

Integrated watershed management in Québec: a participatory approach centred on local solidarity

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Abstract

The Quebec Water Policy launched in November 2002 support a main orientation based on the reform of the water governance. One of the government commitments with this orientation is related to gradually implement watershed-based management for 33 major watercourses located primarily in the St.Lawrence plain. At the local and regional levels, watershed organizations are responsible for implementing integrated management, from a sustainable-development perspective, by preparing a Master Plan for Water (MPW), which will include watercourses, lakes, marshes, and other wetlands, as well as any aquifers in the area. These watershed organizations are relying on public consultation, as well as local and regional expertise, on the responsibilities over water of the municipalities and RCMs (Regional County Municipality) on the territory, as well as those of the ministries and other government agencies. They also be required to observe national priorities regarding protection, restoration, and development of water resources and to comply with relevant guidelines, directives, standards, regulations, and legislation.

The role of watershed organizations, composed of members acting on behalf of all stakeholders (local and regional as well as public and private), is to act as planning and consultation tables. Government representatives are present, on the initial process, as facilitator and for scientific and technical support. They do not have, at this moment, any voting or decisional rights. After 2 years, integrated water management realised a major mobilization of water stakeholders on watersheds and they are on their way to realize their first MPW.

Keywords

Quebec Water Policy, Watershed-base Management, participatory approach, local solidarity

INTRODUCTION

Although the principles of integrated watershed management are relatively similar from one country to another (territorial base management, scientific base management and integrated base management, participative base management), its implementation can in practice take on a number of forms of organization. According to the Center for watershed protection (1998), watershed management can be implemented according to three types of models:

1. Government directed model
2. Citizen directed model

3. Hybrid model

Table 3.4 Typical Components of Watershed Management Structures			
	Government Directed Model	Citizen Directed Model	Hybrid Model
Formation	Created by legislative authority.	Created at "grass-roots" level from citizens or other interested parties	Created with some governmental authority, with support from citizens.
Membership	Organization membership is appointed by governmental authority	Stakeholder participation is voluntary	Some members are required to participate, but many are volunteers.
Authority	Structure has regulatory authority over land use and other permits	Advisory capacity with no regulatory authority over land use or permits	Some members of the structure have regulatory authority, and others act in a volunteer or advisory capacity.
Funding	Funding is through taxes or levied fees	Funding is either by grant, donations, or sometimes by local government contributions	Much of the funding is through a steady source, such as an agreement with a local government, but grants may also comprise a significant portion of the budget.
Implementation	Government agencies at the state, local and federal levels implement the plan.	Local governments implement the plan.	Local governments implement the plan, with some assistance from state and federal agencies.

Table 1: Conventional components of watershed management structures (Center for watershed protection (1998))

I - WATERSHED MANAGEMENT: A MATTER OF POLICY

In Québec, since water is considered something “common to all”, it is the responsibility of the government to define policies for the type of governance it would like to implement for water management.

In addition to laws and regulations that control sectoral areas such as drinking water or wastewater treatment, the government of Québec has decided to introduce another policy instrument for the governance of water: integrated watershed management (IWM) based on a participatory approach centered on local action. Québec has chosen to implement a hybrid approach similar to the citizen-directed model; which can be considered a *collaborative model*.

This approach is based on decentralized participatory structures that are maintained and supervised by the government, with no separate legislative provisions. These are known

as Watershed Organizations. Watershed Organizations operate in cooperation with all public and private stakeholders within a particular watershed to coordinate actions in order to protect, restore and develop the water resources of the watershed. This specific coordination process is realized in respect with the powers and responsibilities of each stakeholder involved.

Although the basis of the Québec approach is designed to be non-regulatory, it is nonetheless supported by a governmental policy: The Québec Water Policy. The approach is designed to be gradual by first targeting 33 priority watersheds of more than 400 in Québec. The approach is designed to be voluntary: Watershed Organizations are set up on the basis of citizens' initiatives, backed by funding and technical support from the government. The approach is designed to be participatory because Watershed Organizations act as multi-sectoral consulting and conciliatory organizations. The approach is also designed to be structured, with a government reference framework and management cycle.

