Control Act*

Under the *Weed Control Act*, Inspectors are granted powers to order noxious weeds and seeds to be destroyed on any land, and may undertake the destruction where the occupant of the land does not comply with the order. The Act only applies to noxious weeds and seeds that have been listed in Weed Control Regulations. The Act is intended to protect agricultural land, however application is not limited to agricultural properties and may be invoked to prevent economic harm or ill health.

Pros:

- (1) Inspectors have broad powers to ensure that designated noxious weeds and weed seeds are destroyed anywhere in the province including on private land.
- (2) Inspectors have authority to require noxious weeds to be controlled along public highways.
- (3) Any occupant of land is required to destroy noxious weeds in accordance with the Act.
- (4) The Minister is required to have a weed control advisory committee in place.

Limitations: (1) Applies to noxious weeds that have been designated by regulation.

- (2) The intent of the Act is limited to preserving the quality of agricultural land, and providing protection from weeds which can inflict economic harm or ill health on humans and animals.
- (3) Does not specifically reference invasive alien species or biodiversity.

2.2.6 *Agricultural Marshland Conservation Act*

The *Agricultural Marshland Conservation Act* includes broad Ministerial authority relating to “works” on marshlands used for agricultural purposes. “Works” include “...facilities for the conservation, development, improvement or protection of marshland...”

- Pros: (1) The Minister’s authority to protect agricultural marshland is broad.
- Limitations: (1) The application of the Act is limited to marshland designated under the *Marshland Reclamation Act*.
- (2) Does not refer to invasive alien species specifically and its application to the control of invasive alien species is not clear.

2.3 Minister of Environment

2.3.1 *Environment Act*

The *Environment Act* is an umbrella statute which has as its goal the protection, enhancement and prudent use of the environment. The Act recognizes the principle of ecological value, ensuring the maintenance and restoration of essential ecological processes and the preservation and prevention of loss of biological diversity. Although the term invasive alien species is not referenced in the statute, the language contained in the purpose section of the Act facilitates the use of the Act as a tool to manage invasive alien species. The Minister has a number of authorities under the Act that have been or may be used to prevent, control and/or eradicate invasive alien species.

- The Minister has the authority to sponsor or undertake research on anything the Minister considers necessary to achieve the purpose of the Act. This could include research on the impact of invasive alien species on biological diversity.
- The Minister has the authority to take action against any person who releases a substance that causes or may cause an adverse effect to the environment. The definition of substance is very broad and could arguably include invasive alien species.
- The Minister has the authority to require remedial measures be taken to prevent, reduce or remedy the adverse effects of a substance.
- The Minister regulates the handling, storage, etc of pest control products (Pesticide Regulations).
- The Minister can assess the potential environmental effects of invasive alien species in the context of an environmental impact assessment (EIA) and can include conditions in EIA approvals to address any concerns (Environmental Assessment Regulations).
- The Minister can include terms and conditions in approvals required for a variety of activities (e.g. alteration of a wetland) to prevent the introduction of invasive alien species or mitigate the impacts of invasive alien species (Activities Designation Regulations).

- Pros: (1) The purpose section of the Act specifically recognizes the preservation of biodiversity as a goal.

- (2) The Minister has broad authority to consider any thing that has or may have an adverse effect on the environment.
 - (3) Includes numerous opportunities to implement programs to manage invasive alien species.
- Limitations:
- (1) Does not refer to or define invasive alien species specifically.
 - (2) Provisions that may be used to address invasive alien species are discretionary to the Minister; specific actions are not required.
 - (3) In some instances the authorities provided to the Minister may not be deemed appropriate for invasive alien species management.

2.3.2 *Wilderness Areas Protection Act*

The *Wilderness Areas Protection Act* enables the Minister of Environment to maintain and restore the integrity of natural processes and biodiversity within protected areas. The Minister has broad authority to establish committees, programs, policies, etc., and is required to produce a management plan to guide “protection” of the designated wilderness area.

- Pros:
- (1) Recognizes protection of biodiversity.
 - (2) The Minister’s authority to protect biodiversity is not limited to specific species or actions.
 - (3) The Minister is required to establish a plan.

- Limitations:
- (1) Applies to designated wilderness areas only.
 - (2) Does not refer to invasive alien species specifically.

2.4 Minister of Service Nova Scotia and Municipal Relations

2.4.1 *Municipal Government Act*

The *Municipal Government Act* grants municipalities the authority to create by-laws to address nuisance activities, including control of “weeds”. The Act does not include a definition of “weeds”.

- Pros:
- (1) The by-law making authority is not limited to designated “weeds”.
 - (2) Enabling municipal governments to manage weed control provides more opportunities for monitoring and management of invasive alien species.

- Limitations:
- (1) The by-law making authority is set in the context of nuisance activities, which may limit application.
 - (2) The by-law making authority is limited to weeds.
 - (3) Does not specifically reference invasive alien species or biodiversity.
 - (4) Does not define “weeds”.

