

# **Toward a Canadian National Water Strategy**

## **Final Report**

**Prepared for  
Canadian Water Resources Association**

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# Executive Summary

Significant threats to water resources exist across Canada. Climate change is an emerging challenge in all parts of the country, but numerous long term problems also exist, with serious implications for Canada's environment, economy and society.

Canada does not currently have an overarching national water strategy that facilitates more effective responses to current and emerging challenges and threats. The benefits of having such a strategy are numerous. Examples include the following:

- More consistent and effective responses to concerns with national dimensions, such as water exports and climate change
- Increased accountability due to broader stakeholder participation in governance
- Enhanced environmental protection and a stronger foundation for economic productivity
- Stronger national capacity to respond to threats and crises
- Better positioning to meeting growing international expectations and obligations
- Greater public acceptance and support for water management decisions

The Canadian Water Resources Association (CWRA) believes that a Canadian National Water Strategy (CNWS) is an effective way to address the water management challenges we face, and that such a strategy is within reach. Two major reasons are offered in the report to support this viewpoint:

1. There is a long history in Canada of initiatives that aim to coordinate and integrate aspects of water management. These are found within the federal government, within each provincial/territorial government, and between governments at various levels. At the same time, a strong appetite currently exists in organizations outside of governments for national-level coordination and collaboration in water management.

2. Around the world, there are numerous examples of jurisdictions that have already developed, or are in the process of developing, overarching water policies, strategies or frameworks designed to address the kinds of challenges faced in Canada. This report examines the cases of New Zealand, Australia, South Africa, Brazil and the European Union. Experiences in these jurisdictions provide examples, lessons and motivation for Canadians to develop a CNWS.

The CWRA commissioned this study to explore options and opportunities for developing and implementing a Canadian National Water Strategy. The report outlines CWRA's vision, and proposes an approach for developing such a strategy. The recommended approach is grounded in the assumption that broad participation from all stakeholders – inside and outside of governments – is required to develop and implement a meaningful CNWS. As a result, it is argued, the precise form and content of a CNWS cannot be specified in advance, but must be revealed as the process unfolds.

The process outlined in this report begins with the formation of a leadership team, comprised of people who can speak to the needs, concerns and interests of the various stakeholder groups identified by or in the report. Active involvement by Indigenous participants at this early stage is critical. Similarly, active involvement by federal and provincial government officials (even in an unofficial capacity) is needed because of their constitutional responsibilities for water.

The remaining steps in the process are designed to build a broad base of support, clarify the objectives of a CNWS, and eventually create a solid foundation for governments (federal and provincial/territorial) to adopt and implement a CNWS in their own laws and policies.

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# 1. Introduction

Canada does not have an overarching national water strategy that facilitates stronger, more effective water management. The benefits of having such a strategy are well known, and have been identified by numerous groups including the Canadian Chamber of Commerce, the Conference Board of Canada, the Council of Canadians, Pollution Probe, the Gordon Water Group, Friends of the Earth, and the Canadian Water Resources Association. Several Canadian provinces and one territory have seen the benefits of coordinated water policies, and have developed, or are developing, their own overarching strategies. The federal government is also showing renewed interest in water through its Action Plan on Clean Water. Thus, the time is right to create a Canadian National Water Strategy (CNWS).

In June, 2007, the Board of Directors of the Canadian Water Resources Association (CWRA) formed the *CWRA Working Group on a National Water Strategy*. The Working Group's goal is to map out and promote processes needed to develop and implement a CNWS.

This report, which has been commissioned by the CWRA NWS Working Group, explores options and opportunities for developing and implementing a CNWS.

- The rationale for a CNWS is outlined in Section 1.1.
- Past and current initiatives in Canada that establish a foundation for a CNWS are highlighted in Section 2.
- Canadian and international examples of overarching water strategies and policies are discussed in Section 3.
- Recommendations for a process through which a CNWS can be developed are offered in Section 4.

The audience for this report is the large and diverse group of people who share an interest in, or responsibility for, water policy in Canada (Box 1).

## Box 1: Who is Involved in Canadian Water Management?

- Federal, provincial/territorial and local government politicians, planners, regulators, policy makers, scientists, and enforcement officers have key roles in water management.
- Organizations with legally-defined responsibilities for water management include public utilities; conservation authorities in Ontario; irrigation districts in British Columbia, Alberta and Saskatchewan; conservation districts in Manitoba; improvement districts in British Columbia; and water boards in the territories.
- Thousands of consulting firms, water and energy firms, manufacturing industries, farmers and other commercial enterprises are involved in aspects of water management.
- Scores of non-government organizations (NGOs) are stakeholders in Canadian water management. Examples include community groups, environmental NGOs, industry associations, and conservation groups. Some are small, volunteer organizations, while others operate on the world stage. They contribute to policy, lobby governments, take part in governance, and play key roles in monitoring and data collection.
- The historical and treaty rights of Canada's Indigenous people give them a special place in Canadian water management. Comprehensive land claims agreements such as the Nunavut Final Agreement and the Labrador Inuit Land Claims Agreement are reshaping the role of Indigenous people in water management in the areas in which these agreements have effect.
- Researchers in universities are stakeholders even if they do not "manage" water themselves.
- Finally, members of the public are important stakeholders because all Canadians use and affect water (directly or indirectly), and because citizens are affected by the water-related decisions that other people make.

## 1.1. Water Management in Canada

The scope of water management in Canada is enormous (Box 2). Some activities, such as developing water supplies and providing water for domestic, industrial and agricultural purposes, have been part of the landscape of water management for centuries. Others, such as remediation of contaminated water bodies and provision of ecological flows, are more recent concerns.

Activities in Box 2 occur in Canada at scales from local to regional. Some take place everywhere in the country, at all times (e.g., provision of drinking water and disposal of wastewater), while others are concentrated in a few areas and take place during certain times of the year (e.g., agricultural irrigation). The relative importance of these activities in particular places in Canada

### Box 2: Water Management in Canada

Contemporary Canadian water management involves activities such as the following:

- Operating drinking water treatment and distribution systems
- Collecting, treating and disposing of wastewater
- Developing and delivering water conservation and efficiency programs
- Protecting water sources from contamination
- Creating watershed plans to guide land use planning and to promote sustainable water use
- Remediating contaminated surface water and groundwater bodies
- Gathering data for research, monitoring, planning and enforcement
- Allocating scarce water supplies through permits and licenses
- Protecting and restoring fish habitat
- Exploring for, and developing, groundwater resources
- Constructing and operating dams and other infrastructure for flood control, navigation, irrigation, and drinking water supply
- Irrigating crops and watering livestock
- Generating hydroelectric power
- Regulating flows to meet ecological needs
- Building dykes and levees to protect developed areas from flooding

is shaped by the country's hugely varying climate and water resources; the distinctive patterns of settlement and economic development in its regions; the institutions that exist in each province and territory; and the specific threats, challenges and problems that exist or are anticipated (Box 3).

How important the problems identified in Box 3 are varies from place-to-place in Canada. However, recent studies by Environment Canada <sup>[29; 30]</sup> demonstrate that all parts of the country currently face significant threats to water, and that these threats are likely to become more severe in future.

Historically, water management in Canada was almost exclusively the domain of governments and industry, and the people involved usually were technical specialists. As the scope of water management has changed over the years to reflect new concerns and new problems, so too have the kinds of stakeholders involved. Because of their constitutional responsibilities, the federal and provincial/territorial governments are – and will always remain – critical players. Nonetheless, during the past roughly four decades, the range of people and organizations involved in water management has broadened considerably beyond government officials. Members of the public now expect to be involved in decision making. At the same time, the backgrounds of the people involved (inside and outside of government) have become much more diverse <sup>[27]</sup>.

In sum, Canadian water management today involves a long and growing list of activities designed to address critical needs and increasingly serious problems. The people involved have very diverse backgrounds and interests, and the roles they play in water management are very different than in previous decades.

## 1.2. Why a Canadian National Water Strategy?

In a country as large and diverse as Canada, there is no reason to expect that approaches to water management should be the same everywhere. Different problems sometimes warrant

### Box 3: Water Problems in Canada

Problems such as the following have been extensively documented nationwide in Canada during the past several decades.

- Contamination of surface water bodies and groundwater aquifers
- Unsafe drinking water and inadequate waste water treatment
- Overuse and misuse of water supplies
- Inadequate links between surface water and groundwater management
- Shortages due to overuse and drought
- Low lake and river levels that compromise navigation
- Loss of habitat and damage to ecosystems
- Invasive species that threaten native species
- Inconsistent standards for water quality, water use, and data collection
- Gaps in knowledge relating to groundwater and surface water resources, water use patterns and trends, and sources of vulnerability
- Poor accountability and variable or inadequate stakeholder involvement
- A failure to coordinate across jurisdictions
- Gaps in the implementation or enforcement of existing laws, regulations and policies
- Lack of capacity (technical, financial, social) and lack of leadership
- Conflict and inefficiency that compromise economic productivity
- Fear of insatiable demands for water from the United States
- Limited capacity to meet growing international obligations
- The impacts of climate change on the hydrologic cycle

different solutions. Furthermore, for reasons of history, politics, culture and capacity, what works in one part of the country might not be appropriate in another. Nonetheless, it has been recognized for some time now that increased coordination, consistency and focus are needed to strengthen Canadian water management. For example, the 1985 Inquiry on Federal Water Policy was an attempt to focus the federal government's water management activities<sup>[67]</sup>.

The momentum established by the Inquiry on Federal Water Policy raised the profile of water management in Canada and led to the well-

received *Federal Water Policy* (discussed in Section 2). However, it did not produce a *national* water policy. Indeed, momentum built up during the 1980s dissipated during the 1990s when water management ceased to be a major concern of governments across Canada<sup>[10; 12]</sup>.

There has been a resurgence of interest in water policy in Canada since 2000. Reasons include widely-publicized contamination incidents in Walkerton, Ontario (in 2000) and North Battleford, Saskatchewan (in 2001); severe droughts and water shortages on the prairies; concerns about water exports and the security of Canada's water resources under NAFTA; widespread attention to the anticipated impacts of climate change in the media and among the scientific community; and growing recognition of Canada's role as a member of the global water community.

