## REGULATORY AND NON-REGULATORY APPROACHES FOR WETLAND **CONSERVATION IN CANADA**

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Case Study

prepared for the

Technical Consultation on Designing Methodologies to Review Laws and Institutions Relevant to Wetlands

> Gland, Switzerland 3-4 July 1998

#### Abstract

Canada is a nation with extensive wetland resources. We have a wide array of federal and provincial as well as territorial regulatory legislation that, to some degree, has a direct or indirect capacity to promote wetland conservation. However, only a few pieces of Canadian legislation have been specifically designed to directly promote wetland protection. Over the past two decades, a wide range of additional facilitating legislation and wetland conservation programs and policy have been introduced to promote private and voluntary wetland conservation actions. This array of regulatory and non-regulatory actions are changing the way Canadians view wetlands.

The role and status of selected federal, provincial and territorial legislation and voluntary programs that affect the conservation and securement of wetlands in Canada are reviewed in this paper. The paper provides a review of the approaches that are regulatory and non-regulatory in nature to achieve national and sub-national wetland conservation objectives. About one-third of Canada's 153 million ha of wetlands are under some form of environmental regulation. At the same time, about three quarters are covered under non-regulatory wetland conservation and management programs and policies established by government and industry sectors. A voluntary, policy-driven approach complemented with a wide suite of regulatory tools has evolved as the dominant focus of the wetland programs in Canada. Four Canadian provinces, the federal government and two resource-based industries have developed wetland policies and are implementing these. In this regard, Canada has made significant advances that are internationally-recognized and potential models for other nations.

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## 1.0 Introduction

In the last 150 years, about 14% (or 20 million ha) of the wetlands have disappeared from the landscapes in which Canadians live. In our ten provinces and two territories lie an estimated 153 million hectares of wetlands. Canada has a special position in the World — about 25% of the wetlands that now remain on the face of the Earth are estimated to be found in our country. Wetland loss due to agriculture, urbanization, transportation, industrial and hydroelectric development, water management projects, and a variety of related activities has made wetland conservation an issue in many jurisdictions. Modification or loss of wetland ecosystems has been extensive in some regions. For example, over 40% of the wetlands in the southern portions of the central Prairies, 68% in southern Ontario and 80% of the wetlands of the Fraser Lowland in British Columbia have been converted to other land uses. However, wetland disturbance has been minimal in lightly populated areas of Canada such as the boreal and subarctic zones where most of our forested wetlands are found.

Wetlands are a truly threatened landscape in many areas of Canada. How has the country responded to this problem? Traditionally, governments have operated in a "lead and control mode" for conservation: establishing regulations, allocating funding and providing onthe ground program delivery (Silver *et al.* 1995). But over the last 15 years, a major shift in the approach to wetland conservation has been unfolding, spurred on by restricted public finances, continuing degradation of resources and loss of biodiversity, and a growing acknowledgement of the role of all Canadians as partners in environmental conservation.

Canadians and their governments, as well as the industries working in our landscapes, are committed to the "wise" or "sustainable" use of our wetlands. Wetland policies are in place at the federal level and in four provinces, that emphasize private landowner stewardship, partnerships of government, industry, conservation organizations and private landowners, sustainable use of wetland resources, education and public awareness programs, and continuing research and science. Innovative, non-regulatory approaches have been developed that promote the voluntary involvement of Canadians in wetland conservation through habitat enhancement programs, tax relief, wetland restoration and creation, and mitigation and compensation initiatives. These are complemented by a series of wetland securement initiatives through purchase, lease and income tax incentives for land donations.

The purpose of this paper is to describe Canada's approach to wetland conservation. The paper is organized in the following sections:

- 2.0 Examination of the definitions of Canadian wetlands;
- 3.0 Review of regulatory legislation in Canada for wetland conservation;
- 4.0 Review of: (i) non-regulatory legislation that facilitates wetland conservation initiatives; (ii) voluntary, non-regulatory stewardship programs, and (iii) government and non-government policies affecting wetland resources; and
- 5.0 Conclusions.

## 2.0 Defining Wetlands

Unlike several other nations, a legal definition of "wetland" is generally not enshrined in federal, provincial or territorial legislation. There are various definitions based on scientific wetland classifications however.

The Government of Canada has published the book *Wetlands of Canada* (National Wetlands Working Group - NWWG 1988) and the *Federal Policy on Wetland Classification* (Government of Canada 1991). These two publications use the definition of wetlands most recently published in the *Canadian Wetland Classification System, Second Edition* (Warner and Rubec 1997). This definition has been adopted by this national science committee, the National Wetlands Working Group, since the mid 1970s. Wetland is defined as:

"land that is saturated with water long enough to promote wetland or aquatic processes as indicated by poorly drained soils, hydrophytic vegetation and various kinds of biological activity which are adapted to a wet environment. Wetlands include bogs, fens, marshes, swamps and shallow water (usually two metres deep or less)." (Warner and Rubec 1997)

The Canadian Wetland Classification System recognizes three levels: class, form and type. The five "classes" of wetland in Canada are marsh, swamp, bog, fen and shallow water. The System is hierarchical with over 40 wetland "forms" based on site genetic factors, hydrology, landscape setting and chemistry of waters and numerous wetland "types" based on vegetative physiognomy also recognized.

In the Prairies of Canada, definitions of wetland that support implementation of provincial wetland policies have focused on specific aspects of the ecological character of these ecosystems. The Alberta Water Resources Commission for example has characterized Alberta's wetlands as either "permanent" or "non-permanent" and adopted several categories for each: *Permanent*: (a) slough, marsh; (b) lake/pond; (c) bog/fen; and (d) watercourse; or *Non-Permanent*: (e) seasonal slough/marsh; (f) sheetwater; and (g) seep.