Characteristics of Québec's *collaborative model* of Integrated watershed management¹

	Quebec model
Formation	Created by interested parties in basins chosen by the government and with governmental financial help
Membership	Stakeholders voluntary participation with a guidance of representativeness and a governmental participation
Authority	No regulatory authority but some stakeholders have it (Quebec government, local governments)
Funding	A base funding by central government (program), funding by grant and sometimes by local government
Implementation	Each stakeholder (include provincial and local governments, private companies, NGO, citizens) have the <i>voluntary</i> opportunity to act for implementing the plan established in a participative process

Table 2: Components of Quebec's watershed management structure

II – THE QUÉBEC WATER POLICY (QWP)

The development of the Québec Water Policy began on August 29, 1997, with the government's announcement that the Symposium on Water Management would be held

¹ For more information on the Québec approach, go to: <http://www.mddep.gouv.qc.ca/eau/bassinversant/index.htm>

in December of that year. Subsequently, a series of actions intended to lead to the adoption of this policy were taken. The symposium, which brought together various national and international experts in the field of water, provided an initial picture of the different uses made of water in Québec and the mechanisms used for its management. Thus the symposium proceedings were published in 1998. Following the discussion by experts, the Bureau d'audiences publiques sur l'environnement (BAPE) was mandated to organize an extensive public consultation process to gather public opinion in every region of Québec. The Commission sur la gestion de l'eau heard thousands of testimonials and received close to 400 briefs that reflected public interest in and active commitment to environmental issues, and more specifically, those related to water. These consultations led to the publication, with the Minister of the Environment, on May 1, 2000, of a report containing the Commission's recommendations. On June 15, 2000, the government followed up on the Commission's report by publishing its general orientation paper for the future policy on water management. This framework sets forth the government's guiding principle for water management, namely "a commitment to environment quality and sustainable renewable resources." It set forth the orientations, objectives, and principles to be used in developing the Québec Water Policy. This Policy is therefore the outcome of a process that began five years ago and that involves all Quebecers.

In November 2002, the Québec Water Policy was unveiled, which targets three major issues that were raised during public consultations, namely:

- 1) Recognition of water as a collective heritage of all Quebecers;
- 2) Protection of public health and aquatic ecosystems;
- 3) Integrated and sustainable water management.

Recognition of water as a collective heritage of all quebecers

Through the Québec Water Policy, the government intends to reaffirm its commitment to recognize this resource as a valuable asset of Québec society and an integral part of its collective heritage. Under the *Civil Code of Québec*, surface and underground water is something that is of common use to all, barring any rights to use or limited appropriation rights that may be recognized. This "common to all" status implies that all members of society have the right to access water and use it in a manner consistent with its nature,

and that the government has a responsibility to regulate water use, establish priority uses and preserve its quality and quantity, in the general public interest. The government therefore intends to enact the policy instruments necessary to give precedence, over other uses, to the fundamental right of individuals to access this resource for their basic needs.

Protection of public health and aquatic ecosystems

Water quality is first and foremost a matter of protecting public health. This applies to human consumption and activities involving contact with water: swimming and water sports. Québec's government has consequently tightened standards with the introduction of the *Regulation respecting the quality of drinking water*, thus protecting the quality of drinking water in Québec. With respect to groundwater, the government has introduced the *Regulation respecting groundwater catchment*, which prescribes standards to ensure the best possible quality of raw water, by requiring that protective perimeters be established around underground water catchment sites. The Québec Water Policy also includes a series of other actions to guarantee water quality and hence, provide greater protection of public health and aquatic ecosystems.

Integrated and sustainable water management

The water management situation in Québec, as in the rest of the world, is not only an issue of protection, restoration and development of this resource. It is also a matter of how things are managed. A consistent water management policy requires the coordination of all government, local and regional actions, the use of effective policy tools and monitoring systems. The Québec Water Policy will therefore bring changes to how things currently operate in sectors by introducing a genuine, watershed-based integrated and consultative management approach. A more comprehensive approach for sustainable development appears to be necessary in order to prioritize actions or projects on the basis of total environmental impacts. With an integrated management approach in mind, the Ministère du Développement durable, de l'Environnement et des Parcs has been commissioned to ensure the consistency of all government actions related to water and aquatic ecosystems, in cooperation with other departments involved in water

management. The government of Québec intends to urge citizens to become much more involved in the management of this vital collective heritage.

