Canadian Wetlands Roundtable (CWR)

Recommendations and Proposed Next Steps - Establishing Canada's Wetlands Inventory and Monitoring Program

About the Canadian Wetlands Roundtable:

The Canadian Wetlands Roundtable (CWR) is a multi-stakeholder partnership of conservation and resource sector organizations committed to advancing the sustainability, health, and responsible management of Canada's wetlands.

In addition to participation by university researchers, the Canadian Wildlife Service and the Canadian Wildlife Directors Committee, our membership also includes: Association of Fish and Wildlife Agencies, BC Wildlife Federation, Canadian Association of Petroleum Producers, Canadian Canola Growers Association, Canadian Cattlemen's Association, Canadian Federation of Agriculture, Canadian Remote Sensing Society, Canadian Sphagnum Peat Moss Association, CropLife Canada, Ducks Unlimited (Canada), Wildlife Habitat Canada and the Forest Products Association of Canada.

For additional information about CWR's vision, mission, activities and objectives please consult our website: https://wetlandsroundtable.ca/

Is a national wetlands inventory and monitoring program needed?

Canada's wetlands are important to Canadians and to the world:

- Canada is home to approximately one quarter of the world's remaining wetlands (*biodivcanada 2010*).
- Our wetlands provide critical ecological services including habitat to support biodiversity, improving water quality, buffering flooding and sequestering carbon (*De Groot et al 2006*)
- The majority of wildlife species are dependent on water at some point in their life cycle. Wetlands are critical landscape features that support these populations. In Canada an estimated 30 percent of species at risk rely on wetland habitats (*North American Wetlands Conservation Council, 2003*).
- The benefits to Canadians generated by wetlands exceeds $25 billion annually (*North American Wetlands Conservation Council 2003*).

Yet the conservation and management of our wetlands remains a continuing challenge. Despite their importance both nationally and globally, in parts of Canada, up to 90 per cent of the wetland resource base has been lost or degraded. Nation-wide we continue to lose an estimated 32 hectares of wetlands each day *(biodivcanada 2010).*

Investment in wetland management produces biodiversity protection and conservation results. For every $1 invested in wetland conservation there is $22 returned to society in economic, ecological and other societal benefits (*Anielski et al 2014*). Reliable inventory information is fundamental to our understanding of wetland function, our ability to quantify wetland benefits, and the conduct of needed landscape-based conservation policies and programs. While progress is being made in the development of wetland indicators, the conduct of regional inventories, and implementation of wetland protection policies and programs, the long-standing absence of a national wetland inventory and monitoring remains a major impediment to Canada's ability to understand, monitor and responsibly manage our wetlands.

Clearly more needs to be done to provide conservation planners, land and resource developers, regulators and decision-makers with relevant information about our wetlands, their status and trends. Given the ecological services and economic benefits that wetlands provide to Canadians and the continuing challenges in successfully protecting and conserving our wetlands, an investment of approximately $65 million (in today's dollars) over five years in the development of a national wetland inventory and monitoring program *(Canadian Wetland Inventory Project Team 2007)* is both warranted and long overdue.

Would this Program help achieve Canada's sustainable development and biodiversity conservation goals?

A national wetland inventory and monitoring program would directly support the Government of Canada's commitment to nature-based climate solutions and ongoing work to protect biodiversity and species at risk. It would also help Canada meet its international obligations to protect, conserve and responsibly manage wetlands. In particular the establishment and implementation of national wetland

inventory and monitoring program would strengthen Canada's ability to successfully deliver on the following key commitments:

- As called for in the Pan-Canadian Framework on Clean Growth and Climate Change, wetlands have an important role to play in both managing atmospheric carbon and mitigating climate change impacts *(Pan-Canadian Framework on Clean Growth and Climate Change 2016).*
- With participation by Canada's landowners and resource sectors, the protection and enhancement of wetlands through credit stacking would both sequester carbon and generate additional environmental benefits *(ECCC 2019).*
- In order to mitigate the significant material and financial losses that Canadians are currently facing as a result severe flooding and wildfires *(Government of Canada 2019),* wetlands and other nature-based green infrastructure solutions can be a cost-effective solution *(Insurance Bureau of Canada, 2018).*
- Strengthened wetland conservation would contribute to all four of the 2020 goals of Canada's Biodiversity Outcomes Framework including targets for: protected areas and other effective area-based conservation measures; species at risk recovery; improved biodiversity on working landscapes; and, provision of relevant information to support conservation planning and decision making *(Environment Canada, 2015).*
- The 2016-2024 strategic plan of the 1971 Convention on Wetlands of International Importance calls for the updating and completion of national wetlands inventories *(Ramsar 2015),* and
- The North American Waterfowl Management Plan (NAWMP) 2018 Update – Connecting People, Waterfowl and Wetlands, reaffirms and continues a long-term and continent-wide waterfowl and wetland conservation initiative based on sound science and adaptive management (*NAWMP Update, 2018*)

Conclusions and Recommendations

Canada's ability to fully respond to these and other national and international conservation and environmental commitments requires comprehensive, detailed and up-to-date information on the geographical distribution, type and status of Canadian wetlands – *information that can best be obtained through implementation of a national inventory and monitoring program*.

Accordingly, CWR proposes the development on a priority basis of a national wetland inventory and monitoring program and offers the following recommendations on program purpose and design:

1. Effectiveness depends on the delivery of key services including:
    - Reporting regularly on the status and trends of permanent, seasonal and temporal wetland basins.
    - Providing data on the historical condition of our wetlands including the highly-drained landscapes.
    - Supporting ongoing monitoring and management of wetlands including their environmental and societal benefits.
    - Informing landscape-level resource management by employing national standards that are compatible with other land-cover initiatives, and
    - Enabling easy access to digital delineated and classified wetland data using standardized data structure.
2. Cost-efficiencies can best be obtained by integrating a national wetlands inventory and monitoring program with investments in national ecosystem and science data management, as well as remote-sensing.
3. Timely completion of the inventory and monitoring program can best be assured by leveraging Canada's recent investments in satellite capacity, as well as Canada's expertise in wetland inventory data, survey standards and methodology, geographical mapping and remote sensing.

Collaboration and Next Steps

Collaboration and next steps should include the establishment of an interdepartmental working group with a clear mandate to lead program planning through engagement with stakeholders, NSERC, as well as provincial and territorial jurisdictions and municipal governments and indigenous organizations. CWR is willing to participate this work, including drawing on our extensive network of experts and practitioners.

Program development, guided a working group, and should include the following key activities:

A. *Leverage existing efforts and expertise:* Detailed analysis of existing inventory, monitoring and reporting initiatives including the identification of data and

reporting gaps is urgently required. While these initiatives provide a starting point for national program design, as well as partnership and data models, the current information holdings are a patchwork of incomplete and incomparable data.

B. *Conduct a user-needs assessment:* Identification of national wetland inventory and monitoring program performance requirements for resource development, environmental impact assessment, land use planning, wetland conservation, protected areas planning and similar purposes.
C. *Identify remote sensing solutions:* As a key part of a program development plan, establish a collaborative cost-sharing partnership between government agencies, eligible research institutions and NSERC in order to assess technological needs and identify remote sensing solutions that support program implementation, and
D. Refine cost estimates: Development of a national program and implantation plan and budget is critical to building partnerships and support for the needed investments in program development and implementation.

References

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- North American Waterfowl Management Plan 2018. *NAWMP Update 2018, Connecting People, Waterfowl and Wetlands.*

For more information

For more information about Canada's Wetlands Roundtable, please visit our new website at: https://wetlandsroundtable.ca/