These concerns have led to renewed calls from a variety of sources for strengthening water management by adopting a national perspective.

- Organizations such as the Canadian Water Resources Association<sup>[81]</sup>, Pollution Probe<sup>[69]</sup>, the Gordon Water Group<sup>[62]</sup>, the Council of Canadians<sup>[22No Date]</sup> and Friends of the Earth<sup>[33]</sup> all have called for a national perspective on water policy to better address the challenges faced in Canada.
- These organized efforts have been echoed by speakers at various national conferences and events, such as the Policy Research Initiative's Freshwater for the Future conference (Ottawa, 2006) and the Fifth Biennial Rosenberg International Forum on Water Policy (Banff, 2006), and by authors in *Eau Canada*<sup>[9]</sup>, a recent book about water management in Canada.

A national water policy, framework or strategy, its advocates suggest, would allow Canada to address current and future water management challenges much more effectively than has occurred to date. Suggested benefits of a Canadian National Water Strategy include the following:

- More efficient and effective water management due to clarified responsibilities

- Increased accountability due to broader stakeholder participation in water governance
  - Reduced institutional fragmentation and fewer gaps in laws and policies
  - More consistency in responses to concerns with national dimensions, e.g., climate change and water export
  - Enhanced environmental protection and a stronger foundation for economic productivity through increased consistency in regulations, standards and practices
  - More effective decision making that transcends jurisdictional boundaries
  - Stronger capacity in all parts of the country to respond to threats and crises
  - Greater integration within water management, and between water and other sectors
  - Increased potential for policy innovation due to national coordination and collaboration
- Better positioning to meet growing international expectations and obligations
  - Stronger public acceptance and support for decisions that respond to clearly-articulated, consensus-based goals that use tools confirmed to be most effective

In the event that a CNWS is created, Canada would be following in the path of jurisdictions such as New Zealand, Australia, South Africa, Brazil and the European Union. These jurisdictions have developed overarching frameworks to address the water-related challenges they face, and to position themselves to respond more effectively to global challenges and opportunities. Their experiences suggest that it should at least be *possible* for Canadians to bring a national perspective to water management policies and practices.

## 2. Foundations for a Canadian National Water Strategy

A process to develop a CNWS can and should build on numerous past and current initiatives that aim to coordinate and integrate some aspect of water management. This section highlights selected examples of such initiatives, primarily from the water sector. It is neither a comprehensive inventory, nor an evaluation of the effectiveness or success of the initiatives discussed. Rather, the aim in this section is to demonstrate – using selected concrete examples – that collaboration and coordination are part of the fabric of Canadian water management. Secondary aims are to reinforce the fact that water governance in Canada is not the exclusive domain of governments; to emphasize the enormous range of concerns that pertain to water; and to draw attention to factors that influenced or motivated parties to create these initiatives.

The federal and provincial governments have constitutionally-defined responsibilities for water in Canada. Thus, initiatives of these governments are discussed first (Section 2.1). Examples are introduced that speak to attempts to coordinate and integrate *within* each level of government. This is followed by a discussion of Canada-wide *intergovernmental* initiatives.

Selected initiatives of the vast range of organizations representing environmentalists, conservationists, industries, local governments, Indigenous people and others involved in water management are considered in Section 2.2. As noted in Section 1, Indigenous people in Canada have important legal rights that give them a special role in Canadian water management. Therefore, it is becoming less and less appropriate to think of them as “stakeholders” who are on the same level as other kinds of water users. However, because *national* initiatives by Indigenous peoples are primarily undertaken by advocacy organizations such as the Assembly of First Nations, a pertinent example is discussed in Section 2.2.

### 2.1. Government Initiatives

#### Federal Government

The *Constitution Act* assigns the federal government a specific set of water-related responsibilities pertaining to fish and fish habitat, navigation, Indigenous people, transboundary flows, international relations, trade and commerce, agriculture (shared with the provinces), and federal lands. Hence, the scope of federal government activity in the water sector is vast. The 1985 *Inquiry on Federal Water Policy* <sup>[67]</sup> catalogued the breadth and depth of federal activity. Much has changed since then, in terms of policies and programs, but the federal government continues to be a critical player in Canadian water management with key leadership responsibilities.

Recognizing the need to get its own house in order, the federal government has attempted to coordinate policies and actions across federal departments and agencies that have water-related responsibilities. Three examples of federal government-wide water policy making activities, one past and two current, include the following:

- Following the acclaimed 1985 *Inquiry on Federal Water Policy*, the federal government published its *Federal Water Policy* in 1987 <sup>[28]</sup>. The *Federal Water Policy* was widely recognized as a forward looking document that clarified the federal government’s overall policy for water; its strategies relating to concerns such as water pricing, science leadership, and integrated planning; and its policies concerning topics such as interbasin transfers, climate change, drinking water and wetlands. Importantly, the policy explicitly recognized Canada’s connection to the global water system, its international obligations, and the benefits of a global perspective. Unfortunately, the policy was never fully implemented, and it has limited relevance today <sup>[62]</sup>.

- Two interdepartmental committees have been formed recently – one at the Assistant Deputy Minister level, and a mirror committee at the Director General level. The overall goal in creating these committees is to increase inter-departmental coordination in water policy and management among federal departments through routine sharing of information and collaboration.
- Despite its narrow scope and focus on specific actions rather than broad policies, the government’s *Action Plan on Clean Water*, presented in the 2007 budget (Box 4), is another example of renewed attention to water by the federal government.

Numerous examples also exist of federal initiatives focused on specific sectors and concerns. The first example discussed here illustrates the government’s response in an area where it has constitutional responsibilities, while the second example highlights an area where government-wide coordination is being pursued more for practical rather than constitutional reasons.

- Environment Canada and Agriculture and Agri-Food Canada are collaborating on the National Agri-Environmental Standards Initiative (NAESI) under the Agricultural Policy Framework. The goal is to develop standards relating to pesticides, water quality, water conservation, air quality and biodiversity; these voluntary standards will be targeted for various sectors, including agriculture, and are meant to be used by farm producers to enhance (among other things) water conservation practices that address regional and sectoral variability in water use, ecological sensitivity and water availability. Agriculture is a shared federal-provincial responsibility under the *Constitution Act*. Thus, implementation of standards resulting from the NAESI will occur primarily through the actions of provincial governments.
- Provision of clean, safe drinking water is primarily the responsibility of provincial/territorial and local governments in most parts of Canada. Nonetheless, numerous federal government agencies are involved in drinking water supply. The Federal Drinking

#### Box 4: The Federal Government’s 2007 *Action Plan on Clean Water*

In the October 16, 2007 Speech from the Throne, the Government of Canada announced that “A new water strategy will be implemented to help clean up our major lakes and oceans and to improve access to safe drinking water for First Nations.” The Budget itself identified the following elements of the strategy:

- \$11 million over two years to accelerate the clean-up of contaminated sediments in eight areas of the Great Lakes Basin identified under the Canada-U.S. Great Lakes Water Quality Agreement.
- \$5 million over two years for the International Joint Commission to carry out a study with the U.S. on the flow of water out of Lake Superior.
- \$12 million over two years to support the clean-up of Lake Simcoe.
- \$7 million over two years to support the clean-up of Lake Winnipeg.
- \$19 million over two years to help clean and protect our oceans and support greater water pollution prevention, surveillance and enforcement along Canada’s coasts.
- \$39 million over two years to increase fisheries science research programs to strengthen fisheries management and resource conservation.
- \$324 million to the Canadian Coast Guard for the procurement, operation and maintenance of an additional six new large vessels – four mid-shore patrol vessels and two offshore fishery science vessels.
- New standards to ensure that all First Nations residents have access to safe drinking water.
- Improving water and wastewater infrastructure, including treatment facilities, sewage collection and water distribution, through the Government’s long-term infrastructure plan.

These activities reflect the federal government’s current preference for specific actions rather than broad policies. To clarify the distinction, the term “Action Plan on Clean Water” became used within the federal government instead of “National Water Strategy”, the term used in the Throne Speech.

Water Compliance Program is a Health Canada initiative that aims to coordinate the activities of the roughly 14 federal departments and agencies that are involved in drinking water provision<sup>[40]</sup>. These include Indian and Northern Affairs Canada (which has specific constitutional responsibilities for drinking water safety in First Nations communities), the Department of National Defense, Parks Canada, the Coast Guard, the Department of Foreign Affairs and International Trade, and numerous other federal agencies that operate water treatment infrastructure in Canada, and around the world.

### Provincial/Territorial Governments

Under Canada's *Constitution Act*, the provinces are the level of government primarily responsible for water through their jurisdiction over public lands, municipal institutions, local works and undertakings, non-renewable resources, property and civil rights and energy, and their shared jurisdiction over agriculture. As a result, provincial governments have developed a wide range of water-related laws, policies and programs. In all provinces, the scope of water-related activities is extensive. Every provincial government has developed its own systems for allocating water resources, regulating drinking water providers, guiding land use planning, controlling discharges of pollutants into the environment, and other critical activities pertinent to water management<sup>[26]</sup>.

Like the federal government, the provincial and territorial governments face the challenge of having numerous agencies and organizations responsible for different statutes – and thus a pressing need for intra-governmental coordination. In response, many have developed, or are working towards, overall strategies. Examples include Nova Scotia's *Drinking Water Strategy*, Saskatchewan's *Long-Term Safe Drinking Water Strategy*, Manitoba's *Water Strategy*, Alberta's *Water for Life* strategy, and Quebec's *National Water Policy* – to name a few. The last two examples are recognized as being, conceptually at least, comprehensive and well developed. Thus, they are explored in more depth in Section 3.

Water management in the territories is the responsibility of the federal government under the *Constitution Act*. However, territorial governments are increasingly taking on new powers and responsibilities, and creating water-related statutes, policies and programs. At the same time, in each of the territories arms-length boards play key roles in water management. Examples include the Yukon Water Board; Nunavut Water Board; and, in the Northwest Territories, Northwest Territories Water Board, and four boards created under the Mackenzie Valley Resource Management Act (Gwich'in Land and Water Board, Mackenzie Valley Land and Water Board, Wek'eezhii Land and Water Board, and Sahtu Land and Water Board).