In Ontario, the provincial government recognizes four main types of wetlands: swamps, marshes, bogs and fens, defining wetlands as:

"lands that are seasonally or permanently covered by shallow water, as well as lands where the water table is close to or at the surface. In either case the presence of abundant water has caused the formation of hydric soils and has favoured the dominance of either hydrophytic plants or water tolerant plants." (Ontario Ministry of Municipal Affairs and Housing 1997)

In Quebec, a provincial wetland classification system (Buteau *et al.* 1994) is generally consistent with the classes of the Canadian *System* (Warner and Rubec 1997), but wetlands are also deemed to extend into the full riparian zone and coastal, unvegetated habitats such as rocky shores and sandy beaches.

## 3.0 Regulatory legislation for wetland conservation

While the focus of much of Canada's wetland conservation effort is on non-regulatory approaches, it is clear that some environmental legislation is needed to protect the well-being of Canadians. This section characterizes legal tools that have contributed to wetland protection in Canada. These tools include federal, provincial and territorial legislation — that is, statutes or acts passed by legislatures — that have been used to conserve wetlands, or have the potential to do so. It focuses on the more "traditional" statutes that aim to manage or control human activity

for particular purposes, requiring compliance with specific regulations, and specifying punishment for contravention. Legislation that enables voluntary conservation efforts is dealt with in Section 4.

There is no comprehensive statute that focuses exclusively on conserving wetlands in any jurisdiction in Canada, although some statutes define special provisions for wetlands within a broader mandate. Most acts reviewed here are not wetland statutes *per se*, rather they offer support for wetlands protection while advancing other statutory objectives.

What is the role of these statutes in wetland conservation? Most specify the means by which agents of the federal, provincial or territorial governments can carry out their jurisdictional obligations as entrenched in the Constitution. In so doing, they provide the authority to acquire or designate lands as "protected areas"; to develop regulations for what can and cannot be done in designated areas; or define acceptable effects on certain species of wildlife and their habitat. Various statutes also regulate the use of resources such as water and the impact on the environment of activities such as forestry. These statutes set out how processes, such as environmental assessment or land use planning, must be carried out, and specify how the public will be able to participate in those processes. Most of the statutes detail punishments for contravention of the law and regulations.

Within this legal framework, wetland policy holds a special place. It is a common view that policy is an inferior government tool since it does not have the "teeth" that statutes do. In fact, public policy can call into service a range of legal tools to tackle a particular issue. It can guide the development, revision and interpretation of legislation, and in so doing ease duplication and incompatibility among statutes. Policy can establish goals and objectives to work towards, and justify the resources that are required to make progress on issues. Policies also promote awareness and understanding of wetland issues by Canadians.

Federal, provincial, territorial and municipal governments in Canada have the authority to make and enforce laws that affect wetlands. However, the authority over wetlands lies mainly with the provinces, by virtue of their ownership of the natural resources that lie within their boundaries, and their jurisdiction over civil rights; an authority limited only by the existence of federal areas of responsibility. Thus, the majority of statutes that can influence wetlands in Canada have been enacted at the provincial level.

### 3.1 Federal Jurisdiction and Statutes

Federal authority lies in their responsibilities for maintaining the quality of the environment, migratory bird populations, inland and ocean fisheries, and international or transboundary resources such as water and wildlife, as well as direct management responsibility for federal land holdings across the nation. Attridge (1996) notes:

"The federal government also has a leadership and unifying role to play, both within Canada's boundaries and beyond. This role derives from federal involvement and obligations within the international area, its unique position in relation to the provinces, plus its extensive resources, experience and influence available to be applied as opportunities arise across the country."

In 1992, the *Federal Policy on Wetland Conservation* was approved by Cabinet. The *Policy* directs all departments to sustain wetland functions in the delivery of their programs. It has been successful in raising the profile of wetlands in federal decision-making, as evidenced by numerous documented case studies of decisions that have been influenced by this federal wetland policy. Additional information about the federal wetland policy is contained in Section 4.0.

Lynch-Stewart and Kessel-Taylor (in preparation) describe each of six federal statutes that contribute to wetland conservation in Canada. For each of these statutes, the authors explored, through a literature review, a series of questions: What is the purpose of the legislation? Why is it important for wetlands? Is it effective? What has it contributed to wetland conservation in Canada? What are its strengths and limitations for wetland conservation?

Table 1 summarizes the information on federal statutes contained in the Lynch-Stewart and Kessel-Taylor report. The table shows that federal legislation can protect wetlands that:

- provide "nationally significant" habitat, especially for migratory birds;
- support fish stocks that sustain commercial, recreation or native fishing activities;
- are threatened by projects for which the federal government holds decision-making authority; and
- are contained within the boundaries of national parks.

Four of the six statutes rely on the designation and management of protected areas as the primary means of achieving their objectives. Two statutes prohibit activities anywhere in Canada that will harm habitat, including wetlands. Another statute focuses on a particular major developer in Canada – the federal government – holding federal agencies accountable for mitigating the environmental effects of a broad range of their projects. Statutes also contain provisions for co-operating with provincial governments, or establishing advisory bodies.

