















Experiences in Watershed Management and Stakeholder Engagement in Canada

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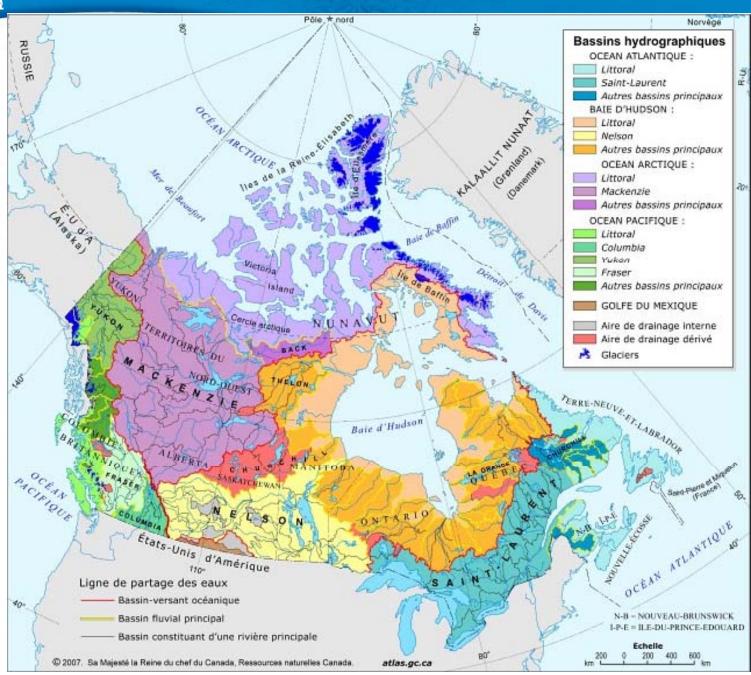








Canada's Main Watersheds







Water is a common resource

1. Federal: Navigation, Fisheries and Fish habitat.

2. Provincial: Preservation of water quality and natural habitats (lakes, rivers and wetlands);

Withdrawls management.

3. Regional: Land management and river maintenance

4. Municipal: Supply drinking water,

Waste water management and

Protection of shoreline habitats, flood plains and

wetlands.





- Sectoral management;
- Administrative boundaries;
- Lack of cohesion in the actions taken upstream and downstream;
- Current issues require a global vision.





Quebec Water Policy – 2002

Integrated Watershed Resource Management (IWRM)