### Canada-Wide Intergovernmental Initiatives

Even though the *Constitution Act* specifies areas of distinct federal versus provincial responsibility for water, the reality of water management in Canada is shared or overlapping responsibility between the federal and provincial/territorial governments in many areas. Even in areas where responsibility *technically* resides with one level of government or another, in practice compelling grounds for collaboration and coordination usually exist.

Initiatives in this sub-section are examples of federal-provincial/territorial collaboration and coordination on water or environmental management. The focus is on initiatives that are Canada-wide in scope. Thus, well known examples of federal-provincial cooperation such as the *Canada-Ontario Agreement Respecting the Great Lakes Basin Ecosystem* and the *Master Agreement on Apportionment* (involving Canada, Alberta, Saskatchewan and Manitoba) are not discussed here simply because their scope is regional rather than national. The kinds of initiatives discussed in this sub-section are especially significant from the viewpoint of this report because they support the claim that collaboration and coordination have long been part of the fabric of Canadian water management.

Effective policy coordination among the federal and provincial/territorial governments demands

ongoing interaction. The Canadian Council of Ministers of the Environment (CCME) provides a forum to permit regular interaction among Canada's environment ministers. CCME promotes cooperation and coordination on inter-jurisdictional issues, and serves as a forum for members to develop national guidelines, norms and strategies. It has no authority to implement or enforce legislation. Therefore, each jurisdiction chooses whether or not it will adopt CCME proposals. Examples of work pertinent to water include a national action plan to encourage municipal water use efficiency; guidelines for applying the multi-barrier approach to drinking water source protection; the Canadian Environmental Quality Guidelines, which updated the 1987 Canadian Water Quality Guidelines; and, less directly, the Canada-Wide Accord on Environmental Harmonization, which sets as a goal coordination among the governments.

A practical and often non-politically controversial area for intergovernmental cooperation and coordination is the development of standards. Standards development at the national level has proven to be beneficial because it permits more efficient use of resources and greater consistency across the country [25]. The CCME's water quality guidelines are one example where this has occurred. Others include the following:

- The *Guidelines for Canadian Drinking Water Quality* are established by the Federal-Provincial-Territorial Committee on Drinking Water and have been published by Health Canada since 1968. Most Canadian provinces have drawn on the guidelines to shape their own legal standards for drinking water quality. Some provinces have nearly or completely incorporated the standards into their regulations (e.g., Alberta, Nova Scotia and Québec), while provinces such as Ontario have drawn strongly on, or adapted them, in their drinking water regulations.
- Standards for plumbing fixtures in Canada have been developed at the national level, and are implemented by provincial and territorial governments. The Canadian Commission on Building and Fire Codes has developed six of Canada's national model building codes, in-

cluding the National Plumbing Code. The six codes, which are linked to detailed codes published by organizations such as the Canadian Standards Association, have been adopted by most provinces and territories, with or without modifications [63].

Intergovernmental cooperation and collaboration also occur in the implementation of water management activities on the ground. This can be illustrated through two examples, one from agriculture and one from flood plain management:

- The National Water Supply Expansion Program (NWSEP) is a four year, \$60 million initiative under Agriculture and Agri-Food Canada's Agricultural Policy Framework. Its objective is to help agricultural producers and communities in Canada reduce the risk of future water shortages by increasing the reliability of water supplies. Individuals, groups, communities, businesses, educational institutions and provincial agencies can apply for assistance for projects ranging from individual water supplies to strategic initiatives. NWSEP is an example of intergovernmental collaboration and cooperation because it involves a series of individual agreements between the federal government and all provincial/territorial governments except for New Brunswick and the Northwest Territories.
- The federal-provincial Flood Damage Reduction Program (FDRP) was launched on April 1, 1975 as a response to flood damages that were increasing despite considerable spending on flood prevention works. The aim of the FDRP was to reduce flood damages through mapping the flood hazard and diverting development out of flood prone areas. To accomplish this goal, the federal and provincial/territorial governments (excepting Prince Edward Island and Yukon Territory) entered into time-limited agreements. In all cases except the Northwest Territories, where the federal government bore all costs, costs of mapping and designation were cost-shared on a 50/50 basis. In each participating province and territory, program activities were supervised by a Steering Committee comprising two federally-appointed members and two

provincially- or territorially-appointed members. The program, which effectively ended when the last agreement terminated in 2000, was widely acknowledged to have been a cost-effective and successful example of federal-provincial/territorial cooperation in water management<sup>[23]</sup>.

## 2.2. Non-Government Initiatives

Due to their constitutional responsibilities, the federal and provincial/territorial governments must play leadership roles in the development and implementation of a National Water Strategy. However, as noted in Section 1, water management in Canada has long since ceased to be the exclusive domain of governments. Numerous other stakeholders – at the local, regional, national and international levels – play key roles. Thus, an inclusive, truly *national* water strategy will emerge only from the concerted efforts of people in organizations inside and outside of governments who believe that there is value in working together across Canada to coordinate, collaborate and share in the governing and management of water.

This section presents selected examples of initiatives with a national or Canada-wide scope. The examples selected demonstrate that an appetite exists in organizations outside of the federal and provincial/territorial governments for national-level coordination and collaboration in water management.

Importantly, the focus on initiatives of organizations operating at the national level does not imply that these organizations are more important than ones working at regional or local levels. National-level examples were chosen simply for the sake of brevity.

### First Nations Advocacy Groups

Canada's First Nations people face significant challenges in ensuring clean, safe drinking water and adequate wastewater treatment and disposal<sup>[77]</sup>. The dispersed and often isolated nature of the over 630 communities in which many First Nations people reside makes coordinated and

collaborative responses to Canada-wide problems challenging. The Assembly of First Nations (AFN) is a national advocacy organization that represents the interests of Canadian First Nations. In the context of drinking water, AFN has committed to working with the federal government to implement the *Plan of Action for Drinking Water in First Nations Communities* that was announced by the federal government on March 21, 2006. AFN's goal is to secure meaningful First Nations' engagement in the Plan in ways that support the development of First Nations governance in the areas of source water protection and drinking water treatment and distribution.

### Municipal Government Advocacy Groups

The Federation of Canadian Municipalities (FCM) is an advocacy organization representing Canada's municipal governments. Its roughly 1,600 members include Canada's largest cities, smaller urban and rural communities, and 18 provincial/territorial municipal associations. As a national voice for municipalities, the FCM has developed principles, policies and strategies relating to water<sup>[31]</sup>. *Principles* pertain to sustainable community planning, ecosystem management, pollution prevention, full-cost accounting, the polluter-pays principle, partnerships, and measurement and reporting. Water-related *policies* that build on these principles relate to drinking water safety; water conservation; wastewater; and bulk water exports, diversions and inter-basin transfers. For each policy area, the FCM has identified specific *strategies*. For example, in the context of drinking water safety, seven strategies are identified, including ensuring that municipal governments are engaged and consulted in the development and implementation of the federal government's *Action Plan on Clean Water*, and encouraging the federal government to play a leadership role in strengthening and harmonizing water quality objectives across Canada.

### Water and Environment Advocacy Groups

The Canadian Water Resources Association (CWRA) has been an advocate of effective water

management in Canada since the late 1940s<sup>[61]</sup>. Numerous CWRA initiatives contribute to a national perspective on water management in Canada. Examples include creating and advocating principles of sustainable water management<sup>[17]</sup>; collaborating with the Royal Society of Canada to publish a report evaluating the federal role in Canadian water management<sup>[12]</sup>; delivering an annual national conference that bring together practitioners, researchers and others to discuss water management; and, of course, the CWRA Working Group on a National Water Strategy.

Pollution Probe is a national environmental non-government organization that conducts research, promotes understanding through education, and presses for practical solutions to critical environmental problems through advocacy. Water is a major focus of the organization. In 2006, Pollution Probe organized a series of five workshops across Canada that involved hundreds of participants from all sectors involved in water management. The final report produced from the workshop series<sup>[69]</sup> calls for new approaches to water management in Canada, and advocates for a national vision and strategy. Because the report reflects the involvement of almost all the stakeholders identified in Box 1, Pollution Probe's report is a strong signal of Canada-wide interest in a stronger national approach to water management.

Many environmental groups also are concerned about water management in Canada and advocate for policy changes. For example, the Sierra Legal Defence Fund (now EcoJustice) has a long-standing concern for water issues in Canada. Sierra Legal Defence Fund published two reports on the state of drinking water in Canada<sup>[18; 19]</sup>. Friends of the Earth has completed studies that promote new approaches to water policy in Canada based on the Water Soft Path<sup>[33]</sup>.

### Foundations and Networking Organizations

The Walter and Duncan Gordon Foundation has supported numerous organizations and researchers concerned with fresh water management in Canada. Examples include the POLIS Project on Ecological Governance, which has studied and

advocated for different approaches to water management in Canada<sup>[11]</sup>; the Gordon Water Group, which recently published a call for renewed federal leadership in Canadian water management<sup>[62]</sup>; and the Guelph Water Management Group, which recently completed a Canada-wide study of water allocation and water security using funds provided by the Foundation<sup>[26]</sup>. The most recent entrant in this category is the Royal Bank of Canada, which launched the \$50 million Blue Water Project initiative in 2007 to support the conservation and protection of freshwater resources in Canada and around the world<sup>[72]</sup>.

The Canadian Water Network/Réseau canadien de l'eau (CWN/RCE) is a federally funded Network of Centres of Excellence that was formed in 2001 to identify and address critical water-related issues facing Canada. Development of a national vision of Canada's role in the effective management and use of water resources is an explicit goal of the network. To accomplish this goal, CWN/RCE develops and supports a wide range of multidisciplinary projects involving researchers and partners in government, industry and non-government organizations. It also organizes annual and other conferences and meetings that bring together key stakeholders interested in water issues.

### Industry and Agriculture Advocacy Groups

The Canadian Water and Wastewater Association (CWWA) represents professionals involved in water treatment and distribution, and wastewater collection and treatment. Currently, its policy making efforts are focused on concerns specific to the industry, e.g., public-private partnerships; water use, efficiency and conservation; drinking water guidelines; and emergency preparedness. However, the water and wastewater sector has an obvious stake in any process to develop a CNWS, and thus could be expected to play a broader role through an organization such as CWWA.