Although they fall short of providing comprehensive protection for wetlands on a national scale, these six statutes contain substantial authority for wetland conservation for those areas where the federal government has constitutional jurisdiction. But what have they achieved? The effectiveness of the *Migratory Birds Convention Act* or the *Fisheries Act* in preventing harm to wetland habitat is difficult to gauge, and there is no national accounting of charges laid, specific to wetlands, under these Acts. Nor has there been any research accomplished on the wetland area protected by the *Canadian Environmental Assessment Act*. However, the following examples show the range of influence that the statutes can exert over wetlands:

- By 1993, over 7.1 million hectares of wetlands were protected by the Government of Canada in its network of 180 National Wildlife Areas, National Parks and Migratory Bird Sanctuaries (Bryson and Associates 1993). (It is estimated that provincial and territorial government and private sector initiatives match this federal protected wetland area suggesting that about 15 million ha of our wetlands, or 10% of all our nation's wetlands, are under a protected or conservation management status in Canada today.) Four Migratory Bird Sanctuaries and ten of Canada's National Wildlife Areas are designated as Wetlands of International Importance under the Convention on Wetlands.
- Under the *Canada Wildlife Act*, the North American Wetlands Conservation Council (Canada) was created in 1990. The Council co-ordinates the implementation of the North

American Waterfowl Management Plan in Canada, and promotes wetland conservation through co-ordinating management, science and policy initiatives. It is supported by a national secretariat in Ottawa and has published over twenty reports that focus on making Canadians more aware of the importance of wetlands and wetland conservation.

- Also under the conditions of the *Canada Wildlife Act*, the federal government recently deregulated a part of a National Wildlife Area for public safety reasons, and negotiated a significant exchange of lands, that included wetland habitat, in the interest of wildlife. The exchange represented a 40:1 compensation ratio of biologically significant lands for a smaller parcel that in comparison was biologically insignificant.
- Estrin and Swaigen (1993) cite numerous wetland development projects in Ontario that have been scrutinized under the *Fisheries Act*. An Ontario developer was recently charged after a portion of provincially significant wetland was filled, dredged, and bulldozed without any statutory approval.
- Under the relatively new *Canadian Environmental Assessment Act*, and with reference to the *Federal Policy on Wetland Conservation*, an independent panel review of the environmental screening of a federal museum facility directed the government to consider restoring former wetlands or constructing new wetlands on federal lands as near the site as possible on a replacement ratio of at least 2:1. The Panel wrote that there needs to be a public commitment on the part of the Federal Government to undertake the necessary compensation. The Museum is committed to ensuring the long-term conservation of wetlands adjacent to the facility, and their use in scientific research, public awareness and education.

Have these statutes and their regulations been effective in protecting wetlands as nationally significant habitat, especially for migratory birds, as habitat which sustains fisheries, as an ecosystem within a park landscape, or from impacts caused by federal projects? While statutes may authorize substantial powers, their potential for wetland protection is largely "unfulfilled" to date. For example,

- Percy (1993) notes that the *Canada Wildlife Act* remains a limited instrument for wetland conservation in the Prairie Provinces. He notes "The intimate connection between wetlands and wildlife habitat might suggest that the (*Canada*) Wildlife Act would be an important source of wetland regulation. However, the Act ... provides little direct power over wetlands because of the jurisdictional limitations placed on the federal government."
- Attridge (1996) comments on the advantages of National Wildlife Area and Migratory Bird Sanctuary designations for biodiversity conservation, but suggests that both designations could be more widely used, given their potential to act as buffer areas around, or links between, protected areas such as national or provincial parks.
- The World Wildlife Fund Endangered Spaces Campaign has called for an increase in
  protection standards for National Wildlife Areas and Migratory Bird Sanctuaries, urging the
  federal government to eliminate the potential for industrial development in all National
  Wildlife Areas, by adopting management standards equivalent to those set for the Polar
  Bear Pass NWA when it was established.

- The Fisheries Act only applies to wetland habitats that can be shown to contribute to an existing or a potential fishery. Percy (1993) also notes that it seems unlikely that a federal Act would be enforced in areas, such as wetlands, that have previously been considered as totally within provincial jurisdiction.
- Attridge (1996) concludes that the Canadian Environmental Assessment Act does not accomplish comprehensive, independent review and decision-making to avoid or mitigate impacts on the biodiversity of ecosystems such as wetlands. In particular, the lack of clear criteria for determining appropriate mitigation measures is an important weakness that needs to be addressed to fully inform federal decisions about wetlands. Drawing from the substantial body of growing expertise on this subject in Canada and the United States, the North American Wetlands Conservation Council (Canada) has prepared a report on the National Workshop on Wetland Mitigation and Compensation held in April 1997 (Cox and Grose 1998). It is also considering development of principles and guidelines and a practical framework for applying wetland mitigation and compensation in Canada. Together, these further studies could provide detailed advice on when, where and how to mitigate impacts to wetlands.

### 3.3 Provincial and Territorial Jurisdiction and Statutes

Attridge (1996) describes provincial and territorial jurisdiction relative to biodiversity:

"Provincial governments have exclusive control over natural resources, public lands belonging to the province and the timber and wood located on these lands, municipalities and any other merely local and private matters, and broad property and civil rights. The provinces share jurisdiction with the federal government over some areas, such as agriculture, and also may impose taxes of various sorts. In aggregate, this jurisdiction gives the provinces the primary lead in conserving wildlife and habitat, and in managing how biodiversity is used."

"Territorial governments are established on the basis of delegated powers from the federal government; they thus do not have their own independent constitutional mandate, as do the federal and provincial governments. Municipal governments also have this derivative authority, conducting their affairs within the limits prescribed by the provinces. While both territorial and municipal governments are established and operate at the discretion of their parent governments, they nonetheless are well-entrenched institutions and exercise substantial powers and political influence."

Provincial and territorial constitutional powers have resulted in the enactment of a range of statutes in each province and territory related to land use planning, protected areas designation and wildlife management. While no jurisdiction has an exclusive wetland protection statute, each uses a mix of these legal tools to accomplish their conservation objectives. Table 2 lists the major types of legislation that can contribute to wetland conservation: protected areas, wildlife management, water management, land use planning, environmental protection, environmental assessment, sustainable use of resources, and private land conservation. The table highlights some 25 provincial and territorial statutes that are considered by local wetland managers to be the most valuable legal tools for wetland conservation. These are discussed below.