2.5 Minister of Transportation

2.5.1 *Public Highways Act*

The *Public Highways Act* vests every common and public highway, together with the land within the highways boundaries in the Crown. The Act states that every road now open and used as a public road or highway is deemed to be a public highway. The Minister is granted broad

authority to preserve and maintain public highways. Guidance materials produced by the Department of Transportation indicate that the shoulder area, ditch area and buffer zone all exist within the right of way of the public highway and are subject to maintenance under the Act.

Pros: (1) The Minister has broad authority to control any unwanted vegetation along a public highway.

Limitations: (1) The Minister's authority is limited to the public highway and associated right of way.
(2) Does not specifically reference invasive alien species or biodiversity.

Part B

Federal Overview of Legislative Authorities and Responsibilities for Invasive Alien Species (Terrestrial Plants and Insects)

The following summary provides an overview of the legislative authorities and responsibilities for invasive alien species (terrestrial plants and insects) provided to federal Ministers. The goal of this summary is to clarify the role that each of the Ministers may play in the management of invasive alien species in Nova Scotia. Appendix A, entitled Jurisdictional Tables, provides a more detailed overview of ministerial authorities and responsibilities identified in this part.

This part is divided into two sections. Section 1.0 identifies: (1.1) which Ministers have direct or indirect responsibility for invasive alien species; (1.2) under what circumstances the federal government has relatively broad regulatory control over invasive alien species; (1.3) the geographical areas where the government can control invasive alien species; and (1.4) which plant and animal species the government can protect from invasive alien species.

Section 2.0 is a brief narrative overview of each of the relevant federal statutes, including a preliminary assessment of authorities that support management of invasive alien species and limitations on those authorities.

1.0 Federal Authorities and Responsibilities

1.1 Responsible Ministers

The following federal Ministers have direct or indirect responsibility for invasive alien species:

1.1.1 Minister of Environment

The Minister of Environment is responsible for six statutes with a wide ranging impact on the management of invasive alien species. Four of the six statutes are focused specifically on the protection of wildlife species and their habitats. Each of the four statutes has a slightly different means of exercising that protection, but in all cases the Minister's authority is intended to ensure that important Canadian species and spaces are protected. The other two statutes provide a more general protection for the environment from undertakings or substances that may be harmful. Within the context of these statutes, invasive alien species, though not specifically addressed, may be captured because of their potential to cause an adverse effect to the environment.

1.1.2 Minister of Natural Resources

The Minister of Natural Resources is responsible for two statutes that may play a role in the management of invasive alien species. Both of these statutes provide opportunities for the Minister to engage in research related to the protection and management of Canada's natural resources. Neither of the statutes contain any direct responsibilities for the identification, control or eradication of invasive alien species.

1.1.3 Minister of Agriculture

The Minister of Agriculture is responsible for two statutes relevant to the management of invasive alien species. The Canadian Food Inspection Agency (CFIA) plays a leadership role in the

implementation of *An Invasive Alien Species Strategy for Canada* as it relates to plants and plant pests. The primary objectives of the CFIA in this regard are to prevent the introduction and spread of plant pests of “quarantine significance”, to detect and control or eradicate “designated” plant pests and to certify plant and plant products for domestic and export trade.⁷

1.1.4 Minister of Health

The Minister of Health does not have any direct responsibility for the management of invasive species. The Health Canada Pest Management Regulatory Agency (PMRA) is responsible for pesticide regulation in Canada. Any pest control products considered for use in the control of invasive alien species must be evaluated and registered by the PMRA.

1.2 General Areas of Regulation

A review of the legislation indicates that the federal government has relatively broad authority to regulate invasive alien species (terrestrial plants and insects) in the following circumstances:

- Any invasive alien species designated as toxic substance under the *Canadian Environmental Protection Act*
- Any invasive alien species to be imported into Canada (*Plant Protection Act, Canadian Environmental Protection Act, Wild Animal and Plant Protection and Regulation of International and Inter-Provincial Trade Act*)
- Any invasive alien species designated as a noxious weed seed (*Seeds Act*)
- Any invasive alien species that is injurious to plants and has the potential to spread (*Plant Protection Act*)

1.3 Geographical Areas of Protection

A review of the legislation indicates that the federal government has the authority to regulate and manage invasive alien species in the following areas:

- National wildlife areas
- National parks
- Crown forests
- Federally owned land

1.4 Species Protected by Regulation

A review of the legislation indicates that the federal government has the authority to protect the following plants and animals from invasive alien species:

- Federally listed species at risk
- All plants
- All wild plants and animals subject to international or interprovincial movement

⁷ Summary of Plant Quarantine Pest and Disease Situations in Canada.
www.inspection.gc.ca/english/plaveg/pestrava/surv/obje.shtml

2.0 Federal Legislative Summaries by Ministry

The following section provides a brief narrative on each of the relevant statutes, including a summary of pros and limitations. Details of each of the statutes described in this section can be found in Appendix C, entitled Federal Legislative Tables.