The activities of manufacturing and resource industries have major implications for water quality and quantity in Canada. These industries are

stakeholders in water management because of the impacts of their activities on water, and because decisions made by governments and others about water will affect their business. As a result, organizations representing firms in the industrial sector commonly have developed water policies. For example, the Mining Association of Canada (MAC) is an umbrella organization representing mining companies. MAC has developed a series of policies and principles relating to “sustainable mining”<sup>[52]</sup>. These are meant to shape the practices of mining companies, for instance, through the creation of environmental standards and best practices. At the same time, they demonstrate opportunities for the industry to participate in a process to develop a CNWS.

Water is essential for agricultural production, and agricultural activities affect both water quality and quantity<sup>[24]</sup>. Thus, the agriculture sector in Canada is an important stakeholder in Canadian water management. Organizations representing the sector have developed a number of pertinent policies and programs. For instance, the Canadian Federation of Agriculture (CFA), which was formed in 1935 to provide a unified voice for Canadian farmers, is a national umbrella organization representing provincial farm organizations and national commodity groups. CFA has developed a series of environmental policy statements, including one for water that spells out the sector’s interests, and what roles CFA expects governments to play in Canadian water management<sup>[16]</sup>. National leadership on key issues is identified as a priority.

### 2.3. Summary

The main aim of this section was to demonstrate, using selected examples, that collaboration and coordination are part of the fabric of Canadian water management. The extent to which the specific initiatives discussed have been effective or successful is not the issue. Instead, what this section demonstrates concretely is that there is an existing foundation of actions on which to build a National Water Strategy. However, building on this foundation will not be easy.

- Jurisdictional fragmentation is an unavoidable characteristic of water governance in Canada. Therefore, collaboration and coordination among the federal and provincial/territorial governments is a prerequisite in developing and implementing a CNWS.
- Within each province/territory, and within the federal government, further fragmentation of authority and responsibility exists. As the examples in section 2.1 demonstrate, efforts are being made within each jurisdiction to address this problem. Nonetheless, division of responsibility for water management among numerous departments and agencies within each level of government will continue to be a fact of life in Canadian water management.
- New models of water governance that are being developed and used in Canada are further distributing responsibility and authority for key aspects of water management. For example, in many provinces responsibilities are being shifted away from government agencies to locally organized groups of stakeholders.
- The number and diversity of stakeholders involved in water management today presents both a challenge and an opportunity. Among stakeholders, interests in water vary widely and are not necessarily compatible. This applies both to government and non-government stakeholders. Hence, a key challenge in developing a CNWS will be to find a way to reconcile and balance these competing interests. In light of the way the courts are profoundly reshaping the relationship between Indigenous people and governments in Canada, it will be particularly important to address questions relating to Indigenous water rights in developing a CNWS.
- Finally, it bears repeating that current and anticipated future water problems and concerns in Canada (Box 3) are serious, and vary as widely as the water resource itself. Following from this fact, the nature of water management in each province and territory and the types of stakeholders involved also varies enormously. A key challenge in working towards a CNWS will be to respect this diver-

sity. One-size-fits-all solutions are neither appropriate nor desirable.

Despite these enormous challenges, there are good reasons to believe that development of a CNWS is feasible. Two are offered here:

1. This section presented many examples that reveal an appetite for coordination and collaboration in Canadian water management. These included the federal government's attempt to coordinate its own water management activities through the interdepartmental water policy committees it has established; attempts by provinces to develop overarching and facilitative frameworks or policies to guide and strengthen water management within their boundaries (two of which are discussed in more detail in the next section); various initiatives by non-government organizations aimed at encouraging the development of federal and/or national water policies (e.g., by Pollution Probe, the Gordon Water Group and CWRA); and efforts by national organizations representing First Nations people, and municipal, industrial, agricultural and other interests, to clarify their interests, create op-

portunities for involvement in governance, and call for leadership on the part of governments.

2. Tangible examples were presented of successful national collaboration among government and non-government stakeholders on shared concerns such as flood plain management; agri-environmental standards; and standards for water quality, drinking water and plumbing fixtures. Some of these initiatives are decades old. For example, the first version of the Canadian Drinking Water Quality Guidelines was published in 1968, and the Flood Damage Reduction Program was launched in 1975. Securing multi-stakeholder agreement on technical standards that will be implemented by individual jurisdictions clearly is less politically difficult than getting those jurisdictions to agree on an overall vision for water management in Canada. Nonetheless, examples such as these demonstrate that in Canada, capacity exists for collaboration and coordination, working across jurisdictional boundaries, and setting aside parochial interests.

### 3. Case Studies

This section presents selected case studies of jurisdictions that have developed, or are in the process of developing, overarching water policies, strategies, or frameworks. These cases were chosen because they reveal important characteristics of overarching water policies, frameworks or strategies that offer lessons pertinent to Canada.

The case studies are not evaluations of the success or failure of policy development and implementation in each jurisdiction. Instead, the goal in presenting these case studies is to reveal insights about the forms that overarching and facilitative water policies, strategies or frameworks can take; motivations and drivers; processes used to develop the overarching policy, strategy or framework; stakeholders involved; and implementation challenges. These insights inform the recommendations in Section 4.

#### 3.1. Canadian Provinces

Several Canadian provinces and territories have developed policies or strategies designed to increase the effectiveness of water management within their boundaries. The two cases discussed here, Alberta and Québec, are relatively comprehensive and well developed.

##### Alberta's Water for Life Strategy

The legal foundation for water management in Alberta is provided by the *Water Act*, which assigns responsibility for the conservation and management of surface water and groundwater resources to the Minister of the Environment, and establishes the province's water allocation system. In Alberta, all rights in water are vested in the Crown, and the right to use water is assigned according to the first-in-time, first-in-right principle<sup>[68]</sup>.

Throughout the 1990s the pace of industrial, agricultural and municipal development in Alberta was such that parts of many rivers (particularly in the southern regions of the province) were

fully allocated<sup>[46]</sup>. Decreasing annual flows in some of Alberta's major southern rivers has therefore become a serious concern<sup>[70]</sup>, pressure is being placed on groundwater and surface water resources in areas where energy development is intensive<sup>[74]</sup>, and serious concerns have been raised about the adverse effects of climate change on water resources<sup>[15; 73]</sup>. Consecutive years of drought in 2000-2001, which led to severe water shortages in southern basins in the province<sup>[1; 4; 76]</sup>, reinforce the kinds of problems that can be expected in future.

*Water for Life: Alberta's Strategy for Sustainability*<sup>[3]</sup> is the provincial government's approach to addressing current and future water management challenges in the province of Alberta. This non-binding strategic plan outlines Alberta's vision for water management, which centres around three primary goals: safe, secure drinking water; reliable, quality water supplies for a sustainable economy; and healthy aquatic ecosystems. The strategy lays out short-, medium-, and long-term implementation targets that extend over a ten-year period. To achieve these goals, *Water for Life* focuses on three kinds of action: research and the acquisition of data and knowledge; implementation of water conservation measures; and, establishment of partnerships. Three types of multi-stakeholder partnerships were created under the strategy: the Provincial Water Advisory Council, also known as the Alberta Water Council (AWC); Watershed Planning and Advisory Councils (WPACs); and Watershed Stewardship Groups (WSGs).

*Water for Life* was created through a consultative process involving key stakeholders. The process had three major components: idea generation; public outreach and consultation; and a ministerial forum on water<sup>[5]</sup>. The idea generation stage took place in March and April of 2002. Follow-up public consultation occurred across the province through 15 community workshops. Public concerns also were captured during this process through 1,000 telephone surveys and 2,100 questionnaire-style workbooks. A Minister's Forum

on Water took place in June, 2002 and involved 117 participants representing diverse water interests who attended at the invitation of the cross-government working group. In small working groups and in open plenary sessions, the participants worked to review the input from the first two stages of the process and to discuss next steps and emergent priorities [2]. After reviewing the outputs of all three rounds of consultation, a cross-ministry working group compiled and developed a draft water strategy, which was released for discussion in March, 2003. The final *Water for Life Strategy* was released in November, 2003 [3].

Implementation of *Water for Life* is ongoing. Major implementation challenges relate to the capacity of stakeholders to participate in the various partnerships, confusion about roles and responsibilities within Alberta's new water governance structure, and integration of water stewardship with land-use planning [6]. In a recent evaluation, the Alberta Water Council has noted excellent progress towards ensuring safe, secure drinking water, slower than expected progress on healthy aquatic ecosystems, and a lack of innovation in efforts to secure reliable, quality water supplies for a sustainable economy [6].

### Quebec's National Water Policy

Responsibility for water management within the Government of Québec is divided among 12 provincial ministries. However, dozens of local and regional associations, groups and councils in Québec's 17 administrative regions also are involved in water resource management. Coordination of the activities of these various organizations has long been identified as a priority [32]. A variety of threats and challenges during the 1990s reinforced the need for a more integrated approach to water policy. These included major floods on the Saguenay River in 1996; concerns relating to the growth of the water bottling industry and implications for groundwater resources; bulk water export projects; water pollution from agriculture, industrial and municipal sources; and conflicts among users. Increasing public demands to play a greater role in water

management also added pressure for a new approach to water management [14; 35; 36].

In response to these challenges, the government introduced the Québec Water Policy (QWP) in November, 2002 [36]. The overall aim of the QWP, which was adopted by the National Assembly on November 26, 2002 [38], is to protect water quality and quantity in the province. Additionally, it aims to promote a participatory approach through providing incentives for citizens to become more involved in water management [13; 36; 50]. The QWP includes broad principles such as user-pay and polluter-pay, and 57 commitments or "engagements" – each associated with specific actions and expected results. These engagements are organized under five broad "orientations": water governance reform; integrated management of the St. Lawrence River; protection of water quality and aquatic ecosystems; continued clean up and improved management of water services; and the promotion of water-related recreation and tourism activities [37].

