

Cross-cutting Complementary Recommendations

A NATIONAL ENVIRONMENTAL SCIENCE DATA AND MANAGEMENT STRATEGY FOR CANADA

An integrated and open data platform

Federal leadership is urgently needed to move Canada towards an updated, integrated and complete data collection and management strategy to effectively address Canada’s growing environmental challenges and manage economic growth in an environmentally sustainable manner. A coordinated national scientific and data management strategy would have profound and long-lasting impacts.

A critical policy component to this is the need for improved data collection, management and integration among federal departments with other levels of government and with supporting non-government organizations like educational institutions and NGOs. Issues such as ensuring that collection and management overlaps are kept to a minimum and external experts are at the table with government will ensure that Canada builds the best data management strategy possible.

1. Updated National Ecosystem Geospatial Data

Through Natural Resources Canada’s Federal Geospatial platform, the Government of Canada has built an important data management tool that aggregates existing core data layers into a national geo-database. However, the foundational base layers of this data are badly outdated, sometimes by decades. A new and substantial investment in digital geospatial data is required to support Canada’s land use, conservation and resource management decisions. Furthermore, third-party data, such as that provided by proponents for environmental assessment or regulatory approvals, is not made publicly available. The data that the federal government does make public is spread across multiple platforms and tends to focus on environmental indicators, rather than

include the projects and activities that impact the environment. As a result, our land use and management decisions are being made with outdated or incomplete information.

Core to this is to ensure that these new data tools and products remain open and accessible, that we create a more sustained and regular approach to data acquisition and management, and that we clarify the roles and responsibilities of the various external stakeholders and public sector participants in future data collection and management decisions.

The Green Budget Coalition therefore recommends a new federal investment in updated foundational geographic and landscape feature data. The intended outcomes are to: establish new baseline data; generate modern elevation, soil and biodiversity datasets; make proponents’ data publicly available; and amalgamate all data respecting baseline data and federal assessment and regulatory approvals open and accessible on a single, consolidated database.

Recommended Investment:

For 2019-2020:

Investments in High Resolution Optical Data upgrades — \$5 million

Purchase LIDAR (Light Detection and Ranging) Data to construct 3D elevation geodatabase models — \$20 million

For 2020-2024

a) Investments in High Resolution Optical Data upgrades — \$5 million/year

b) Purchase LIDAR Data to construct 3D elevation geodatabase models — \$20 million/year

Total Investment: \$125 million in updated data investments for 2019-2024



2. Data Analytics: A National Census of the Environment

In order to effectively manage our natural heritage and corresponding ecosystem services, Canada is in need of a robust and full accounting of its environmental assets, including the development of a regularly published status and trends report leading to a national “Census of the Environment.” Creating such a baseline accounting and inventory of Canada’s environmental assets would highlight the benefits Canada gains from its combined ecosystem goods and services, benefits that frequently go unnoticed until the quality of the service degrades. This Census would provide many benefits including strong support of many policy objectives:

- Supporting the transition to a clean and low-carbon economy;
- Supporting smart “Green Infrastructure” program decisions and investments;
- Informing implementation plans for Canada’s biodiversity and protected area targets;
- Supporting proposed legislative reforms to core federal environmental and regulatory oversight processes;
- Informing the development of sustainable and climate resilient agriculture and extractive resources;
- Better managing our freshwater and saltwater fisheries;
- Enhancing the protection of our freshwater resources; and
- Reducing environmental risks from toxic chemicals.

For 2019-23: \$4 million/year (\$16M total)

starting in 2019/2020 to build the central registry architecture of an environmental census and to run a pilot.

For 2023-24 and ongoing thereafter: \$5 million/year ongoing for (non-geospatial) data acquisition, data analysis and to expand the sectoral/functional capacity within Statistics Canada’s environmental statistics group.

3. A New Public-Private Advisory Panel on Sharing Environmental Data and Science

Similar to Statistics Canada’s Public Accounts Advisory Committee, the Green Budget Coalition recommends establishing a new public and private expert advisory panel, led by Natural Resources Canada, to make recommendations on the collection, exchange and use of environmental data and information across the federal government. In addition, this body would have a mandate to provide strategic advice on data collection and management issues including: barriers to environmental data collection; exchange and use issues across various data collectors and end-users, jurisdictions and sectors; identifying data gaps and needs; and assessing current information sharing systems in Canada and abroad. Lastly, it would publish a report with recommendations to government on actions and requirements that would help close Canada’s environmental information gap.

Given the complexities and potential benefits of developing and implementing this initiative, the Green Budget Coalition recommends an initial **\$3 million investment, over 3 years**, to establish and support an expert panel coordinated by officials from the Canada Centre for Earth Observation at the Department of Natural Resources Canada.

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