2.1 Minister of Environment

2.1.1 *Wild Animal and Plant Protection and Regulation of International and Inter-Provincial Trade Act*

The *Wild Animal and Plant Protection and Regulation of International and Inter-Provincial Trade Act* (WAPPRITA) provides the Minister with the authority to regulate the import, export and interprovincial movement of certain plants and animals in order to protect these species of animals and plants. One of the goals of the Act is to protect Canadian ecosystems from wild species whose introduction would be harmful to indigenous species. To that end, the Act provides the Minister with the authority to urgently recommend to the Governor in Council that a certain specimen not be imported into Canada because it would be harmful to Canadian ecosystems or to any species in Canada. These species are listed under Schedule II of the Regulations and are few in number.

Pros: (1) Provides a tool to control the introduction and interprovincial movement of species that may prove to be invasive alien species.

Limitations: (1) Limited to international and inter-provincial trade.
(2) Regulates the movement of listed species only.

2.1.2 *Canada Wildlife Act*

The *Canada Wildlife Act* grants the Minister authority to undertake conservation activities in wildlife areas assigned to the Minister. The activities must not be inconsistent with the laws of the province or territory where the wildlife area exists. The authority of the Minister to take action to protect species in wildlife areas appears to be broad, although specific actions are not noted in the legislation.

Pros: (1) The Minister has broad authority to undertake activities in wildlife areas.

Limitations: (1) The authority of the Minister does not extend outside of the wildlife area.
(2) Does not specifically reference invasive alien species or biodiversity.
(3) The Minister's authority is subject to provincial law.
(4) The Minister is not required to take any action.

2.1.3 *Canada National Parks Act*

Under the *Canada National Parks Act* the Minister is responsible for the maintenance and management of all national parks. Included in this responsibility is a requirement to make the maintenance or restoration of ecological integrity, through the protection of natural resources and natural processes, the first priority of park management. Within five years after a park is established, the Minister is required to prepare a park management plan that must include a long-term ecological vision for the park, a set of ecological integrity objectives and indicators, and provisions for resource protection and restoration.

- Pros:
- (1) The Minister has both the authority and responsibility to protect ecological integrity in the parks.
 - (2) The Minister is required to undertake management planning and monitoring within a specified timeframe.
- Limitations:
- (1) Applies to designated National Parks only.
 - (2) Does not specifically reference invasive alien species.

2.1.4 *Species at Risk Act*

The *Species at Risk Act* requires that once a species has been listed as extirpated, endangered or threatened, the competent Minister must follow a series of steps to assess and hopefully recover the species. Included in this is an assessment of any threats against the species or its critical habitat. The Act further requires all recovery strategies, action plans and management plans to consider the commitment of the Government of Canada to conserving biological diversity.

- Pros:
- (1) Requires assessment of threats, which could include invasive alien species, to a wildlife species or its critical habitat.
 - (2) Management and action plans are a required part of the assessment and recovery process.
 - (3) Recognizes conservation of biological diversity.
- Limitations:
- (1) Supports protection of listed species only, and some of their habitat.
 - (2) Does not reference invasive alien species specifically.
 - (3) Application of the Act to habitat is very limited.

2.1.5 *Canadian Environmental Assessment Act*

The *Canadian Environmental Assessment Act* requires that the environmental effects of any project which triggers the Act be considered before the project is undertaken. All aspects of the project and its interaction with the environment may be considered in the environmental impact assessment (EIA). These assessments may lead to new information on potential environmental effects, including invasive alien species, and may require changes to the project to prevent or mitigate such effects. An environmental effect includes any change that the project may cause in the environment, including any change it may cause to a listed wildlife species or its critical habitat.

- Pros:
- (1) Provides an opportunity for consideration of invasive alien species as an environmental effect.
 - (2) Includes a tool for assessment, planning and management.
 - (3) Is not limited to specific species.
- Limitations:
- (1) The requirement for an EIA only applies when the Act is triggered.
 - (2) Assessment for invasive alien species is not specifically mentioned and therefore may be missed.

2.1.6 *Canadian Environmental Protection Act*

The *Canadian Environment Protection Act* is a broad statute that includes as its focus preventive and remedial measures to protect, enhance and restore the environment. The protection of biological diversity from the use or release of toxic substances is specifically addressed in the

Act. The Minister has the authority to regulate substances that meet the definition of toxic under the Act and have been listed as a toxic substance in Schedule 1. The definition of toxic substance is very broad and includes any substance that may have an immediate or long-term harmful effect on the environment or its biological diversity. The Act also recognizes the precautionary principle. The Act authorizes the assessment of substances new to Canada, including living organisms, and the New Substance Notification Regulations require an environmental risk assessment that includes invasiveness as an adverse ecological effect.

- Pros:
- (1) Provides broad authority to the Minister to prevent harmful effects to the environment.
 - (2) The need to protect biological diversity is specifically mentioned.
 - (3) The precautionary principle is specifically referenced.
 - (4) The Minister may assess any new substances manufactured or imported into Canada, including living organisms.

- Limitations:
- (1) The Minister only has the authority to regulate toxic substances that are designated under the Act.
 - (2) The assessment of living organisms is confined to animate products of biotechnology.