The QWP was created in a consultative fashion during a five year process involving key stakeholders inside and outside of government. The process began with a symposium on water management in Québec. International and national experts met to discuss water management issues during this event, which was hosted by the Institute nationale de la recherche scientifique (INRS-Eau) [36; 43]. The symposium proceedings provided the foundation for a series of public consultations in Québec's 17 regions under the supervision of the Bureau of Environmental Public Inquiries (BAPE) [36]. During the process, representatives from key provincial government ministries accompanied members of the Commission in order to provide clarification or to answer questions [35]. Organizations and individuals representing agricultural and environmental groups participated most actively [35]. In 2000, a final report from these consultations was presented by the Beauchamp Commission (also referred to as the Commission on water) in which recommendations were made on the main issues examined and debated during the process [36]. The Commission's report provided a frame-

work of reference for water management [32; 36; 38]. The framework was used during inter-ministerial consultation sessions with representatives of the twelve ministries/departments composing the Inter-Ministerial Council [35]. Ministries were responsible for identifying the specific “engagements” and actions to which they would commit. During this process, the federal government was consulted regarding integrated management of the St. Lawrence River [35].

Implementation of the QWP is occurring through the actions of the 12 provincial ministries that have committed to specific actions, and through the creation of 33 watershed-based organizations established in priority basins. These organizations operate at both local and regional levels, and work with relevant government and non-government stakeholders to create and implement Water Management Master Plans and watershed contracts [36; 53]. The watershed organizations have limited financial resources and no legal powers. However, they provide a forum for citizens, local groups and government representatives to discuss and work towards common goals [7; 48; 71]. At the provincial level, some legislative changes already have been made in response to the QWP [38]. However, implementing the user-pays and polluter-pays principles is proving to be especially difficult [47]. Importantly, an evaluation model has been developed by the government specifically to assess the progress of each ministry's commitments and actions as outlined in the QWP [35].

### 3.2. International Jurisdictions

If Canada develops a CNWS, then it will be joining several jurisdictions around the world that already have gone down this road. Opportunities exist to learn from the experiences of these other jurisdictions, but Canada's economy, politics, geography, history and culture are unique. Therefore, while lessons can be learned from other places, it will be necessary for Canadians to craft a “made in Canada” solution.

Four case studies are presented in this section.

- New Zealand is an example of a country with a single (national) level of government.
- Australia and Brazil are examples of federations; like Canada, they have a federal government and sub-national (state) governments.
- The European Union is a unique transnational institution whose member countries have given up some of their own sovereignty in joining a common framework.

#### New Zealand's Sustainable Water Programme of Action

New Zealand has a national government, but no provinces, states or territories. The *Resource Management Act* (RMA) is the principal statute governing water. Under this statute, the right to use water is vested in the Crown, which delegates water management responsibilities to the regional level. Hence, the RMA establishes the country's legal water management framework, and provides for a range of policy instruments [54]. New Zealand's central government sets national priorities while Regional Councils, which makes up the top tier of local government, are primarily responsible for water management within their boundaries [60].

The central government introduced the *Sustainable Water Programme of Action* (SWPA) in 2003 as one of four priority areas under the *Sustainable Development Programme of Action* [56]. The SWPA is a long-term proposal aimed at setting a national framework to manage water for the future. Protection of New Zealand's social, cultural, environmental and economic wellbeing is a key goal [54]. Through partnerships with local government, industry, water users, Māori and communities, the SWPA will strengthen national direction for freshwater management; identify nationally outstanding natural water bodies and sensitive and at-risk catchments; and facilitate the creation of legislative and best practice tools for regional councils [60]. The SWPA is managed jointly by the Ministry for the Environment and the Ministry of Agriculture and Forestry. Under the SWPA, primary responsibility for water management will remain at the regional level.

The SWPA was developed in response to a number of factors. These included water related stresses such as drier conditions along the eastern coast, reduced rainfall, growing competition, declining water, conflicting interests and uses, and degradation of some water bodies<sup>[51]</sup>. Also important was recognition in the central government that New Zealand's *ad hoc* approach to water management was not working well. A coherent national framework was needed to provide greater leadership and direction and to facilitate a partnership-based approach with industry and other stakeholders<sup>[51; 54; 58; 66]</sup>.

Development of the SWPA occurred following its identification in 2003 as a priority area for action under the *Sustainable Development Programme of Action*. To provide a focus for public consultation, the government released a discussion paper called *Freshwater for a Sustainable Future: Issues and Options* on December 14, 2004<sup>[58]</sup>. The document characterized New Zealand's freshwater management system, identified major issues, suggested options for addressing these issues, and presented next steps. As such, it laid a foundation for public consultations that occurred in 2005. Fifty public meetings were held in February and March 2005; reflecting the importance of New Zealand's indigenous people, 17 of these were hui or Māori meetings. The government heard from hundreds of groups and individuals and received 292 submissions from a wide range of individuals and organizations<sup>[59]</sup>. Follow-up meetings were held across the country between May and November of 2006 to introduce, promote and seek support for the SWPA. Additional communication initiatives included a National Water Awareness Campaign and a Talk Environment Roadshow series held in 17 regional locations.

Implementation of the SWPA is ongoing. On August 31, 2007, cabinet approved the development of a national policy statement on freshwater. On December 31, 2007, cabinet approved the development of two national environmental standards, one that will make the measurement of significant water takes mandatory, and a second designed to ensure that appropriate methods are used to safeguard aquatic ecosystem health in

water allocation decision making<sup>[57]</sup>. In the next two years the government intends to develop detailed policy options for National Policy Statements, National Environmental Standards, other instruments and enhanced tools for local decision-making<sup>[55]</sup>.

### Australia's National Water Initiative and National Plan for Water Security

Under Australia's constitution, states and territories are primarily responsible for the management of natural resources, including water<sup>[78]</sup>. Therefore, each state and territory has created its own laws and policies for water management. The Australian Commonwealth government provides support for state implementation of national strategies through national policies, principles, institutions and funding<sup>[39]</sup>. In key areas the two levels of government work together. For example, cooperative management of the Murray-Darling Basin has occurred since 1915. This critical basin is shared by the states of South Australia, Queensland, New South Wales and Victoria, and by the Australian Capital Territory (ACT). The four states, the ACT and the commonwealth government collaborate in the management of this basin's water resources through the Murray-Darling Basin Agreement, signed in 1992.

Considerable national-level water reform has occurred in Australia, beginning with the 1994 Council of Australian Governments (COAG) *Water Reform Framework* (WRF), followed by the 2004 *National Water Initiative* (NWI), and the 2007 *National Plan for Water Security* (NPWS).

- The 1994 WRF was developed primarily in response to growing environmental concerns about the state of many of Australia's river systems and a belief that the water industry had to be restructured<sup>[8; 78]</sup>. As such, it was linked to broader processes of microeconomic reform that began in the early 1990s; these had the goal of improving the performance of the Australian economy<sup>[78]</sup>.
- Australia has been in the grip of a multi-year drought since soon after the turn of the cen-

tury. The drought and its attendant impacts on ecosystems, communities and the Australian economy, combined with the slow pace of implementation of the 1994 *Water Reform Framework*, spurred the creation of the 2004 NWI<sup>[64]</sup>. In addition to refreshing the process of water reform, the NWI aimed to “achieve a nationally-compatible market, regulatory and planning based system of managing surface and groundwater resources for rural and urban use that optimizes economic, social, and environmental outcomes”<sup>[21]</sup>.

- The NPWS was launched in 2007 specifically in response to the deepening crisis in the Murray-Darling Basin. This \$10 billion initiative is designed to accelerate implementation of the NWI, to establish a new way of governing the Murray-Darling Basin, to address over-allocation of water resources, and to ensure the sustainability of the rural irrigation industry. Key elements of the NPWS will be implemented through the Commonwealth’s *Water Act*, passed on August 17, 2007 and due to come into force in early 2008. The *Water Act* creates a new body, the independent Murray-Darling Basin Authority.

These water reform initiatives have been developed in a top-down fashion, with governments playing the leadership role. The Council of Australian Governments has been an especially important forum for collaboration and joint decision-making. For example, the 1994 water reforms were proposed as part of the National Competition Policy reforms, which were recommended to COAG by an independent inquiry headed by Fred Hilmer (the Hilmer Review)<sup>[78]</sup>. They were then agreed upon and endorsed by the members of COAG. The Wentworth Group of Concerned Scientists<sup>[80]</sup> was similarly influential in the creation of the 2004 NWI. Public involvement and public consultation have occurred primarily during processes of state and territorial reform of water management institutions to meet the national agreements.

The National Water Commission (NWC), an independent statutory body within the Environment and Water Resources portfolio of the Commonwealth government, was created spe-

cifically for the purposes of driving national water reform, implementing the NWI, and advising the COAG and the Australian Government on water issues<sup>[64]</sup>. The NWC is also responsible for helping the states to develop NWI implementation plans, and for assessing the states' progress in meeting NWI objectives through biennial assessments.

A broad consensus exists in Australia that the reforms that began with the 1994 COAG *Water Reform Framework* are heading in the right direction, and that progress is being made<sup>[64]</sup>. Levels of citizen awareness and participation in water governance are relatively high, intergovernmental dialogue and cooperation continues effectively (with some exceptions), and positive changes in environmental conditions have been observed. Nonetheless, both the NWI and the NPWS were created in part because reform has not progressed quickly or successfully enough. The severe and ongoing drought conditions put into question whether or not even these strategies can be successful. Hence, some analysts have argued that they cannot succeed, and have called for yet another round of comprehensive water reform<sup>[82]</sup>.

### Brazil’s National Water Resources Policy

Brazil is organized as a Federative Republic consisting of 26 states, the Federal District (where Brasilia, the national capital, is located), and the federal government. The 1988 Constitution (*Constituição Federal*) is the legal framework that defines the relationship among the Union (the federal government), the states, and municipalities. Responsibility for water is divided between the Union and the states. Rivers that drain more than one state or that define a border between states or with another country belong to the Union domain. Water bodies that drain the interior of one state only are the domain of that particular state<sup>[75]</sup>.

