What is Community-Based Water Monitoring?

Community-based water monitoring (CBM) engages the public in generating the data and local knowledge required to understand the state of aquatic ecosystems and freshwater resources. Individuals, organizations, and networks across Canada are providing much-needed data to help inform evidence-based decision-making processes and fill information gaps for most of our watersheds.

A Diverse Funding Landscape

Disclaiming capacity for watershed assessment among federal and provincial governments means that organizations and networks across the country have to develop creative approaches to resources on the ground-monitoring work. This is an enormous diverse funding landscape for CBM that reflects the wide range of monitoring activities undertaken across spatial and temporal scales.

20 Year Growth of CBM in Canada

Since 1986, the number of CBM projects in Canada has steadily increased, reaching over 100 projects in recent years. This growth is significant and reflects the increasing importance of community-based monitoring in assessing the health of freshwater systems.

Findings - Shared Responsibility

How is CBM Funded by the Federal Government?

Environment and Climate Change Canada
- Great Lakes Sustainability Fund
- Lake Whiting Basin Stewardship Fund
- Atlantic Ecosystems Initiative
- St. Lawrence Initiative
- St. Lawrence Action Plan
- Innovation Community Funding
- Environmental Damage Fund

Indigenous and Northern Affairs Canada
- Northern Contaminants Program
- Indigenous Coastline Protection
- Community Economic Development Program

Research Granting Councils
- Natural Sciences and Engineering Research Council
- Social Sciences and Humanities Research Council
- Canadian Institutes of Health Research

Canadian First Nations Excellence in Energy and Water Program, University of Saskatchewan

A Diverse Funding Landscape

Numbers of CBM Groups as well as different levels of government and funders seeking to leverage the potential of CBM. Understand the challenges and opportunities inherent in funding CBM across Canada.

Findings - Shared Responsibility

How is CBM Funded in the Provinces and Territories? Key Funding Programs

Funding CBM in the Provinces and Territories
- British Columbia
  - Water Sustainability Act
  - Columbia Basin Water Quality Project (CBWQ)

- Alberta
  - Water Sustainability Science Act
  - Water Security Agency
  - Global Water Futures project

- Manitoba
  - Local Water Partnerships
  - Lake Winnipeg Stewardship Program

- Saskatchewan
  - Mexican Continental Shelf Program
  - Lake Winnipeg Basin Stewardship Fund

- Quebec
  - St. Lawrence Action Plan

What We Heard - Factors Affecting Investment in CBM

Shifting Priorities
- Enabling factors – Building momentum and targeting efforts: Targeted funding can help communities develop CBM for key geographies and for water quality parameters that are currently poorly understood.
- Barriers – Government priorities and results: Organizations report a shift from core-to-project based funding focused on restoration clearer ‘before and after’ deliverables.

Diversified Funding
- Enabling factors – autonomy and capacity: A diverse funding portfolio strengthens internal capacity by providing salaries for staff, access to office space, and the ability to purchase necessary equipment and resources to maintain local and regional networks.
- Barriers – Internal capacity and institutional knowledge: Inconsistent funding can limit an organization’s capacity to meet program objectives and reduces institutional knowledge required to sustain long-term monitoring activities.

Cost-effectiveness
- Enabling factors: Maximizing and leveraging resources: Non-monetary support and in-kind contributions can be a significant part of project funding.
- Barriers - Capacity: Government respondents report that internal resources and capacity are already stretched. It is not always feasible to diversify activities by adding or finding a CBM component.

Collaboration
- Enabling Factors – Strengthening networks: Support networks for CBM are essential to coordinate efforts and exchange knowledge and resources required to generate high-quality data across jurisdictional boundaries.
- Barriers – Competition: Higher competition for funding resources puts pressure on organizations to submit increasingly competitive grant applications and leaves them vulnerable to funding gaps when proposals are unsuccessful.

Funding Stability
- Enabling factors – Long-term funding: The knowledge that operational costs will be covered is critical in the short, medium, and long-term allows staff and volunteers to focus on delivering the multiple benefits that come with CBM.
- Barriers: Limited resources and funder fatigue: Most notably, support for CBM from multiple sources has shifted from a core-to-project-based funding.

Principles to Fund CBM

- Develop a strategic, integrated approach
- Include grants and/or funding for CBM at existing funding structures like contributions agreements
- Align program with monitoring requirements, where appropriate, to maximize investments
- Funding must be sustainable - available in the long-term
- Build and maintain monitoring partnerships
- Support collaboration between local and regional monitoring networks
- Adopt diverse funding models
- Ensure that funding is flexible (one size does not fit all)

References


References


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