2.2 Minister of Natural Resources

2.2.1 *Forestry Act*

The *Forestry Act* requires the Minister to conduct research relating to the protection, management and utilization of the forest resources of Canada. The Act authorizes the development of regulations to protect flora and fauna on any lands for which the Minister is responsible.

- Pros:
- (1) Requires the Minister to undertake related research; is not discretionary.

- Limitations:
- (1) The Minister is not required to take any action.
 - (2) The application of the Act is limited to lands for which the Minister is responsible.
 - (3) Does not specifically reference invasive alien species or biodiversity.

2.2.2 *Department of Natural Resources Act*

The *Department of Natural Resources Act* provides the Minister with authority over all natural resources within the jurisdiction of the federal government and not otherwise assigned to another Minister. The Act requires the Minister to always consider sustainable development and integrated management of Canada's natural resources.

- Pros:
- (1) Provides opportunities for research in areas that could include invasive alien species and requires the broad consideration of sustainable development.
 - (2) Clarifies that the Minister of Natural Resources is the Minister responsible for federal natural resources.

- Limitations:
- (1) Generally limited to research.
 - (2) Does not specifically reference invasive alien species or biodiversity.

2.3 Minister of Agriculture

2.3.1 *Plant Protection Act*

The *Plant Protection Act* is administered by the Canadian Food Inspection Agency (CFIA) and provides extensive authority to control the import, export and spread of “pests” in Canada. The definition of pest is very broad and includes any thing that is injurious or potentially injurious, directly or indirectly, to plants, and includes any plant prescribed as a pest. The CFIA uses a pest risk assessment to determine whether something is a pest, if it will have a significant adverse effect on the environment and to minimize degradation of Canadian flora. If following a pest risk assessment the thing is determined to be a pest, in accordance with the *Plant Protection Act*, actions may be taken to prevent the introduction of the pest and to control or eradicate the pest.

Although the implementation of the Act has been focused on import/export, the provisions of the Act are broad enough to address some aspects of domestic control of pests. For example, the Act includes a requirement for any person who has knowledge of a “new” pest to report it to the Minister.

Under the Plant Protection Regulations, Inspectors are granted broad powers to take steps to eradicate a pest or prevent its spread if, following a pest risk assessment, the Minister or the Inspector have a reasonable belief that the thing is a pest or is infested with a pest.

The preliminary legal analysis completed by Environment Canada under the Action Plan for Invasive Terrestrial Plants and Plant Pests concluded that the *Plant Protection Act* includes all of the authority necessary to regulate the introduction of invasive (terrestrial) alien plants and plant pests, and for considering their environmental impacts.⁸

- Pros:
- (1) There is extensive authority to prevent the introduction of certain invasive alien species into Canada.
 - (2) There is some authority to manage the spread of certain invasive alien species in Canada.
 - (3) Requires actions to be taken and includes strong enforcement authorities.
- Limitations:
- (1) Only applies following a determination via a pest risk assessment that the thing of concern is a pest.
 - (2) The focus of the Act is on the import and export of “pests” and not management and control of invasive alien species in Canada.
 - (3) Only applies to invasive alien species that are injurious to plants.
 - (4) Does not reference biodiversity and its implementation is focused on protection of the agriculture and forestry sectors only.

2.3.2 *Seeds Act*

The *Seeds Act*, administered by the Canadian Food Inspection Agency (CFIA) provides the Minister with the authority to regulate the import, export and sale of seeds and control noxious weed seeds (Seeds Regulations). The Weed Seeds Order, 1986, identifies species of plants that are considered weed seeds and lists weed seeds that are prohibited in Canada.

⁸ Action Plan for Invasive Alien Terrestrial Plants and Plant Pests, Phase 2 – Proposed Implementation Plan, 3.0 Area of Delivery – Legislation and Regulation.
<http://www.inspection.gc.ca/english/plaveg/invenv/action/phase2e.shtml>

- Pros:
- (1) Regulates the import of seed that may be invasive.
 - (2) Includes solid enforcement provisions.

- Limitations:
- (1) Application of the Act is restricted to seeds.
 - (2) Focus is on import, export and sale only.
 - (3) Does not specifically reference invasive alien species or biodiversity.

2.4 Minister of Health

2.4.1 *Pest Control Products Act*

The *Pest Control Products Act*, administered by the Pest Management Regulatory Agency (PMRA) regulates the registration and sale of all pest control products in Canada. The term “pest” is broadly defined as an animal, a plant or other organism that is injurious, noxious or troublesome, whether directly or indirectly, and an injurious, noxious or troublesome condition or organic function of an animal, a plant or other organism. The primary objective of the Act is to prevent unacceptable risks to people and the environment from the use of pest control products.

- Pros:
- (1) Provides regulatory control over products that may be used to eradicate or control invasive alien species.
 - (2) Recognizes the need to balance the risks associated with used of these products.
 - (3) Specifically references biodiversity.

- Limitations:
- (1) Limited to the control of products.