To address these three challenges, the government of Québec has centred the Québec Water Policy on five key strategies: 1) Water governance reform; 2) Integrated management of the St. Lawrence River; 3) Protection of water quality and aquatic ecosystems; 4) Continued clean-up and improved management of water services; 5) Promotion of water-related recreation and tourism activities. These 5 strategies are implemented through 16 courses of action and 57 government agreements².

The introduction of integrated watershed management is a main course of action in the government's water governance reform strategy. It is also one of the most innovative and comprehensive for development of water governance in Québec. Two government commitments mark the Québec approach to this change of governance:

- Commitment 2: Gradual introduction of integrated watershed management.
- Commitment 3: Funding and technical backing for the operation of 33 Watershed Organizations.

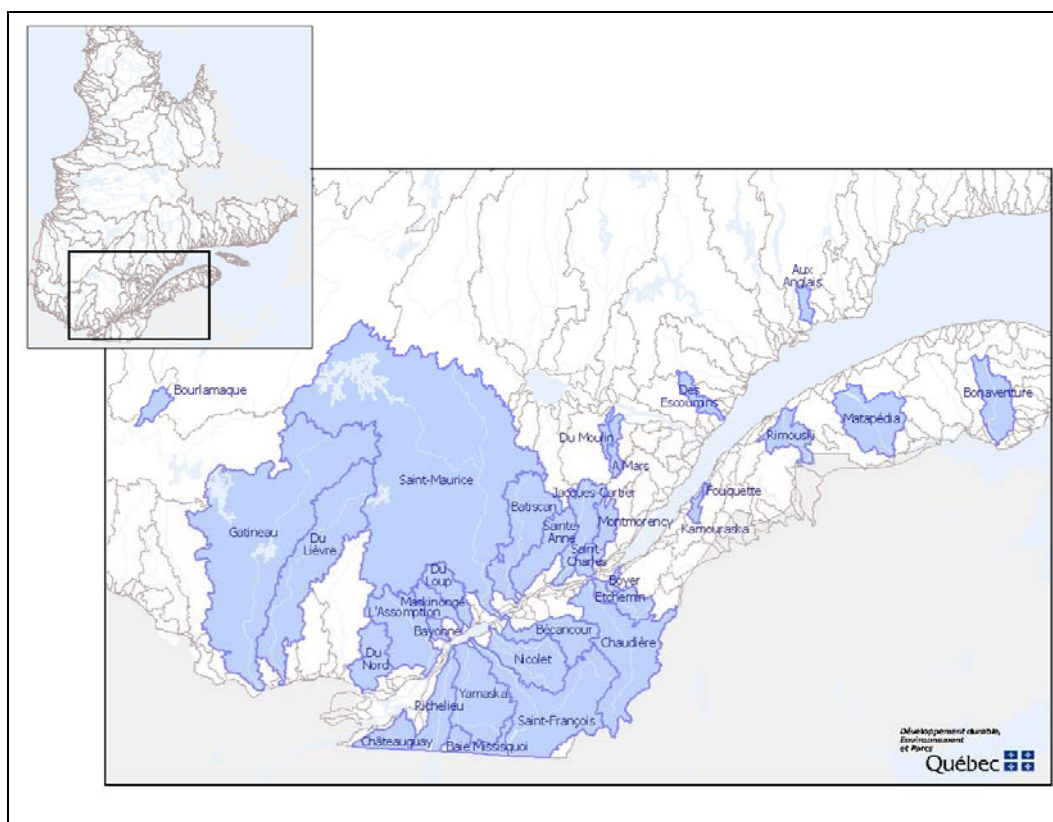
The government anticipates the following results:

- The logical planning of activities carried out within a watershed;
- Coordinated actions among all stakeholders within a particular watershed, bolstered by the principles of sustainable development;
- Systematic protection of water bodies, wetlands and ecosystems that are of ecological value to water;
- The opportunity for the public to be more actively involved in the future of water bodies;
- More effective and innovative tools of how water bodies are managed and the organization of new partnerships;
- Improved health of watercourses, lakes and related ecosystems;
- The safeguard or return of lost activities such as swimming, fishing and other recreational and tourism activities.

² go to our Web site for the 2003-2004 Québec Water Policy report (in French) - <http://www.mddep.gouv.qc.ca/eau/politique/bilan/index.htm>.