#### **Protected Areas**

All of Canada's ten provinces have legislation that enables the designation of protected areas such as provincial parks, ecological reserves, wilderness areas, and fish and wildlife sanctuaries. This type of legislation can secure the legal protection of a wetland; however, protection under these statutes is mostly incidental. That is, although such a designation might preserve wetlands within its boundaries, the area may not have been designated for that primary purpose. It is estimated that an area matching the federal protected wetland area described in Bryson and Associates (1993) – about eight million ha of wetlands – may be present on provincially and territorially protected parks and sanctuaries across Canada. The *Prince Edward Island Natural Areas Protection Act* is one provincial statute that specifically targets wetlands for protection.

Land claim agreements within the Yukon and Northwest Territories have been an important tool for the designation of protected areas. Virtually all land claim agreements require that certain lands be designated as either national or territorial parks, special management areas, ecological reserves or habitat protection areas. Four wetland areas in the Yukon now have protected status, all as a result of land claim settlements since 1984.

### Wildlife

Wildlife legislation generally deals with either the consumptive use of wildlife such as hunting and fishing or the protection of endangered species. Provincial wildlife statutes that include habitat protection clauses can generally be applied to protecting wetlands.

Regulations under the *Newfoundland Wildlife Act* provide for the creation of wildlife reserves to provide habitat for particular species, and for the creation of no hunting areas which virtually creates a protected area. Saskatchewan's *Wildlife Habitat Protection Act* has been used to protect wetlands that provide habitat for endangered species. The *Quebec Act Respecting the Conservation and Development of Wildlife* protects wetlands which are waterfowl gathering areas and provide fish and muskrat habitats. Prince Edward Island is in the process of passing the *Wildlife Conservation Act* which is anticipated to be a powerful tool for wetland protection because it will recognize heritage marshes as areas to be protected.

### **Water Resources**

Water resource legislation regulates the use of freshwater within a province through licenses and permits. These statutes often contain clauses protecting water in its natural state and can therefore be used to protect the hydrology that sustains wetlands.

In British Columbia, the *Water Act* protects wetlands if there is an application made to withdraw water from a wetland, or carry on activities in and around streams that may be part of a wetland system. The *Water Resources Act of Alberta* has been used to issue licenses to protect water in its natural state for the purpose of conservation, recreation or the propagation of fish or wildlife. Alberta's new *Water Act* recognizes the importance of wetlands in maintaining water quality by requiring a strategy for protecting aquatic environments. The *Ontario Water Resources Act* has been used to protect the hydrological values of wetlands. In New Brunswick, the Water Course Alteration Regulation of the *Clean Water Act* provides a specific regulatory mechanism for controlling wetland loss within watersheds used to supply drinking water.

### **Land Use Planning**

Municipal and community planning acts control land use and development in the urbanized regions of the provinces and territories. They play a significant role in wetland protection because it is at this jurisdictional level that many decisions regarding wetlands in and around urban areas are made. Municipal planning, zoning, park and land acquisition, bylaws and environmentally sensitive areas statutes can all have a major impact on wetland protection in urbanized areas.

Recent reforms to the *Ontario Planning Act* have given greater control over land use planning to that province's municipalities. The new *Ontario Provincial Policy Statement* identifies the need to protect provincially significant wetlands from incompatible development. Provincially significant wetlands have been identified using a provincial Wetland Evaluation System. The interpretation and implementation of the *Policy Statement* as a tool for wetland protection has not yet been determined.

In Newfoundland, the *Municipalities Act*, together with the Eastern Habitat Joint Venture of the North American Waterfowl Management Plan, has been used to develop a successful stewardship program which has protected many hectares of wetlands. Under this program the Newfoundland Department of Natural Resources assists municipalities in identifying wetlands that require protection and in developing a management plan for the wetland site. All the provinces have a Crown or public lands act which regulates the use and development of Crown land.

#### **Environmental Protection**

All provinces have some form of environmental protection legislation that is the central anti-pollution law of the province. Each has the potential to protect wetlands by prohibiting discharge of harmful contaminants. This represents another legislative tool that can be used for wetland protection, but it does not appear to be one that is applied in this manner very often.

### **Environmental Assessment**

Provinces across Canada have environmental assessment legislation which can potentially be used for the protection of specific wetlands. These acts establish a legal process for assessing the environmental impacts of a public undertaking.

The Environmental Impact Assessment Regulation of the *Clean Environment Act* of New Brunswick provides a specific regulatory mechanism for controlling wetland loss. The *Nova Scotia Environment Act* mandates the Department of Environment to manage water in wetlands greater in area than two hectares. Requests to alter or infill wetlands less than two hectares are evaluated under the *Wetlands Directive* evaluation process of the Nova Scotia Department of Environment. The *Newfoundland Water Resources Policy* under the *Environment Act* includes the protection of wetlands as a hydrologic resource.

### **Sustainable Use of Resources**

All provinces have legislation that regulates renewable resource harvesting practices. Forest harvesting can have a significant impact on wetlands. Requirements for adequate buffers around wetlands and streams can reduce these impacts thus protecting wetland values.

The *Forest Practices Code of B.C. Act* includes wetland and riparian setbacks as well as limitations on logging for different classes of wetlands. The *Code* establishes "Riparian Management Areas" which include both a reserve zone and a management zone. The *Crown Forest Sustainability Act of Ontario*, anticipated in 1998, will require the development of Forest Management Plans. Under such plans, wetlands can be identified as areas of concern and appropriate management procedures described in the *Forest Management Planning Manual* will be applied. Similar statutes and regulations are in place in some of the other provinces.

#### **Private Land Conservation**

Legislation for private land conservation is discussed in section 4.1 of this paper.