PART C

Analysis and Recommendations

1.0. Gap Analysis

Providing an overview of federal and provincial legislative authorities and responsibilities for invasive alien species (terrestrial plants and insects) in Nova Scotia has been challenging. Although there is along list of statutes that have the potential to address the invasive terrestrial plants and insects, the framework is confused and inconsistent. Invasive alien species exist in many forms and impact the environment, economy and society in a variety of ways. Many sectors of the economy including forestry, agriculture, transportation, parks, protected areas and other industries are affected by invasive alien species but seldom are they the primary focus of any regulatory framework. Without a dedicated statute, many aspects of their regulation fall between the cracks.

1.1 The term “invasive alien species” is not legally defined

The term “invasive alien species” is not referenced or defined in any statute or regulation used to identify, prevent, control or eradicate these species.

The term is defined, as follows, in the 2004 *An Invasive Alien Species Strategy for Canada*:

Alien species are species of plants, animals (including fish), and micro-organisms introduced by human action outside their natural past or present distribution.⁹

Invasive alien species are those harmful alien species whose introduction or spread threatens the environment, the economy, or society, including human health. Alien bacteria, viruses and fungi, and aquatic terrestrial plants, mammals, birds, reptiles, amphibians, fish and invertebrates (including insects and mollusks) can all become invaders.¹⁰

There are numerous other terms defined in legislation that may include invasive alien species; however each of these has specific limitations.

⁹ An Invasive Alien Species Strategy for Canada, 2004 at page 5; see also Decision VI/23 of the Convention on Biological Diversity. http://www.ec.gc.ca/eee-ias/98DB3ACF-94FE-4573-AE0F-95133A03C5E9/Final_IAS_Strategic_Plan_smaller_e.pdf,

¹⁰ An Invasive Alien Species Strategy for Canada, 2004 at page 5; see also United States National Invasive Alien Species Council Management Plan, 2001.

Term	Definition	Statute	Limitation
pest	means any insect or parasite designated in the regulations as a pest;	Bee Industry Act	Must be designated. Bee industry only.
cattle pest	means the insect known as <i>Hypoderma bovis</i> or <i>Hypoderma lineatum</i> and commonly known as the warble fly;	Cattle Pest Control Act	Warble fly only. Cattle protection only.
insect, pest or disease	means any insect, pest or disease destructive or injurious to potatoes;	Potato Industry Act	Potato industry only.
noxious weed	means a plant that is designated under this Act as a noxious weed;	Weed Control Act	Must be designated. Plants only.
pest	means any plant, animal, micro-organism or any organic functions of a plant, animal, or micro-organism, including any insect, nematode, rodent, predatory animal, parasite, bacterium, fungus, weed, or other form of plant or animal life or virus, the Minister believes is or may be injurious, noxious or troublesome, but does not include a virus, parasite, bacterium or fungus in a living person or animal;	Environment Act Pesticide Regulations	Applies to pesticide regulation only.
pest	means any thing that is injurious or potentially injurious, whether directly or indirectly, to plants or to products or by-products of plants, and includes any plant prescribed as a pest;	Plant Protection Act	Applies to plant protection only. Used for import/export only.
quarantine pest	a pest of potential economic importance to the area endangered thereby and not yet present but not widely distributed and being officially controlled;	International Plant Protection Convention	Applies to plant protection only. Limited to listed species.
pest	means an animal, a plant or other organism that is injurious, noxious or troublesome, whether directly or indirectly, and an injurious, noxious or troublesome condition or organic function of an animal, a plant or other organism.	Pest Control Products Act	Applies to pesticide regulation only.

The lack of a consistent legal definition of invasive alien species creates confusion and makes it difficult to determine specifically which invasive alien species are addressed by a particular statute.

1.2 The regulation of invasive alien species is indirect and compartmentalized

There is no comprehensive federal or provincial legislative framework to identify, prevent, eradicate or control invasive alien species in Nova Scotia. There is a mishmash of authorities and responsibilities which seek to protect and maintain defined areas or things, such as forests, national or provincial parks, wildlife, endangered species, public highways, agricultural crops and livestock.

The challenge of a regulatory framework that does not have as its goal the management of invasive alien species is that each individual statute defines the problem differently and takes a different approach to addressing the problem. For example, the goal of the provincial *Forests Act* is to increase the productivity of Nova Scotia forests. To that end the Minister has broad authority to protect the forests from any injurious agents (i.e. invasive alien species) and to take steps to plan for the future management of the forests. However, the focus of the statute is on forest production not maintaining biodiversity. The Minister is not required to develop management plans that incorporate the identification or control of invasive alien species that may have an impact on forest biodiversity. As well, the authority of the Minister, although broadly applied on Crown land, is limited on privately owned properties.

This is just one example of legislation that has some potential to manage invasive alien species but is limited in scope and application. The same is true of most of the legislation considered in this Report. Such a silo or compartmentalized approach to the management of invasive alien species has led to a weak regulatory framework.