THE CHARACTERISTICS OF THE QUEBEC IWM MODEL

The **first component** of Québec's IWM model is the identification of priority watersheds. Watersheds are chosen on the basis of environmental issues concerning pollution, protection and conflicts over use, but also on the basis of a budgetary situation in which public funding is limited. This is particularly the case in Québec where there are few³ funding systems in place to absorb costs related to the use and pollution of water resources, for example a polluter-pay or user-pay system.



Map of the 33 priority watersheds in Québec

The **second component** of the Québec approach is a government that backs grassroots initiatives, rather than an interventionist government. Support for the mobilization of civilians is in the form of funding and technical assistance.

³ Under the industrial waste reduction program, the pulp and paper sector, along with the mining and prime metal manufacturing industry, are required to pay an annual fee based on the quantity of certain contaminants released into the environment.

The government of Québec, via the Ministère du Développement durable, de l'Environnement et des Parcs (MDDEP), will therefore be funding the key operations of Watershed Organizations through a dedicated program. Annual grants of \$65,000 will maintain the permanent operations of each of the 33 Watershed Organizations.

With regard to technical support, the MDDEP has developed technical support on the form of scientific support and different guides to help Watershed Organizations fulfill their mandates (ex. water management plan development guide). It is also distributing a water Atlas and information kits based on a geographic information system (GIS) for water governance in order to pave the way for the watershed analysis phase.

The Regroupement des organisations de bassin versant du Québec (ROBVQ), a private non-profit association, to which all Watershed Organizations must belong, is also funded by the MDDEP. The ROBVQ (www.robvq.qc.ca) provides Watershed Organizations with assistance ties in with the support from the government.

The third component is the Watershed Organization. The Watershed Organization is the operating core of the Québec approach. It is, in fact, a consultative organization set up by local stakeholders that include representatives of all public and private users, NGO and water managers, from within the watershed. The function of the Watershed Organization is to initiate and ensure dialogue among stakeholders (conciliatory approach) and to develop a vision for sustainable development of water resources in the watershed area. Watershed Organizations are primarily responsible for drafting a water development plan (WDP) on which stakeholders and the population agree, ensuring that the plan is implemented by having the stakeholders themselves to assume responsibility for each of the actions set forth in the WDP and following up implementation.

A Watershed Organization is a non-profit organization (NPO). Its board of directors must be representative of all public and private stakeholders present in the watershed region. To ensure dialogue and consensus building, community (citizens and citizens' groups), municipal (elected officials appointed by a municipality, regional county municipalities and metropolitan communities) and economic (water users from the sectors of agriculture, industry, forestry, business, education, etc.) sectors have equal representation,

with no possible majority of one sector over another. The government of Québec is also represented by different departments.

Watershed Organizations are not a substitute for current stakeholders, but are a means of maximizing the resources, structures and programs that exist in order to maneuver them according to clearly defined needs that have been endorsed by the stakeholders and population of the watershed within the WDP. Watershed Organizations can therefore be deemed a forum for developing local solidarity on water through the sharing of information, problems, solutions and channels of action available to each stakeholder.

The fourth component that characterizes the Québec approach is a flexible framework developed by the government. This framework is *result-oriented*. The government does not impose methods, leaving it instead to Watershed Organizations to adapt to the social, economic and environmental characteristics of their watershed. In the context of a very recent and gradual implementation (2002) process, this allows for the emergence of new ideas and methods, modeled after experiments in other countries or other regions of Québec. Despite the government's recent introduction of IWM, for over the last 20 years now, some NGO (with a similar structure of a Watershed Organization) have expressed interest in the preservation of Québec rivers and have therefore developed a solid knowledge of participatory water management.

Flexibility therefore allows ample room for innovation and development of watershed knowledge. This characteristic is particularly relevant in the case of a long-term project (i.e. water governance reform) since it allows new channels to open, some that perform better than others, with the advantage of being able to identify and choose those best suited to Québec. The option chosen by Québec is therefore to operate according to an *adaptive management* method rather than to impose specific practices and rigid legislation.

The government's flexible backing is set forth in an integrated watershed management reference document for priority Watershed Organizations entitled: "*Gestion intégrée de l'eau par bassin versant au Québec : cadre de référence pour les organismes de bassins versants prioritaires*" (2004). This document details some procedures for implementation of watershed management in Québec, such as representativeness within the board of

directors of Watershed Organizations or the components that a water development plan must contain (profile, diagnosis, challenges, strategies, objectives, action plan, monitoring). The *reference framework*, however, can be easily revised to adapt to needs.