## 4.0 Voluntary and Non-Regulatory Legislative Instruments

The focus in this paper so far has been on legislative tools that regulate human activity, and can promote wetland conservation. However, the most expanding component of Canada's wetland programs involves the use of voluntary, non-regulatory mechanisms. In some cases, these involve new legislation that is "facilitating" or "enabling" versus regulatory in nature. Two examples of voluntary programs based upon facilitating legislation are outlined below.

### The North American Waterfowl Management Plan

The North American Waterfowl Management Plan (NAWMP), initiated in 1986, has evolved jointly between Canada, the United States, and Mexico and is implemented through a trilateral Agreement and funding legislation in the United States (the *North American Wetlands Conservation Act*). The Plan focuses on the reversal or modification of activities that destroy or degrade waterfowl habitat, primarily wetlands. Canadians are involved in many habitat restoration or enhancement programs under the NAWMP complemented by regional conservation programs. These regional programs include the Great Lakes Wetland Action Plan, Plan 2000 in the St. Lawrence River system in Quebec, and the Fraser River Action Plan in British Columbia.

NAWMP has been a success due to innovative support and funding of voluntary wetland conservation projects in all three nations of North America. In Canada, this has led to expenditures of over CA\$ 500 million during the 1987-1998 period. It has resulted in securement of over one million ha of wetland and upland habitat across Canada so far. The Plan recognizes that, in the face of major alterations to the landscape by people, the continued maintenance and restoration of wetlands is necessary to provide suitable habitat for waterfowl and many other wildlife species. It also has been the key element in recognition that voluntary action by landowners and financial incentive mechanisms are essential to implementation of habitat conservation objectives. NAWMP also recognizes that economic sustainability and wise use of wetland resources such as surface water, groundwater, soils and landscape features is essential.

## **Ecological Gifts**

The NAWMP is being complemented by numerous new initiatives promoting voluntary land stewardship across Canada. One such recent innovation is the introduction of the

Ecological Gifts Program under the *Income Tax Act of Canada* and the *Loi des impôts sur le revenu du Québec*. Ecological gifts are a new, voluntary income tax benefits mechanism to protect many ecologically sensitive sites, including wetlands. It fosters use of voluntary land donations and conservation easements in return for tax deductions against income and government and non-government program cooperation. During the first two years of this Program, more than 50 ecological gifts by private landowners, representing over 5 000 ha of sensitive habitats valued at \$12 million, have been donated to conservation organizations (Rubec 1998). This activity is strongly dependent on the enactment of supporting provincial easements or covenants legislation as described in Section 4.1 below.

## **4.1** Legislation for Private Land Conservation

In many provinces, wetlands in the settled areas are on privately owned land. It is difficult for public agencies to secure lasting protection of these wetlands due to rising land prices and limited funds. In the last decade, some provinces have taken a "protection by example" approach to encourage public participation in wetland protection. This has been accomplished through education of the public regarding the value of wetlands, the development of provincial wetland policies and the enacting of legislation which enables stewardship agreements, conservation easements, and conservation covenants. Each of these pieces of legislation promotes a voluntary, non-regulatory approach to wetland conservation, involving partnerships of landowners and conservation organizations. The North American Wetlands Conservation Council (Canada) recently prepared a report entitled *Canadian Legislation for Conservation Covenants, Easements and Servitudes* (Silver *et al.* 1995)

The Saskatchewan Conservation Easement Act, adopted in 1997, is being used to protect habitats along water courses and around wetlands. Manitoba has recently enacted the Manitoba Conservation Agreements Act which will permit the development of conservation easements in the settled areas. The Ontario Conservation Land Act permits programs designed to encourage the stewardship of conservation land which includes wetland. The Act encourages private landowners to act as stewards on natural areas through the payment of grants. Nova Scotia and New Brunswick have also recently adopted conservation easements acts.

The *British Columbia Land Title Act* permits the use of conservation covenants. A conservation covenant is an agreement between a landowner and another party such as a government body, conservation organization or adjacent landowner to conserve land or a particular aspect or feature of the land. These are voluntary agreements. A landowner may be motivated to grant the covenant by concern for protecting the land, by payment for the covenant and/or by receiving other benefits such as a reduction in real property taxes.

## **4.2** *Modification of Sectoral Policies*

In the last several years we have seen major undertakings to modify existing economic and resource management policies and programs in sectors such as forestry and agriculture, to globally benefit wetland biodiversity. The implementation of the North American Free Trade Agreement (NAFTA) and other international trade instruments are viewed as opportunities to substantially influence wetland conservation in Canada. A review of opportunities on a national and continental scale for modification of sectoral trade and economic policies that would benefit wetlands in Canada has been presented in Rubec, Cox and Patterson (1995).

## **4.3** Canadian Policies for Wetland Conservation

Policies for wetland conservation have emerged as an important tool in Canada's effort to conserve wetlands, focusing primarily on the functions that wetlands provide. The main elements of such policies have been: private landowner stewardship of wetland resources; government-industry-landowner cooperation; water quality and flood damage reduction; sustainable use of wetland resources; intergovernmental cooperation; protected areas management; education and public awareness; and research and science.

In the mid-1980s, Canada's federal and provincial governments, as well as the industry and private sectors, recognized the need for a more comprehensive, coordinated initiative for wetland protection, restoration, enhancement and designation. Government and other sectors started looking at ways and means to facilitate wetland conservation, leading to a series of national and regional policy workshops from 1987 through 1990.

The Sustaining Wetlands Forum in 1990 produced recommendations for action including a call for all jurisdictions in Canada to adopt mutually supporting wetland conservation and management policies. A report of the Canadian Wetlands Conservation Task Force (Cox 1993) laid out a series of 25 national recommendations. These recommendations have guided the implementation of federal and provincial as well as sectoral industry wetland programs and policies since 1990. The 1990 Forum included a keynote address by the Prime Minister of Canada who called for urgent action to conserve the nation's wetland resources and announced the Federal Government's commitment to adopting a federal wetland policy. Since then wetland policies or programs have been implemented in all of our ten provinces.