It may be argued that the federal *Plant Protection Act* and the provincial *Weed Control Act* provide more direct authority to regulate invasive alien species. The authorities in the *Plant Protection Act* and *Weed Control Act* are sufficiently direct to regulate certain invasive alien species; however both statutes are limited in their scope. The *Plant Protection Act* provides authority to control pests that are injurious to plants. The provincial *Weed Control Act* is limited to noxious weeds and seeds; all other invasive alien species are not covered.

It should also be noted that many of the authorities described in the relevant federal and provincial statutes limit their application to Crown land, i.e. Crown forests, provincial/national parks, beaches, designated wilderness areas, etc. There are very few statutes that include the authority necessary to identify and manage invasive alien species on privately owned property. There are some limited exceptions in statutes such as the provincial *Agriculture and Marketing Act*, *Weed Control Act*, *Forests Act* and the federal *Plant Protection Act*.

The Nova Scotia *Environment Act* and the federal *Canadian Environmental Protection Act* are the only statutes that have a broad scope. These laws have the general protection of the environment as their goal and they recognize the protection of biodiversity and the precautionary principle. However neither of the statutes defines invasive alien species nor provides sufficient authority to ensure that these species are effectively identified or eradicated. There are tools within these statutes and their regulations that are useful (i.e. environmental impact assessment, new substances notification, approvals for designated activities) but the approach is far from comprehensive and the application far from clear.

1.3 The application of invasive alien species regulation is weak and inconsistent

The lack of consistency in approach to regulating invasive alien species exists primarily because the legislation was developed with for a purpose other than management of invasive alien species.

To that end, any management of invasive alien species that occurs is secondary to the purpose of the legislation.

As well, the statutes all have a different means by which they authorize the management of invasive alien species. In some instances the Minister has the authority to take action by virtue of the statute (*Provincial Parks Act*). In other cases the Minister's action is subject to the creation of a regulation (*Beaches Act*) or approval by the Governor in Council (*Weed Control Act*). In some cases the legislative authority extends to control invasive plants and insects (*Potato Industry Act*), in other instances the authority extends only to invasive plants (*Weed Control Act*) or insects (*Cattle Pest Act*). It is virtually impossible to keep track of the various approaches, let alone apply this mishmash of authorities to construct an effective management plan for invasive alien species.

It is likely that this failure to make the management of invasive alien species a legislated goal has led to many of the policy and resource challenges that are faced in trying to prevent, eradicate and control invasive alien species on the ground. For example, the provincial *Weed Control Act* provides the Minister of Agriculture with the authority to require any occupant of land to destroy a noxious weed that is designated as such. However the legislation only applies to weeds that have been designated by Cabinet (GIC). This is an involved process and has resulted in the designation of only ten weeds over time. Furthermore, the Act provides no means of removing weeds from the list once they are designated. This leads to confusion regarding which weeds continue to be a problem and which are no longer of concern.

The application of the *Weed Control Act* also suffers from a lack of resources for effective implementation. Policy decisions within the Department of Agriculture appear to have limited the application of the Act to areas where agricultural land may be directly impacted. The Act itself has much broader application.

The federal *Plant Protection Act* appears to suffer from many of the same challenges that exist for the provincial *Weed Control Act*. The provisions of the Act are fairly broad-ranging giving the appearance that the Act could be used to prevent the introduction, export and spread of any pest injurious to plants or any plant found to be a pest. The application of the Act, however, has been limited to preventing the introduction into Canada of plant quarantine pests, which are limited to pests of economic importance that have not yet spread widely in Canada. In that regard the Act is not used to its full potential to control invasive alien plants or their potential impact on biodiversity. This issue was recognized by the federal government in 2004, but there is no indication that a change to the policy approach or the interpretation of the Act is forthcoming.

2.0. Recommendations

An Invasive Alien Species Strategy for Canada refers to the different ways that invasive species can be introduced into Canada as “pathways”. One of the key roles of a comprehensive legislative framework is to prevent invasive species from reaching these pathways. There are two primary means of achieving this goal: (1) import controls and (2) prevention planning.

Once an invasive alien species has been introduced into Canada the role of the legislative framework is to provide the authority necessary to identify/detect the species, enable immediate mitigative action to eradicate the species, monitor the area following the action, and provide for remedial steps to be taken where mitigation has not been successful.

As described in the gap analysis, the federal and provincial legislation identified and analyzed for this report confirms that Canada does not have a comprehensive legislative framework to address the roles described above.

There are three general approaches that may be considered to create a more consistent and effective legislative framework for the management of invasive alien species in Nova Scotia:

1. working within the current legislative framework;
2. minor amendments to the current legislative framework to improve effectiveness; or
3. major amendments/replacing the current legislative framework.

These approaches are not mutually exclusive.

2.1 Working within the current legislative framework

2.1.1 Integrate invasive alien species into policies, programs and management plans

There are several federal and provincial statutes that include a mandate to the responsible Minister to undertake studies or develop policies, programs and management plans that could include invasive alien species. In many instances the purpose of the enabling statute includes protection of biodiversity.