Brazil’s *National Water Resources Policy (NWRP) (Política Nacional de Recursos Hídricos)* was created under Federal Law no. 9433 of January 8, 1997. It was developed in response to Article 21/XIX of the constitution which states

that “the Union shall implement a National Water Resources Management System and define criteria for authorization of water use”. Importantly, the NWRP only addresses surface water. Core principles of the *National Water Resources Policy* (NWRP) include the following <sup>[65]</sup>:

- Water is a common good and a limited natural resource with economic value
- Water management must be participative and decentralized, involving participation by the Government, users, and civil society
- Priority must be given to human and animal consumption in periods of water shortage
- Water resources management should always allow for multiple uses of water
- The river basin (watershed) is the basis for the implementation of the National Water Resources Policy and the National Water Resources Management System

The NWRP was developed in response to a number of drivers. Public concern for persistent contamination of water bodies throughout the country, droughts in semiarid regions of northeastern Brazil, flooding in southern Brazil, and water conflicts throughout the country was one important driver <sup>[34]</sup>. The concept of sustainable development also provided part of the impetus for the policy. Brazil’s hosting the 1992 Rio conference was an important benchmark for the country’s general level of environmental awareness <sup>[49]</sup>. Within the federal government, there was concern that sources of international investment would be linked to Brazil’s progress toward sustainable development.

The process to create the NWRP took approximately 5 years. The Union (federal) government played the primary leadership role, with state governments playing roles that varied according to their capabilities. For example, the State of São Paulo, which reformed its own water laws in 1991, set a national example <sup>[34]</sup>. In contrast, some states did not have their own legislation for water management at the time of the policy’s creation. Numerous public hearings held throughout the country provided a forum for members of the public and stakeholder groups to identify the concerns and articulate their posi-

tions. These meetings were attended by the representatives of the Brazilian Congress who were responsible for creating the law <sup>[34]</sup>; their participation at these meetings helped to ensure that they were exposed to issues of concern to the public. The NWRP was approved by both chambers of the Brazilian National Congress, and sanctioned by the President of the Republic, in 1997.

Following passage of the NWRP, states and the Federal District have taken steps to make their legislation compatible with the federal law, or to create appropriate legislation where none existed. Several new bodies were created, including the National Water Resources Council (1997), the National Water Agency (2001), and a host of watershed committees and watershed agencies. The National Water Resources Council is a particularly important body. It establishes guidelines and policies; approves the constitution of basin committees; arbitrates conflicts that may occur between state water resource councils and between basin committees; approves implementation of the NWRP; and is responsible for approving monitoring and follow-up of the NWRP. It also approves general criteria for granting water rights within the federal domain and water use charges. The National Water Resources Management System is an overarching structure for integrating the various national, state and basin organizations.

Implementation of the NWRP has been very challenging. Measures of success include the fact that new concepts of water governance have been introduced in Brazil, states that did not have their own laws and organizations for water management have created them, and public awareness relating to water issues is much higher than it has been in previous decades. Similarly, intergovernmental coordination and cooperation is vigorous, and numerous nongovernment organizations, beyond traditional interests such as the hydroelectric power industry, now play key roles through forums such as the National Water Resources Council. Evidence of improvements in water quality exists, but progress has been slow in many parts of the country.

## European Union Water Framework Directive

The European Union (EU) was created on November 1, 1993, when the Treaty on European Union (the Maastricht Treaty) came into force. This union of independent European states (currently 27) has its roots in the European Economic Community, which was created in 1957 by Belgium, the Federal Republic of Germany, France, Italy, Luxembourg and the Netherlands.

Water management within EU member states currently is guided by the overarching Water Framework Directive (WFD), which was created in 2000 under Act 2000/60/EC. The WFD is the successor to a host of previous European water directives created between 1975 and 1996. These related to individual concerns such as drinking water, dangerous substances, bathing water, ground water, urban wastewater management, nitrates, and pesticides. The WFD, which replaces these various regulations with one unified statute, sets out a broad framework for water management. Precise standards, targets and requirements for monitoring and reporting are specified in “daughter directives”<sup>[79]</sup>. Implementation of the WFD occurs through member states changing their own laws, regulations and processes.

The WFD includes principles and objectives. Principles relate to topics such as sustainable development, environmental and community responsibility, integration of the environment and other policy areas, the precautionary principle, prevention at the source, and polluter pays. Examples of key targets and objectives for member states under the WFD include the following:

- Achievement of “good status” (chemical, ecological, hydromorphological and quantitative) for all waters (surface, groundwater and protected areas) by 2015. Objectives and deadlines are provided to achieve “good status”.
- Integrated water management based on river basins. The WFD requires that River Basin Management Plans for each basin identified by Member States be completed by December 2009, reviewed by 2015 and updated every six years after that.

- Development of water pricing as an incentive for efficient water use by 2010.
- Active involvement of all stakeholders (i.e., citizens, businesses, farmers and other stakeholders, environmental NGOs, local communities, water users) in water management activities, particularly in the production, review and updating of the river basin management plans and activities.
- Streamlining of legislation and regulations.
- Pollution prevention at the source for agriculture, industrial activities, urban areas, etc.
- Identification of groundwater and priority substances as areas requiring more specific legislation.

Several factors contributed to the push for the creation of the WFD. During the mid-1990s, it was recognized that the fragmentation that was created by the numerous separate directives was hindering effective water management in member states. This concern, combined with severe winter floods in northern Europe and drought in southern Europe in 1995, provided the impetus for the formation of the WFD<sup>[79]</sup>. Major steps in the process that produced the WFD included the following<sup>[42; 44; 79]</sup>:

- A two-day water conference organized by the European Commission took place in Brussels in May, 1996. The conference was attended by 250 delegates representing Member States, regional and local authorities, enforcement agencies, water providers, industry, agriculture, consumers and environmentalists. A key outcome was agreement among the delegates that an integrated strategy was needed.
- In February 1997, the European Commission published its first proposal for a framework directive.
- Detailed negotiations took place between 1997 and 2000.
- In 1999, the EU Environment Council, comprising environment ministers from the governments of the member states, unanimously approved a proposal for a water policy.
- The WFD itself was adopted on October 23, 2000 by a co-decision between the European Parliament and the European Council.

The European commission encouraged an open consultation process in drafting the WFD legislation. However, some analysts claim that in reality the process favored governments and groups representing industry and environmental interests that were large enough to support offices and staff in the EU capital of Brussels <sup>[45]</sup>.

The European Commission is primarily responsible for ensuring the implementation of the WFD. To facilitate the implementation of the WFD, a Common Implementation Strategy (CIS) was created in May 2001. The CIS focuses on information sharing; management of information and data; development of guidance documents on technical issues; application, testing and validation of guidance in pilot river basins; and development of a European information management system <sup>[41]</sup>. Experts from the EU countries, stakeholders and non-governmental organizations are all involved in the CIS process.

Progress on achieving the targets and objectives specified in the WFD has been inconsistent. For example, the process of creating national legislation to implement the WFD was supposed to have been completed by December 22, 2003 by 15 of the member states. However, few of these countries achieved these targets, and the quality of the legislation they created was judged to be poor <sup>[20]</sup>. As a result, the Commission launched eleven legal infringement cases. In five of these, the European Court of Justice ruled against the Member States for not communicating whether or not the WFD was included in their national legislation. Public involvement is another concern. Although public participation is a key requirement of the WFD, participation is not institutionally defined in the decision-making and implementation phases, and neither are the roles of different political actors (e.g., professional organizations, NGOs, etc.) <sup>[44]</sup>. Some critics have argued that those who do participate tend to be “the well-resourced developers, knowledgeable interest groups and industry that have the most influence” <sup>[42]</sup>.

### 3.3. Summary

Comparison among the six case studies examined in this section shows enormous variation in types of facilitative and overarching water policies, strategies or frameworks; motivations and drivers; stakeholders involved; processes used to develop overarching policies, strategies or frameworks; and implementation challenges. The brief synthesis in this subsection provides a host of insights for the development of the Canadian national water strategy.

- At some level, all six policies, strategies and frameworks included broad, shared principles relating to themes such as sustainability, subsidiarity, user-pays, watersheds as organizing units, stakeholder involvement, economic instruments and integration of water with other sectors. Beyond that, there was wide variation in the extent to which the policies, strategies or frameworks were binding on the parties involved; the level of specificity in objectives and targets beyond broad principles; the use of benchmarks and targets to monitor implementation; requirements for changes to other laws, regulations and policies; and the need for new organizations with specific responsibilities for implementation.
- In all case study jurisdictions, it is possible to identify key drivers that motivated the various participants. Tangible threats to water resources, or to economic activities and communities that depended on those resources, were a universal driver. Other common drivers included concern for fragmented or inefficient management and decision making due to the multitude of organizations involved; recognition of shared benefits from collaboration and coordination; and pressure from key stakeholders and members of the public for action on the part of governments. In the case of Australia, water reform was associated with a broader agenda of micro-economic reform, while in New Zealand it was bundled with other reforms designed to achieve sustainable development. In the European Union, water reform was a logical extension of

Europe-wide economic and social integration that started decades earlier.

- Reflecting a global shift in the nature of water governance, a broad range of stakeholders beyond governments was involved in every case study examined. Where legal responsibility for water was shared among different governments or levels of government (e.g., European Union, Brazil, Australia), all played key roles. Similarly, in all cases it was recognized that when different government agencies within one level of government shared responsibility, all agencies had to be involved. Non-government stakeholders with a direct interest in water normally were deeply involved in the process of developing overarching water strategies, policies or frameworks. In some jurisdictions, certain stakeholder groups were thought to hold considerable (or even disproportionate) influence (e.g., European Union, Australia). In others, attempts were made to ensure that all stakeholders who wanted to participate could in a relatively equal way. Consultation with the general public was comprehensive in some cases (e.g., Alberta, New Zealand, Brazil) and very limited in others (e.g., Australia, European Union). Importantly, in every case the commitment of politicians was a prerequisite in the cases examined because development and implementation of overarching policies or strategies involved making political tradeoffs among competing objectives.
- Processes and mechanisms used to develop overarching policies, strategies and frameworks were as diverse as the places in which they were used. Nonetheless, in the six cases examined, the specific processes and mechanisms used can be described as “off the shelf”, e.g., development and circulation of discussion papers, working papers and drafts of policies for comment; requests for submissions from members of the public and interested stakeholders; public meetings and surveys to gather ideas and concerns; and inter-governmental and inter-departmental meet-

ings and workshops to identify issues and priorities. The desired end result strongly influenced the processes and mechanisms used. For instance, in the cases of Australia and the European Union, the goal was to create binding inter-governmental agreements. Thus, government-to-government negotiation was a key mechanism. In contrast, the government of New Zealand did not have a clear endpoint in mind when it began the process of developing the *Sustainable Water Programme of Action*; hence, an open-ended process was used.