### **The Federal Wetland Policy**

One of the original considerations in the development of the federal wetland policy was that it should be crafted to deliver Canadian commitments to the Convention on Wetlands. It was also apparent that greater influence on land use decisions by federal departments and agencies would assist in meeting Canada's commitments under the North American Waterfowl Management Plan. More recently, following Canada's endorsement of the Convention on Biodiversity in 1992, it is expected that Canada's federal wetland policy will form a portion of implementation initiatives for this important and far-reaching international agreement. Canada, in particular, has been supportive of joint actions for freshwater by the Convention on Biodiversity and Convention on Wetlands.

The Federal Policy on Wetland Conservation announced by the Government of Canada in 1992 focuses on the "wise" or "sustainable" use of wetlands in Canada, consistent with the Wise Use Principles developed by the Convention on Wetlands. The Policy applies to all federal agencies, programs and projects. It is being implemented through existing programs and budgets. The Canadian Wildlife Service of Environment Canada acts as an inter-agency advisor assisting federal departments in the design of mechanisms to implement the Policy in their programs.

The objective of this *Policy* is: "to promote the conservation of Canada's wetlands to sustain their ecological and socio-economic functions, now and in the future." Two key commitments include: (a) no net loss of wetland functions on federal lands and waters through mitigation of all impacts of development related to these wetlands; and (b) enhancement and

rehabilitation of wetlands in areas where the continuing loss or degradation of wetlands or their functions have reached critical levels.

Implementation of the *Policy* is haunted by two major misconceptions. First, many land managers have indicated that they regard it as a policy of the federal environment department. Rather, it is a Cabinet-approved federal policy, and all departments are responsible for implementing its strategies. The second major misconception is that it applies only to the management of federal lands. In fact, the *Policy* applies to the delivery of all federal programs, services and expenditures. Implementation of seven strategies under the Policy is now facilitated by the *Implementation Guide for Federal Land Managers* (Lynch-Stewart *et al.* 1996). A training program on implementing the federal wetland policy has been developed by the North American Wetlands Conservation Council (Canada) and the Canadian Wildlife Service to help federal land managers to better understand their obligations with respect to wetlands and how to carry them out.

#### **Provincial Policies**

Because Canada is a federal state, wetlands in its ten provinces are generally under provincial regulation except on federal lands such as national parks. However, in its two northern territories, most wetlands are under federal management. Hence, while the federal wetland policy applies directly to 29% of Canada's wetland base (on federal lands), provincial wetland programs are responsible for the rest.

While all provinces have non-regulatory wetland management programs in place, four provinces – Alberta, Saskatchewan, Manitoba and Ontario – have developed wetland conservation policies. These policies have been developed through extensive public review and consultation processes. While most provincial wetland policies emphasize a non-regulatory approach, they also direct the use of regulatory mechanisms for achieving wetland conservation uses, as discussed in Section 3.0.

Ontario's *Provincial Policy Statement*, describes how wetlands in that province will be dealt with through the provincial *Planning Act*. Alberta is currently applying an interim wetland management policy for the settled areas of the province and is in the process of developing a policy for the whole province. Saskatchewan has developed a provincial policy to encourage sustainable management of wetlands on public and private lands. Manitoba has established a wetland policy as a section under the umbrella of the Manitoba Water Policies. In Atlantic Canada, Nova Scotia and New Brunswick have developed draft wetland policies, but the drafting of new environmental legislation in these provinces has postponed further development of these policies.

## **Industry Sector Policies**

Several industry groups that utilize wetland resources have brought forward industry-specific wetland management policies. The Canadian Sphagnum Peat Moss Association (CSPMA), whose member companies produce over CA\$ 200 million in peat products each year, established a *Peatland Restoration Policy* in 1993. This CSPMA *Policy* focuses on peatland reclamation, restoration after resource harvesting and cooperation with environmental interests and regulators.

In 1992, the Canadian Pulp and Paper Association (CPPA) released a *Wetlands Policy Statement*, that lays out a series of sustainable development commitments on the use of wetland ecosystems by one of the nation's largest employers. The CPPA *Statement* notes this industry's commitment to sustaining wetlands through integrated resource management and to maintenance of the ecological and socio-economic functions of wetlands over the long-term. The *Statement* notes also that CPPA companies support a coordinated, cooperative approach involving all stakeholders.

### 5.0 Conclusions

Governments at all levels have a diverse suite of legal mechanisms available for conserving wetlands in Canada. In this paper, the authors have looked at over 30 federal and provincial or territorial statutes that influence wetland conservation across Canada. These statutes provide the authority for Crown agencies to acquire wetlands for protection; to regulate activities so as not to harm wetlands on public lands; to regulate activities on private lands where they interfere with resources under federal or provincial jurisdiction such as fisheries, migratory birds, and water; to apply land use restrictions using bylaws, zoning, and environmentally sensitive areas designations and statutes; and to require project proponents to assess and mitigate impacts on wetlands. Other statutes enable conservation agreements with private landowners, and tax incentives for conserving wetlands on private lands.

At the federal level, legislative power over wetlands seems best described as having "unfulfilled" potential. For example, the *Migratory Birds Convention Act* contains powers that have not been widely applied; stronger action could be considered to establish and adequately protect areas under the *Canada Wildlife Act*; controversy in some provinces regarding jurisdiction over fish habitat needs to be addressed; strategies for the new marine protected areas programs need to be implemented; and federal government decision-makers need to recognize the implications of the *Federal Policy on Wetland Conservation* in the environmental assessment of major public development decisions. Generally, published critiques do not indicate that more legal tools are necessarily needed to conserve wetlands, rather, we need to strengthen and use the tools we have.