Provincial statutes: *Forests Act, Forest Enhancement Act, Wildlife Act, Endangered Species Act, Environment Act, and Wilderness Areas Protection Act.*

Federal statutes: *Canada Wildlife Act, Canada National Parks Act, Species at Risk Act, Canadian Environmental Protection Act, Forestry Act.*

See legislative tables found in Appendices B and C for more detail.

There may be an opportunity for ISANS to identify these provisions to the relevant federal and provincial government departments and encourage them to include consideration of invasive alien species in research and in the development of policies, programs and management plans.

2.1.2 Explore the potential role of the *Environment Act* in the management of invasive species

The Nova Scotia *Environment Act* is a umbrella statute which may be used to regulate the release of any substance that could cause an adverse effect to the environment. Broadly interpreted the provisions that apply to the release of substances may include invasive alien species.

Nova Scotia Environment already considers the potential adverse effects on the environment from invasive alien species in the environmental impact assessment process and in the issuing of approvals for certain designated activities. There are a number of other authorities in the *Environment Act* that may prove useful in the identification, prevention, eradication and control of invasive alien species.

There may be an opportunity for ISANS to meet with staff of Nova Scotia Environment to discuss the options that may be available to apply the provisions of the *Environment Act* to the management of invasive alien species.

2.1.3 Pursue more effective implementation of the federal *Plant Protection Act*, and coordination with the *Canadian Environmental Protection Act and Wild Animal and Plant Protection and Regulation of International and Inter-Provincial Trade Act*

The federal *Plant Protection Act* implements the standards under the *International Plant Protection Convention*. The Act is recognized as the primary means of ensuring plant protection in Canada. There are however, a number of recognized limitations as described in the *Action Plan for invasive alien terrestrial plants and plant pests*.

While plant pests (including insects, fungi, and plant viruses) and their pathways have been comprehensively addressed through application of the *Plant Protection Act*, invasive alien plants (i.e. weeds or pest plants) have not. In addition, application of the Act as focused on unintentional introductions (plant pests brought in with plant commodities and soil), not intentional introductions of alien plants, and on the protection of the agriculture and forestry sectors, not native plant biodiversity.¹¹

There is a general consensus within the federal government that changes in policy interpretation could expand the application of the *Plant Protection Act* to regulate the introduction of invasive alien plants and plant pests and for considering their environmental impacts.¹² Implementing these changes in policy would ensure that the introduction of invasive alien plants and plant pests is regulated at the federal level. There would continue to be a gap in preventing the import of invasive alien species that do not have the potential to be injurious to plants. However, both the *Canadian Environmental Protection Act* and the *Wild Animal and Plant Protection and Regulation of International and Inter-Provincial Trade Act* may provide a means of filling that gap.

¹¹ Action Plan for Invasive Alien Terrestrial Plants and Plant Pests, 2004, 4.3 Appendix 3: Strengthening Canada's Federal Legislative Framework for Regulating the Importation of Alien Plants and Plant Pests – A Preliminary Analysis. <http://www.inspection.gc.ca/english/plaveg/invenv/action/phase1e.shtml#a4.2>

¹² Action Plan for Invasive Alien Terrestrial Plants and Plant Pests Phase 2 - Proposed Implementation Plan. <http://www.inspection.gc.ca/english/plaveg/invenv/action/phase2e.shtml>

2.2 Amend the current legislative framework to improve effectiveness

2.2.1 Minor amendments to several statutes

Minor amendments could be incorporated into many of the statutes discussed in this Report to clarify the role of the responsible Minister for the management of invasive alien species in the context of the statute. Not all of the amendments will be appropriate for all statutes.

Amendments could include:

- (1) adding a definition of invasive alien species;
- (2) incorporating protection of biodiversity;
- (3) requiring management planning that incorporates biodiversity and an ecosystem approach;
- (4) providing a process for early detection and monitoring of invasive species;
- (5) providing authority for actions to be taken to eradicate or control invasive species;
- (6) improving inspection and enforcement authorities, where appropriate;
- (7) providing authority to take action to control invasive species on private property, with appropriate limitations to protect privacy;
- (8) establish an expert advisory committee and provide them the authority to identify invasive alien species subject to the Act.

Statutes that may benefit from these amendments include:

Provincial Statutes

- *Forests Act*
- *Forest Enhancement Act*
- *Wildlife Act*
- *Endangered Species Act*
- *Environment Act*
- *Wilderness Areas Protection Act*

Federal Statutes

- *Canada Wildlife Act*
- *Canada National Parks Act*
- *Species at Risk Act*
- *Canadian Environmental Protection Act*
- *Forestry Act*

2.2.2 Minor amendments to the federal *Plant Protection Act*

The federal government has already concluded that the application of the *Plant Protection Act* may be expanded to control the importation of unintentionally imported organisms that are not plant pests but that may impact biodiversity. It is not clear if this can be done without amendment or development of new regulation. These changes would significantly increase the

effectiveness of the *Plant Protection Act* in preventing the introduction of invasive alien species into Canada.¹³

2.2.3 Minor amendments to the provincial *Weed Control Act*

The *Weed Control Act* has several positive features that facilitate the management of noxious weeds in Nova Scotia. These include clear authorities to require the elimination or destruction of noxious weeds on any property and the establishment of a Weed Control Advisory Council. However, for the most part the Act is outdated and presents challenges to broader efforts to address invasive alien species. The Act could be improved by incorporating several of the amendments described in section 2.1. More substantial improvements could be made by broadening the scope of the Act to clarify its application to invasive alien plants, regardless of where they occur in the province.