Watershed Organizations also operate according to a management cycle: a structured procedure that sets out guidelines for the fulfillment of the Organization's mandate. They must follow a logical 6-steps framework.

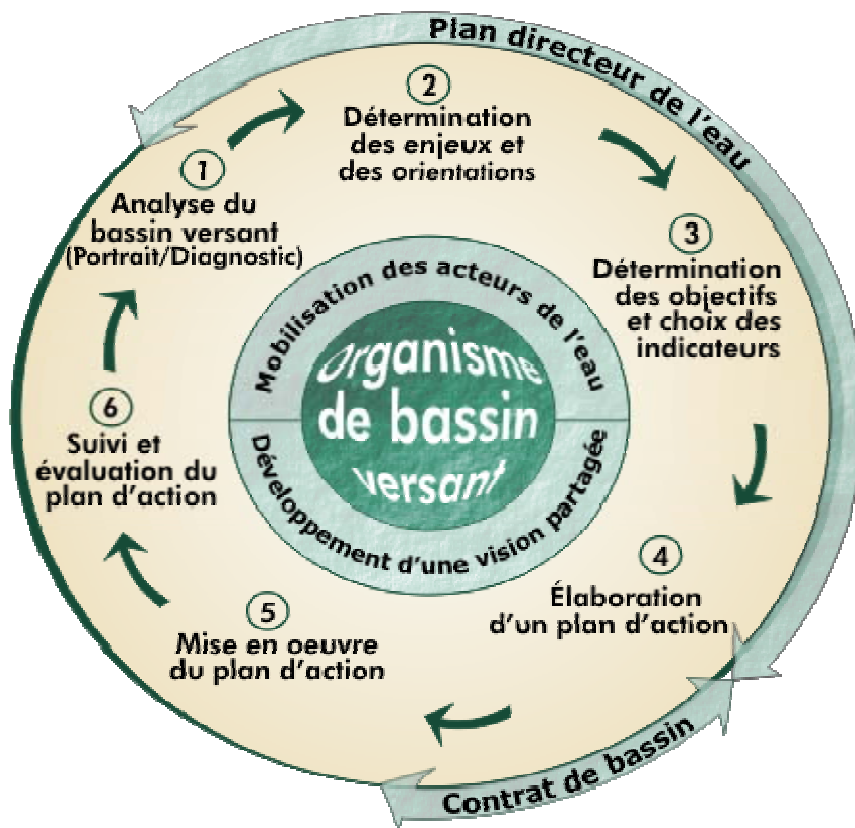


Figure 1: Management cycle of the IWM approach in Québec

The management cycle, together with the components of the reference framework, ensures that the IWM approach is implemented consistently within all priority watersheds.

CONCLUSION

In Québec, the IWM approach is designed to be a system that ties in with existing traditional government policy instruments, such as programs and regulations. The approach developed by Québec is designed to be non-regulatory, flexible, changing, targeted, participatory, and collaborative.

Three years after the Québec Water Policy was first introduced, it is clear that implementing an IWM requires a change in the mind-set of water users and within government administration. Such a mind-set change will not occur in the short-term, since it takes time to garner experience and for stakeholders to take hold of their roles within Watershed Organizations.

Other policy instruments must also be developed. For example a water user charge may provide the funding necessary to fulfill projects detailed in water development plans. In this type of voluntary approach, incentives are very important since there are almost no pressures (regulatory or contractual).

A change in the paradigm that is the governance of water in Québec is therefore beginning to emerge: moving from centralized to decentralized decision-making, from a role of government control to a supporting and contributory government role, from an administrative to an ecological view of the region, from a conflict of powers to a power of solutions.

In a few years, we will be able to take stock of the five to ten first years of Québec's IWM. This will enable the government to come to a decision on development of the Québec approach and to answer questions that are just beginning to take shape. Is there a need to develop regulatory instruments? Is there a need to combine some watershed regions? Is there a need to expand implementation throughout the province? Is there a need to integrate management of the St. Lawrence River with that of watersheds? These are just some strategic questions that will no doubt find their answers in experience, primarily with social and political change in Québec, because the IWM approach is first and foremost a choice of society, a political choice.

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