The legal route will continue to provide a backdrop to the driving force of wetland conservation and restoration in Canada – voluntary stewardship of private lands. The last two decades have also seen the establishment of a legal foundation for stewardship activities in Canada. The federal government amended the *Income Tax Act* in 1996 to facilitate donation of ecologically sensitive lands, easements, covenants and servitudes to municipal, Crown and non-government environmental organizations. Provinces are also adopting voluntary non-regulatory wetland conservation programs through conservation legislation which permits the establishment of stewardship programs, conservation easements and conservation covenants. At the very local level, municipal planning acts are being used more effectively to promote stewardship programs.

Legislation also seems to be evolving in another important way: new and revised legislation makes more explicit reference to wetlands. Particularly at the provincial level, new and revised acts — and associated policies and guidelines — with broader environmental objectives are explicitly recognizing wetlands as important ecosystems worthy of special attention. For example, the Province of Quebec's *Act Respecting the Conservation and Development of Wildlife* protects wetlands as waterfowl, fish and muskrat habitat; Prince

Edward Island's soon to be enacted *Wildlife Conservation Act* recognizes "heritage marshes" as areas to be protected; and British Columbia's *Forest Practices Code* prescribes wetland and riparian setbacks and limits logging according to different wetland classes.

Considering wetlands distribution across the nation, three quarters of our wetlands are affected by a government wetland policy that promotes voluntary, non-regulatory conservation. Wetland conservation policies have been adopted by the federal government, Ontario, Saskatchewan, Alberta, Manitoba, and two major industry associations. Wetlands have become an important component in the development of broader biodiversity conservation strategies across Canada.

Through the preparation of provincial, territorial and federal wetland policies and programs, in concert with a wide array of regulatory tools, a common focus on the global themes of sustainable development and partnership has emerged. Wetland conservation is inextricably linked to these themes at the international, national, regional and local levels. In Canada, these linkages are achieved through the multitude of agreements and partnerships that complement jurisdictional arrangements and achieve cooperation in conservation. Canada has established many commitments to wetland conservation that are far-reaching nationally and internationally. Wetland policies and federal and provincial legislation complement the cooperation inherent in voluntary, non-regulatory initiatives such as the North American Waterfowl Management Plan. On the global scene, Canada's long standing support and interest in the Convention on Wetlands and the principles of "wise use" are also a key aspect of our national approach.

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#### Acknowledgements

The material on wetland legislation in this paper draws upon an ongoing joint project led by Environment Canada and the North American Wetlands Conservation Council (Canada). This study is being conducted under contract by Lynch-Stewart & Associates to develop a 1998 update report on the status of wetland policy and legislation in Canada, for publication later this year.

Disclaimer: The views expressed in this paper are drawn from published literature and are not necessarily those of the Government of Canada or the North American Wetlands Conservation Council (Canada).

Table 1: Strengths and limitations of federal statutes for conserving wetlands

Statute	Focus	Strengths	Limitations <sup>3</sup>	Achievements
Migratory Birds Convention Act	• migratory birds and their nests	authorizes designation of Migratory Bird Sanctuaries for nationally significant habitat	• does not protect habitat, except for Section 35 that prohibits -anywhere in Canada - deposit of harmful substances in waters frequented by migratory birds	<ul> <li>wetlands cover about half of 11.3 million ha of MBS area</li> <li>sheer fact of designation as "Sanctuary" provides some measure of protection to the area</li> <li>effectiveness of Section 35 in preventing harm to wetlands not known</li> </ul>
Canada Wildlife Act	wildlife research, conservation and interpretation     "wildlife" includes any animal, plant or other organism belonging to a wild species and also the habitat of any wild animal, plant or other organism     applies to Canada's lands, internal waters and territorial sea	<ul> <li>authorizes designation of National Wildlife Areas and Marine Wildlife Areas to protect nationally significant habitats, especially for migratory birds but for all wildlife</li> <li>protects wildlife by prohibiting activities harmful to wildlife and the environment</li> <li>less difficult to establish, and more flexible, than National Park designation</li> <li>most extensive geographic</li> </ul>	clear federal jurisdiction     limited to migratory birds;     otherwise need cooperation     of provinces     potential for industrial     development in protected     areas still exists	• wetlands cover about 40% of the 287 00 of NWA area

<sup>3</sup> Based on literature review: references for these comments may be found in the text.

		coverage of all fed. protected			
National Parks Act	<ul> <li>acquisition and management of lands to leave unimpaired for future generations</li> <li>under National Parks System Plan, <u>representative parks</u> in each of the terrestrial and marine regions of Canada (marine regions includes <i>Canada's oceans and Great Lakes</i>)</li> </ul>	area programs  • authorizes designation of National Parks and National Marine Conservation Areas  • National Parks offer relatively strong legal protection, through "maintenance of ecological integrity" and "unimpaired" clauses	• long, onerous process to establish National Parks in legislation; establishment of National Marine Conservation Areas may be even more complicated	• 1.3 million ha of wetland within National Parks	
Canada Oceans Act	<ul> <li>Marine Protected Areas focus is the protection of <u>fishery resources</u> including marine mammals and their habitats; endangered species and their habitats; areas of high biodiversity or productivity; and unique habitats</li> <li>management of estuarine coastal and marine systems in waters that form part of Canada</li> </ul>	<ul> <li>authorizes designation of Marine Protected Areas</li> <li>objective for MPAs         <ul> <li>encompasses a broach range</li> <li>of species and habitats</li> </ul> </li> <li>federal government has <i>clear</i> <ul> <li>authority to establish Marine</li> <li>Protected Areas under this</li> <li>Act</li> </ul> </li> </ul>	would apply to tidal     wetlands only, that support     fisheries	• Act is new: limited achievements to date	
Fisheries Act cntd. Fisheries Act	<ul> <li>applies to all "Canadian fishery waters" (seacoast and inland fisheries)</li> <li>has provisions for pollution prevention and conservation and protection of fish habitat</li> </ul>	<ul> <li>prohibits the harmful alteration, disruption or destruction of fish habitat, including wetlands</li> <li>requires plans of projects with potential to interfere with fish</li> </ul>	<ul> <li>federal jurisdiction limited to those aquatic habitats contributing to a fishery</li> <li>focus on fisheries resources, not ecosystem conservation</li> <li>exercise of federal power</li> </ul>	• proportion of activity under Act that is associated with wetlands not known	