- In every jurisdiction implementation has proceeded along different lines, depending on the nature of the policy, strategy or framework. All jurisdictions except New Zealand (which is in the early stages of implementing its strategy) have created new bodies to oversee or facilitate implementation. As noted previously, some have developed new laws and regulations specifically to enshrine the overarching policy, strategy or framework (e.g., Brazil, European Union), while others are relying on inter-governmental agreements that have legal force (e.g., Australia) or non-binding agreements (e.g., Alberta, Québec, New Zealand).
- Finally, monitoring and evaluation of progress is a common challenge in all the jurisdictions examined. These activities are essential to ensure that outcomes produced are consistent with the objectives of policies or strategies.

Experiences in the six case study jurisdictions offer numerous insights for Canada. However, care must be taken in learning specific lessons from their experiences, and it certainly is not appropriate to attempt to duplicate verbatim a strategy created elsewhere, or even a process used in another jurisdiction. Instead, it will be necessary for Canadians to develop a made in Canada national water strategy using processes and mechanisms appropriate to Canada's distinctive history, geography, society and economy. This is the goal of the next section.

## 4. Towards a Canadian National Water Strategy (CNWS)

This section presents an approach for developing a CNWS. Section 4.1 draws attention to specific concerns that must be addressed. Section 4.2 recommends feasible major steps and activities designed to create a CNWS.

### 4.1. Summary of Major Concerns and Underlying Assumptions

All the jurisdictions discussed in Section 3.2 that developed overarching and facilitative water strategies, frameworks or policies did so in ways that reflect their distinctive historical, legal, economic, environmental and other circumstances. Not surprisingly, therefore, a Canadian National Water Strategy will have to reflect Canada's distinctive circumstances. Previous sections discussed a range of pertinent considerations. The concerns listed here define the nature of the challenges faced by those interested in developing a CNWS.

- As noted previously, jurisdictional fragmentation is severe in Canada. Responsibility for water is divided between the federal governments and the provinces and territories, and within the federal government, and in province and territory, responsibility for water is further divided among a host of agencies and boards. Importantly, this situation is common around the world and should not be seen as a particularly Canadian problem; it is just as pertinent, if not more so, in the European Union, Brazil and Australia. Furthermore, shared responsibility for water is inevitable (and even desirable in some respects). Thus, elimination of shared responsibility for water should not be an objective of a CNWS.
- As is true in most jurisdictions around the world, including those examined in Section 3.2, understanding of water resources and uses in Canada is uneven. Inadequate data undermine the ability to make good policies and sound decisions. However, data limitations should not be used as a reason for inaction. Instead, data limitations are an additional important reason for developing a CNWS.
- The role of water in Canada's economy, and its importance for Canada's future economic prosperity, is not sufficiently understood outside of regions and sectors that traditionally have faced water shortages and poor water quality. A persistent "myth of abundance" contributes to this problem. In contrast, in places such as Australia, the link between water and the economy has been stark and clear for decades.
- Numerous agencies, organizations, groups and communities play critical roles in Canadian water management (Box 5). Reasons for *not* working towards a CNWS will seem readily apparent to many of these people and organizations, while reasons for doing so may be harder to see. However, like institutional fragmentation, this circumstance exists in *all* jurisdictions. The challenge for Canadians is to handle these differences appropriately, and to identify the reasons why collaboration under a CNWS benefits all.
- Interdependence between provinces and territories due to shared water resources – a common foundation for collaboration and joint problem solving in other places – is regional rather than national in Canada. For example, Ontario and Québec share the Great Lakes Basin, and Alberta, Saskatchewan and Manitoba share the Saskatchewan-Nelson basin. However, no Canadian basin unites the majority of provinces and territories like the iconic Murray-Darling unites Australian states, or the Rhine unites countries in Europe.
- Patterns of water use are very different among the provinces and territories, and thus it can be difficult to recognize common causes. For instance, irrigation is extremely important in many Australian states, whereas in Canada irrigation is strongly

concentrated in Alberta, which has two-thirds of the country's irrigated land.

- Finally, a unifying “big idea” about water has yet to emerge in Canada. This was a key driver in the international case studies examined in Section 3.2. For example, in Australia, water reform was framed in terms of the need for micro-economic reform; in Brazil, following the 1992 Rio Conference, sustainable development became a national priority; in the European Union, water reform was associated with the larger project of European integration. Importantly, the major ideas that drove water reform in other jurisdictions clarified the problem that would be addressed, and the benefits of pursuing an overarching strategy, policy or framework.

The recommended approach outlined in the next section takes account of these considerations.

## 4.2. A Way Forward

A successful Canadian National Water Strategy has to be, simultaneously, overarching, unifying, and enabling. Section 3 demonstrated some of the ways in which an overarching water strategy, policy or framework can be developed. The approach recommended here reflects Canada's distinct water management circumstances, as explained above, and the broad vision or goal that CWRA has for a national water strategy (Box 6). It is grounded in several key assumptions:

- The case for a CNWS is not self-evident. Therefore, the many stakeholders involved – inside and outside government – will need to see individual as well as collective benefits of having such a strategy. *Moral suasion and appeals to our better nature will not produce a CNWS.*
- Canada's water resources are diverse, as are the problems and challenges faced across the country, and the stakeholders involved. A CNWS must respect this diversity.
- Leadership from the federal and provincial/territorial governments is required, but

### Box 5: Stakeholder Perspectives and Motivations

Participation of all stakeholders is required to ensure that an inclusive, *national* water strategy results.

- Leadership from the federal government is critical because it has constitutionally-defined national responsibilities. Without a commitment from the federal government to participate in the development and implementation of a CNWS, success is unlikely.
- The provinces and territories must offer leadership because they have the majority of the constitutionally-defined authority to manage water within their jurisdictions. Without their participation and support, a CNWS cannot be created.
- First Nations people are not simply stakeholders. It is essential that they be involved in ways that reflects their current and evolving legal rights. Given the dispersed nature and multitude of interests within First Nations communities, national and provincial/territorial First Nations advocacy groups must be important participants.
- Local governments and other organizations with water management responsibilities are “closest to the ground” and thus well placed to understand local realities; their participation, at minimum through regional and national umbrella groups, is essential.
- Water users (industrial, commercial, agricultural, recreational, etc.) have a legitimate interest in the management of water and a stake in defining solutions to problems. At minimum, the interests of water users must be represented by the national and provincial/territorial advocacy groups.
- Civil society groups, foundations, and research networks are key participants because of the interests they represent, and the resources they bring to the table.
- Finally the views of individual Canadians must be carefully and respectfully collected and taken into account in the shaping of a CNWS that truly reflects the best Canadian visions and ideals.

governments alone cannot develop a meaningful national water strategy. Active support and involvement of Indigenous people, industry, civil society groups, local governments and others is essential.

- The ultimate form of a CNWS cannot be predetermined at the outset. Instead, the appropriate form of a CNWS will become evident only as the process unfolds.

The following major elements and activities are proposed as a way to begin the process of developing a CNWS that is appropriate to Canada's circumstances, reflects the CWRA's vision, and is consistent with the assumptions noted above:

1. Create Leadership Team
2. Prepare a communications strategy
3. Prepare discussion paper
4. Circulate discussion paper
5. Take stock
6. Conduct consensus building workshops
7. Undertake strategy development

It is important to note that the proposed process is distinctive, compared to the examples discussed in Section 3, because it is not initiated and driven by governments. Rather, it is envisioned as a grass-roots effort that is designed to provide the groundwork for formal leadership by the federal and provincial/territorial governments.

Ideally, steps 1 to 6 will be completed within one year. This short time period (relative to the challenge) is needed to ensure that momentum is maintained.

## 1. Leadership Team

A core group of committed people is needed to shepherd the "Canadian National Water Strategy Project" through its early phases. Key initial tasks of the leadership team include the following:

- Clarify objectives of the CNWS development process
- Confirm the stages in the process
- Agree on timelines and deliverables

### Box 6: The CWRA's Vision for a CNWS

As part of the process of completing this report, the CWRA Working Group on a National Water Strategy facilitated a brainstorming session with the CWRA's Board of Directors on February 2nd, 2008. Through that process, it was decided that CWRA supported a CNWS that had the following broad characteristics:

- A CNWS for Canada must be developed and implemented through the participation of all stakeholders. The federal government must be a full and active participant, as must all the provinces and territories. However, initial lack of participation by some provinces/territories should not preclude initiation of the process. Indigenous people should have leadership roles.
- Common goals and principles endorsed by all participants should be at the core of a CNWS. These should be comprehensive in their scope, and should be sufficiently specific that they can guide the policies and actions of participants.
- In areas where urgent national action is required, the CNWS should contain specific commitments to action by participants acting within their own areas of jurisdiction. These commitments should include detailed targets and timelines.
- A CNWS should be able to evolve in response to new information and new challenges/opportunities, and as commitments and targets are met. However, core goals and principles should be more enduring than specific targets and commitments to action. Comprehensive review of implementation progress should occur at predetermined intervals.
- New governance structures are not required. Instead, the parties who endorse the CNWS should take steps to ensure that they coordinate their actions as needed in its implementation.
- To facilitate the development of a CNWS, it is important that experts in water management be available to participants to help define the scope of issues covered, to assist in the formulation of goals, principles and actions, and to provide advice on options for specific actions.
- CWRA wishes to share with other interested groups the role of facilitator and leader in the process of developing a CNWS.

- Prepare a budget for the various stages
- Secure financial resources needed to support each stage
- Establish a secretariat
- Develop a communications strategy

CWRA initiated the process, and has expressed a desire to be a key participant (Box 6). Additionally, CWRA has sufficient credibility to solicit partners and to identify potential participants for a Leadership Team. Formation of an initial team at the instigation of CWRA (and willing partners) is a priority.