Amendments to the Act could also address challenges associated with the designation of species. First of all the authority to designate a species could be expanded from noxious weeds to include all invasive alien plants. Further amendments could be made to remove the requirement to have designation go through Cabinet (GIC) and enable the decision to be made by the Minister. The Minister could delegate this authority to the experts on the Weed (or invasive alien plants) Control Advisory Council to establish a list of species that would be subject to the Act. A provision to enable amendment of the list by decision of the Council could also be included.

A more thorough analysis of the Act and discussions with those tasked with its implementation would likely lead to other useful amendments. The amendments proposed would not provide a comprehensive legislative approach to the management of invasive species at the provincial level as the management of other invasive alien species, such as insects would fall under a separate statute. Another option may be to expand the scope of the *Weed Control Act* to include all terrestrial invasive alien plants and insects.

2.3 Create legislation dedicated to the management of invasive alien species

2.3.1 Create an *Invasive Alien Species Act*

With time and effort it may be possible to make the policy and legislative changes necessary to close the gaps that exist in the current legislative framework. However, it may be less time-consuming and ultimately more effective to create a stand alone statute to regulate the management of invasive alien species. Presuming that adequate changes can be made at the federal level to address the introduction of invasive alien species, the proposed statute would be best suited to the provincial level and would apply after an invasive alien species has been introduced into Canada.

As described above, the role of this legislation would be to provide the authority necessary to identify/detect the species, enable immediate mitigative action to eradicate the species, monitor the area following the action, and provide for remedial steps to be taken where mitigation has not been successful. The design of the statute would draw upon many of the features that already exist in other relevant statutes and would include definitions, research, planning and policy

¹³ Action Plan for Invasive Alien Terrestrial Plants and Plant Pests, 2004, 4.3 Appendix 3: Strengthening Canada's Federal Legislative Framework for Regulating the Importation of Alien Plants and Plant Pests – A Preliminary Analysis. <http://www.inspection.gc.ca/english/plaveg/invenv/action/phase1e.shtml#a4.2>

components, public education, risk assessment, species identification, prohibitions, inspection and enforcement authorities, etc.

The statute would become part of the current legislative framework that includes the *Forests Act*, *Forest Enhancement Act*, *Wildlife Act*, *Endangered Species Act*, *Environment Act* and *Wilderness Areas Protection Act*. The statute would replace the *Weed Control Act* and may replace some portions of other statutes such as the *Bee Industry Act*, *Potato Industry Act*, *Cattle Pest Control Act* and the *Agriculture and Marketing Act*.

2.3.2 Amend the *Environment Act* to provide the authority to regulate the management of invasive alien species

Amendments to the *Environment Act* to include a new part dedicated to the management of invasive alien species and development of related regulations may achieve the same goal as the creation of a stand alone *Invasive Alien Species Act*. The *Environment Act* already contains many of the underlying themes necessary to support effective invasive alien species legislation. For example, the *Environment Act* recognizes protection of biodiversity within the purpose section of the Act, it includes the precautionary principle, capacity for research, policy development and public education, a public registry, comprehensive inspection and enforcement provisions. The *Environment Act* also supports the activities designation regulations which may be used to designate certain activities that are prone to invasive species introduction, thereby requiring an approval process for those activities.

3.0 Areas for Further Research and Consideration

As described above there are numerous options available to improve the legislative framework to manage invasive alien species. However, in all cases, improving the legal capacity to address the problem will lead to little real improvement unless adequate human and financial resources are dedicated to that outcome. The ways and means to ensure that resource capacity through policy and decision-making has not been explored in this Report, but is an area for further research. Other areas of invasive alien species management that may benefit from further research include the following:

1. Role of municipal governments in the management of invasive alien species.
2. Role of Aboriginal governments in the management of invasive alien species.
3. Aquatic invasive alien species.
4. Animals and birds as invasive alien species.
5. Development of case studies to illustrate the application of legislation to the management of invasive alien species.

4.0 Other legislation

The following pieces of legislation were identified in the course of the research for this Report. They were not deemed to be relevant to this phase of the research but may prove useful in a later phase.

Federal Statutes

- *Experimental Farm Stations Act*
- *Transportation of Dangerous Goods Act*
- *Prairie Farm Rehabilitation Act*

- *Customs Act*
- *Canada Transportation Act*
- *Controlled Drugs and Substances Act*
- *National Research Council Act*
- *Canadian Food Inspection Agency Act*
- *Fertilizers Act*
- *Fisheries Act*
- *Federal Real Property and Federal Immovables Act*
- *Health of Animals Act*
- *Oceans Act*
- *Canada Shipping Act*

Provincial Statutes

- *Pipeline Act*