				,
	• "fish" includes all parts and	or fish habitat	over fisheries sometimes	
	life stages of finfish,	• prohibits deposit of	politically controversial	
	shellfish, crustaceans and	deleterious substances in		
	marine mammals; "fish	water frequented by fish		
	habitat" means those areas			
	on which fish depend in			
	order to carry out their life			
	processes; "fisheries			
	resources" means fish stocks			
	or populations that sustain			
	commercial, recreational or			
	native fishing activities of			
	benefit to Canadians			
Canadian	• projects for which the	• casts a broad net over many	• lack of clear criteria or	• number of major decisions
<b>Environmental</b>	<b>federal</b> government holds	of the potential ways that the	guidelines for determining	under CEAA involving
Assessment	decision-making authority,	federal government can affect	the acceptability of projects	wetlands not known
Act	whether it proposes a project,	wetlands: primary means of	and appropriate mitigation	• recent assessment under
	sells, leases or transfers	implementing the Federal	measures	CEAA set important
	control of land, contributes	Policy on Wetland	<ul><li>lack of independent review:</li></ul>	precedent in terms of
	money or other financial	Conservation	decisions often made by	wetland assessment and
	assistance, or exercises a		authority involved in the	mitigation of impacts on
	regulatory or "permitting"		project	wetland functions
	duty		• lack of clear, formal, funded	
	• applies to projects anywhere		public participation process	
	in the world			

# statutes that contribute to wetland conservation

ı ıbia	Alberta	Saskatch ewan	Manitob a	Ontario	Quebec	Northwe st Territori es	Yukon	Newfoun d-landl	New Brunswic k	Nova Scotia	Prince Edward Island
ct; ical ct; ge vation	Wilderne ss Areas, Ecologica l Reserves and Natural Areas Act; Prov.	Ecologica l Reserves Act; Parks Act	Ecologica l Reserves Act; Prov. Parks & Lands Act	Ontario Heritage Act; Provincia I Parks Act	An Act Respectin g the Ecologica l Reserves; Parks Act	Territoria l parks Act (*Land Claims*)	Parks Act (*Land Claims*)	Provincia 1 Parks Act; Wilderne ss and Ecologica 1 Reserves Act	Ecologica l Reserves Act; Parks Act	Provincia 1 Parks Act; Special Places Protectio n Act	*Natural Areas Protectio n Act*
e Act at vation	Parks Act Wildlife Act	*Wildlife Habitat Protectio n Act*	Wildlife Act; Endanger ed Species Act	Endanger ed Species Act	Act Respectin g Threatene d or Vulnerabl e Species; *Act Respectin g the Cons'n & Dev't of Wildlife*	Wildlife Act	Wildlife Act	*Wildlife Act*	Endanger ed Species Act	Wildlife Act	*Wildlife Conserva tion Act* (Heritage Marshes)
· Act*	Water		Water	*Ontario					*Clean	Water	

	Resource s Act; *Water Act (New)*		Resource s Administr ation Act	Water Resource s Act*; Lakes and Rivers Improve ment Act			Water Act* (Water Course Alteration Regulatio n)	Act	
ipal and nmental ement	Municipa l Planning Act (pending) ; *Public Lands Act*	Planning and Dev't Act; Prov'l Land Act	Planning Act	Municipa l Act; Ministry of Governm ent Services Act; *Planning Act*; *Public Lands Act*	Planning Act	*Munici palities Act*; Crown Lands Act	Communi ty Planning Act; Crown Lands and Forests Act	Planning Act; Crown Lands Act	*Plannin g Act* (Coastal Areas Reg); Lands Protectio n Act

ement	ental Protectio n and Enhance ment Act	ental Man't and Protectio n Act	ent Act	ental Protectio n Act				Protectio n Act	Water Act	ent Act	ental Protectio n Act
nmental ment	Environm ental Protectio n and Enhance ment Act	Environm ental Assessme nt Act	Environm ent Act	Environm ental Assessme nt Act	Environm ental Quality Act			*Depart ment of Environ ment and Lands Act* (Water Res's Policy); Env. Assess. Act	*Clean Environ ment Act* (Env'l Impact Assess. Reg)	*Environ ment Act* (Wetland s Directive)	Environm ental Protectio n Act
t es f B.C.	Forests Act	Fisheries Act; Natural Resource s Act	Forest Act	Crown Forest Sustainab ility Act (pending) ; Fish and Wildlife Act (pending)	Forest Act; Plant Protectio n Act	Forest Managem ent Act	Forest Protectio n Act	Forestry Act	Crown Lands and Forests Act		Fish & Game Protectio n Act; Forest Man't Act; Wildlife Conservat ion Act
itle Act	Environm ental Protectio	*Sask'n Conservat ion	Heritage Res's Act;	*Conserv ation Land						*Conserv ation Easemen	*Natural Areas Protectio

n and	Easement	*Cons'n	Act*			ts Act*	n Act*
Enhance	Act*	Agreeme					
ment Act		nts					
		Act*(pen					
		ding)					

ks and bold type are judged most valuable for wetland conservation by local wetland managers.