The Leadership Team ultimately must include members who can speak to the needs, concerns and interests of the various groups identified in this report, including governments. Active involvement by Indigenous participants at this early stage is critical. Similarly, active involvement by federal and provincial government officials (even in an unofficial capacity) is needed because of their constitutional responsibilities for water. Finally, the Leadership Team should include former federal or provincial political leaders who command respect in senior government circles.

The Leadership Team should not be dominated by any one stakeholder, and the process the team is launching must not be seen as an initiative of governments. Hence, members of the Leadership Team should seek to participate as concerned citizens if participation as representatives of their organizations is not permitted (in the same way that members of the CWRA's Board of Directors are not acting for their employers).

A secretariat is required for the Leadership Team to function effectively. At the outset, a team member's organization could provide space and staff for a secretariat; CWRA may wish to play this role. However, it must be understood that the organization that provides the staff and space for a secretariat does not thereby receive a greater voice on the Leadership Team than other members.

Finally, funding to support the work of the Leadership Team is essential. Participation of

some members may be subsidized by employers. However, funds will be required to subsidize travel and other expenses of people whose organizations cannot provide this support. Securing funds for two years of work from supportive governments, foundations or industry partners is an essential part of this first step and a strong test of interest and commitment.

## 2. Communications Strategy

Development of a communications strategy should be a top priority for the Leadership Team. The main purpose of the strategy is to address the following questions:

- What is the "Canadian National Water Strategy Project"?
- Why is it important?
- Who is involved?
- Where can people who are interested get more information?
- How can people who are interested get involved?

A professionally-designed, bilingual web site that supports the project should be an important building block of the communications strategy, and should be developed and published as quickly as possible after the strategy has been confirmed.

The web site should have its own domain name rather than being part of an organizational domain, e.g.,

[www.CanadianNWS-SNECanada.ca](http://www.CanadianNWS-SNECanada.ca)

The web site should be maintained by the Leadership Team's secretariat, and sufficient resources must be made available to ensure that it is always up-to-date.

## 3. Discussion Paper

In jurisdictions where overarching and facilitative water policies, strategies or frameworks have been developed, discussion papers or working papers were prepared to support subsequent deliberation and negotiation. These have ranged from manifestos (in the case of

Australia) to relative neutral background documents (in the case of New Zealand).

Once the web site is ready, the Leadership Team should publish a discussion paper that addresses the following key topics:

- What is a CNWS?
- What are the compelling reasons for a CNWS?
- Who should be involved in its preparation?
- What benefits can be expected (for Canada, and for individual groups and organizations) from having a CNWS?
- In broad terms, what are the major elements of a desirable CNWS?
- What are important next steps?

Preparation of the discussion paper should begin soon after the Leadership Team has formed. The paper should be available no later than one month after the web site itself is published. Publication of the Web Site should be delayed if necessary to ensure that this timing can be met.

The discussion paper must be professionally designed and written, although it should not give the appearance of being a “final” product that presents final decisions. Most importantly, the discussion paper must not be a manifesto. The Leadership Team will have a perspective, in the same way that CWRA has its vision for a CNWS in the course of preparing this report (Box 6). Nonetheless, the purposes of the discussion paper are to raise issues and to facilitate discussion, rather than to stake the Leadership Team’s position.

Note that the discussion paper should identify compelling reasons for why a CNWS is desirable in a *collective* sense; section 1.1 provided numerous examples. Ultimately, however, a CNWS will only come into being in Canada if the various stakeholders – including those inside and outside of governments – can see benefits in terms of their *own* interests. If support for a CNWS from key stakeholder groups and organizations is tepid at this stage, then the discussion paper should reinforce and encourage their participation.

The Leadership Team should include people from the various stakeholder groups. Therefore, the discussion paper can suggest what the benefits might be for the various stakeholder groups, but it should not attempt to identify them on behalf of these groups. Instead, the paper must include a preface that invites the reader to consider how Canada would be better off by having a CNWS, and, most importantly, how the reader’s organization, sector or community would be better off (Box 7).

#### 4. Circulate Discussion Paper

The discussion paper should be circulated widely to organizations that have an interest in water management in Canada, and published through the CanadianNWS-SNECanada web site. Additionally, to ensure that the process is open to all, it should be advertised appropriately to members of the general public.

Members of the Leadership Team have a shared responsibility to promote and disseminate the discussion paper through their networks and to the general public. For example, CWRA Provincial Branches will be well placed to promote the discussion paper, and the CNWS Project, through locally-organized public forums and other events.

Once the discussion paper is published, a facility should be made available on the web site through which general comments can be submitted. The Leadership Team should not be asking for firm positions on the discussion paper at this stage in the process – and this must be clear in the feedback section of the web site. Comments collected through the web site should be collated by the secretariat and made available at the first consensus building workshop.

To ensure that momentum is maintained, there should be a well-defined period of time for this phase. Assuming that the discussion paper has been promoted widely and circulated effectively, a 2-3 month comment/consideration period should be sufficient.

## 5. Take Stock

Following the close of the comment/consideration period, the Leadership Team should take stock. Several pre-conditions must exist for the process to continue:

- The Leadership Team should judge that the discussion paper and web site have generated significant interest in the water management community to make proceeding worthwhile.
- Funds must be committed to support broad stakeholder participation in one or more workshops (Step 6). The target should be the amount of money needed to undertake a modest public inquiry involving cross-country hearings.
- The Leadership Team must receive a clear signal from the federal government and a majority of provincial/territorial governments (preferably across Canada) that they will participate actively in subsequent stages.
- A clear signal from Indigenous leaders that they will participate also should be received.

It may be possible to proceed with limited interest within the broader water management community, or with weak financial support. However, there would be little point in continuing the process without the support of governments and Indigenous peoples.

## 6. Consensus Building Workshops

Assuming that sufficient general interest exists, that funds are available, and that governments and Indigenous groups have signaled their willingness to participate, then the next step in the process should be one or more consensus building workshops. Presuming that previous steps have been completed on the schedule outlined, these workshops could begin as early as six months after the CanadianNWS website is published.

The Leadership Team will organize the workshops. Participation would be by invitation only, although any group that wished to participate should be able to secure an invitation.

### Box 7: Clarification of Benefits and Costs for Individual Stakeholders

The benefits to *individual* government and non-government stakeholders of working towards a CNWS should be clear. Ideally, they will outweigh the costs of participating in the development and implementation of a CNWS. Therefore, a critical stage in any process towards creating and implementing a CNWS must be clarification and evaluation of anticipated benefits and costs for each stakeholder. Examples of the kinds of questions that can be posed by the different stakeholders include the following:

- Will Canadian business be able to compete more effectively in domestic and global markets because a CNWS exists? Will they save money and see increased profits?
- Will First Nations and other Indigenous communities be in a better position to provide clean, safe water to their residents because of a CNWS? Will their rights to water be clarified? Will their role in water governance in Canada be strengthened?
- Will the federal and provincial/territorial governments be able to work together more effectively under the framework of a CNWS? Will it clarify their individual and shared responsibilities? Will it permit them to deliver their mandates more effectively?
- Will Canada's ability to play a leadership role in water on the world stage, and to meet its international commitments and obligations, be enhanced?
- Will a CNWS strengthen the ability of municipalities to provide clean, safe water more effectively and efficiently, and to upgrade aging infrastructure? Will it help to integrate land use planning and water management activities more effectively?
- Will other local organizations with water management responsibilities (e.g., irrigation districts, conservation authorities and districts, water boards) be able to do their jobs more effectively if a CNWS exists?

In creating a list of invitees, the Leadership Team's goals should be to identify individuals who have the ability to represent the interests of key organizations, communities or sectors

they represent. Lack of financial resources should not be a barrier to participation.

Invitations must make clear that participation in the consensus building workshop does not signify agency, group or community endorsement of the discussion paper or the CNWS Project. This critical condition is required to facilitate broad and relatively open participation in the workshop(s).

The major objective of the workshop(s) should be to secure broad agreement – *without necessarily committing agencies, organizations or communities at this stage* – on the following:

- The purposes of a CNWS.
- The type of CNWS that is feasible.
- Anticipated *collective* benefits.
- Common goals and principles that could be included in a CNWS.
- Specific areas where urgent national action is required.

A consensus on these points would provide the basis for participants to seek a commitment from the agencies, organizations or communities they represent to continue the process. If this commitment exists, then Step 7 can proceed.

## 7. Strategy Development

The Leadership Team's final task would be to facilitate a transition to a strategy development group. This group should include people who are empowered to negotiate and decide on behalf of the agencies, organizations or communities they represent. Due to their constitutional responsibilities for water, a commitment to negotiate will be needed from the federal government and provincial/territorial governments. Ideally Indigenous peoples will play a formal role in negotiations and deliberations. Finally, other stakeholders must continue to play key roles that reflect their involvement in earlier stages of the process and their importance for water governance.

Numerous steps and stages would follow success in consensus building workshops. It is not appropriate (or possible) to map these out in

detail in this document. Nonetheless, in broad terms it will be necessary for the strategy development group to address the kinds of issues raised in Box 6 (e.g., the balance between enduring broad goals and specific actions to address urgent national priorities; implementation mechanisms and timelines; processes for reviewing and monitoring implementation).

Most fundamentally, it will be necessary for the federal and provincial/territorial governments to embed the CNWS in their own laws and policies. As the examples presented in Section 3.2 demonstrate, this is a basic requirement for ensuring meaningful implementation of a CNWS.

## 4.3. Summary

The challenges confronting those interested in developing and implementing a Canadian National Water Strategy are undeniable. However, the status quo is not desirable. Canada faces serious threats to its water resources. A carefully designed CNWS can be an important tool for addressing these threats systematically and effectively. Other jurisdictions around the world have successfully developed facilitative and overarching frameworks, policies or strategies for water management. Therefore, the challenge is not out of reach.

The grass-roots approach outlined in this document is distinctive relative to the ones that were used in other jurisdictions considered in this report. Instead of being initiated and led by governments, it is proposed that a CNWS should be built on a collaborative, consensus-based foundation. This approach, it is argued, has the greatest prospects for success in light of the reality of Canadian water management.

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