- Participative governance;
- Watershed Organizations





2002 Quebec Water Policy: 33 Watershed Organizations

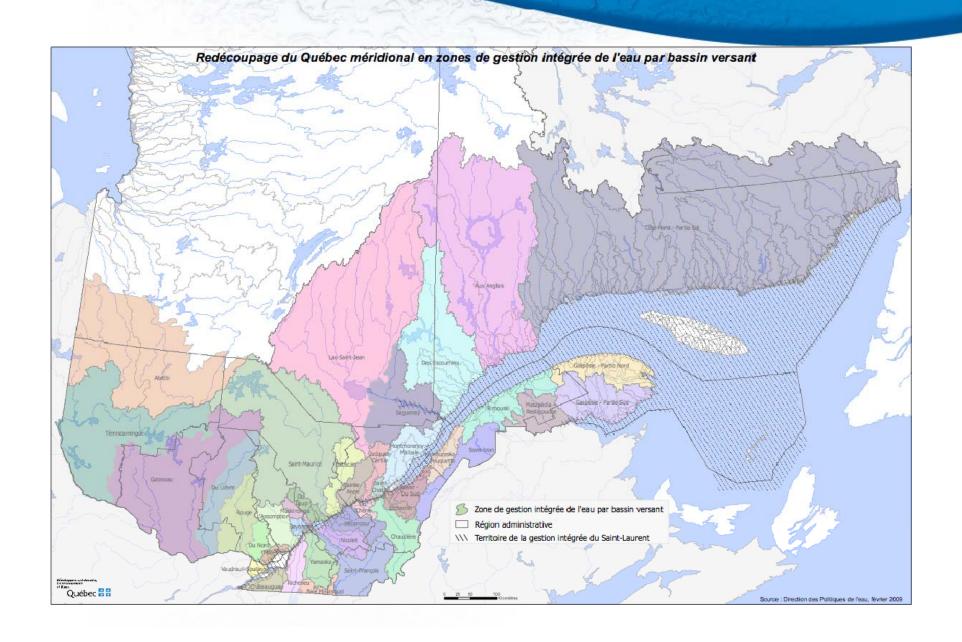








2009-Territorial restructuring: 40 IWRM Zones





Watershed Organizations: Mission and mandates

Mission:

To bring together the Devil's watershed stakeholders, in a process of participatory planning and partnership for a sustainable management of the region's water resources.

Mandates:

- 1. To establish a **Water Master Plan** for the watershed and coordinate its implementation;
- To facilitate dialogue and partnerships amongst the numerous stakeholders of the watershed;
- 3. To contribute to the integration, development and distribution of information about the watershed's resources;
- 4. To **inform and consult the public** about water management and its challenges.

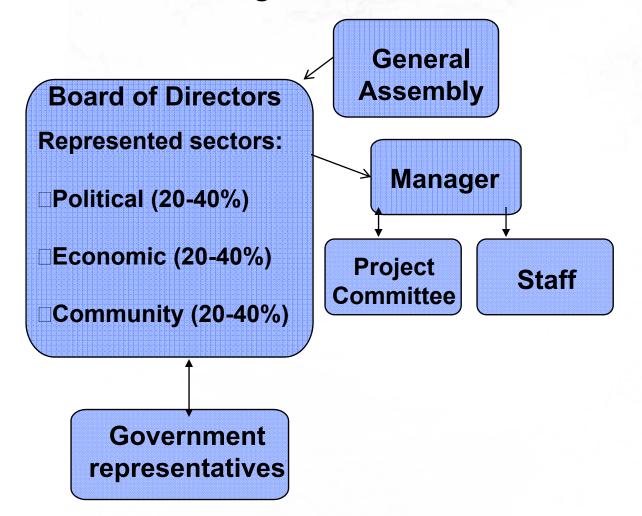






Watershed Organizations: Structure

Watershed Organization



√ Board of directors acts as a round table





Lake Kénogami and Chicoutimi and aux Sables Rivers Watershed Committee



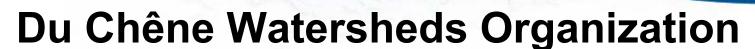


- Created after 1996 Saguenay flood,
- by the Ministry of Environment of Quebec,
- To propose dam and flow management













- Environmental regulations
- Created in 2007 by *Union of Agricultural Producers* and the regional government
- To restore the river quality











- Major housing and recreational development
- Created in 2005 by the local government
- To maintain the river quality and discharge





IWRM cycle: 7 Steps

- 0 Development of a vision
- 1- Watershed analysis
- 2- Stakes and orientations
- 3- Objectives and indicators
- 4- Action plan
- 5- Implementation
- 6- Monitoring and evaluation

Water Master Plan (WMP):

is a planning tool at the watershed level used to determine and prioritize the necessary interventions in order to achieve stakeholder objectives.

6 to 8 years



Watershed analysis:

Territory: geology, topography, soil types, Ecological Reference Framework, climate, hydrology, hydrography, aquatic ecosystems and species.

Activities: Land occupation, agriculture, forestry, industries, tourism/recreation, municipal infrastructures (roads, waste water plants, drinking water plants).

Environmental indicators: Surface and ground water quality, benthic communities, riparian buffer quality, soil erosion potentiel, DRASTIC.

Role of Watershed Organizations:

- Facilitator = Create partnerships between stakeholders through dialogue
- Intergrate data and create information (GIS)
- Motivator





Thank you for your attention

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