

Feedback to the Department of Finance in Advance of Budget 2021

Submitted by: Evidence for Democracy

Recommendation 1: Provide increased funding and an expanded mandate to the Office of the Chief Science Advisor, and secure the position through legislation.

Recommendation 2: Combat misinformation by building on Canadian investments that increase science literacy and digital citizenship.

Recommendation 3: Promote openness and transparency through full implementation and adherence to Scientific Integrity Policies and open access to government science and data.

Recommendation 4: Improve coordination and communication of science through investments in innovative tools and programs.

Recommendation 5: Support fundamental science through continued investment in the federal granting councils and scientific trainees.

Recommendation 6: Increase funding to agencies collecting critical data on COVID-19.

Introduction

From employment to health to our economy, COVID-19 has changed the status quo. Budget 2021 requires investments that carefully consider the new challenges ahead.

The importance of science and evidence is clear in the face of the pandemic. Science helps us understand COVID-19 and develop solutions. Research helps track the virus and inform policies. As well, it is critical that governments can find and use the evidence to inform their decisions.

Evidence for Democracy presents recommendations to the pre-budget Budget consultation organized into three sections: **1) Ensuring governments and the public can find and use evidence; 2) Transparency and Openness and 3) Support for research and data collection.**

Ensuring governments and the public can find and use evidence

Recommendation 1: Provide increased funding and an expanded mandate to the Office of the Chief Science Advisor, and secure the position through legislation.

The COVID-19 pandemic has demonstrated the importance of science advice. As we've watched this crisis unfold internationally, the stark difference in outcomes across countries has tracked closely to how well policy-makers have used science in decision-making. Ignoring the evidence has clear and devastating consequences.

Canada's government has made it clear that robust research is at the heart of the policy-making approach, however, without mechanisms for federal science advice the outcome may have been different.

In 2017, a Chief Science Advisor (CSA) was implemented to provide science advice to the Prime Minister, and support evidence-informed policy. As CSA, Dr. Mona Nemer has delivered milestones including implementation of Scientific Integrity Policies, a youth council, and a roadmap for open science¹²³. During COVID-19, the CSA has taken a leadership role to support a scientific response to COVID-19⁴ by:

¹ Office of the Chief Science Advisor, Annual Report 2018

[https://www.ic.gc.ca/eic/site/063.nsf/vwapj/OCSA_AnnualReport_2018.pdf/\\$file/OCSA_AnnualReport_2018.pdf](https://www.ic.gc.ca/eic/site/063.nsf/vwapj/OCSA_AnnualReport_2018.pdf/$file/OCSA_AnnualReport_2018.pdf)

² Office of the Chief Science Advisor, OCSA's Youth Council, 2019 https://www.ic.gc.ca/eic/site/063.nsf/eng/h_97990.html

³ Office of the Chief Science Advisor, Open Science Roadmap, 2019 https://www.ic.gc.ca/eic/site/063.nsf/eng/h_97992.html

⁴ Office of the Chief Science Advisor, Ongoing initiatives on COVID-19

https://www.ic.gc.ca/eic/site/063.nsf/eng/h_98027.html

- assembling a multidisciplinary expert panel to advise on science of COVID-19;
- leading development of CANCovid, a Canada-wide network to facilitate COVID-19 research collaboration;
- calling on scientific publishers to make COVID-19 publications openly accessible and;
- building on Departmental Science Advisors to support the CSA.

As we adapt and respond to COVID-19, science advice must remain at the forefront of government decision-making. The role of the CSA must reflect the changing landscape and be protected to ensure it can stand up to future challenges and changes in government. The term of the CSA is set to expire in September of 2020, yet no updates have been made to the role, mandate, or funding. Without a dedicated Minister of Science, supporting the CSA is critical.

We recommend:

- **Formalizing the CSA position through legislation**, to emphasize the importance of government science advice, and ensure that science advice remains a core element of policymaking under all future governments.
- **Expanding and updating the CSA mandate:** With COVID-19 presenting new challenges, and a new government in place, an updated mandate could include:
 - building on the CSA's work on COVID-19 advice and science capacity on COVID-19;
 - working towards improved national coordination on science between jurisdictions, across government, and between intramural-extramural science;
 - supporting public science literacy;
 - ensuring adherence to scientific integrity policies and the open science roadmap;
 - leading a whole-of-government review of evidence-informed decision-making, in collaboration with the Privy Council of Canada, and supported by the DSA network.
- **Provide \$1M in additional annual funding to the Office of the CSA:** An enhanced mandate will require sufficient funding. While the office has grown in size and capacity, the funding for the office has not increased. We recommend boosting the current annual office budget by 50%.

Recommendation 2: Combat misinformation by building on Canadian investments that increase science literacy and digital citizenship.

In 2019-20, as part of Canada's approach to protecting democracy, Canadian Heritage contributed \$7 million over 9 months to projects aiming to support citizens in recognizing and

responding to online disinformation, and encouraging participation in democratic processes⁵. In light of COVID-19, this program was expanded with a call for projects focused on COVID-19 misinformation⁶. While these efforts are critical, COVID-19 has highlighted the gap that exists between scientific research and public understanding and knowledge of science. This gap can exacerbate the impact of misinformation and threaten the ability of the public to make informed decisions about health, safety, and other factors.

We recommend that the Government of Canada expand on Canadian Heritage’s digital citizenship program to support projects that increase literacy around science and technology. This could be bolstered by partnership with other departments/agencies working to improve science communication and connection of science with the public, such as **expanding on NSERC’s new Science Communication pilot program**⁷.

Funding could support projects which improve the role of scientists in connecting their work with the public, supporting the public in recognizing and responding to scientific information, and investigating policy solutions to combat misinformation.

Transparency and Openness

Transparency of government processes helps Canadians feel safe, included, and informed. Sharing of data and science also provides opportunities for collaboration and improves access to evidence, which can improve scientific research, support the economy and enhance trust. While the Government of Canada has implemented new tools for openness of government science, steps to ensure these new programs are adhered to are critical as we continue to navigate COVID-19.

Recommendation 3: Promote openness and transparency through full implementation and adherence to Scientific Integrity Policies and open access to government science and data.

In 2019, the federal government implemented Scientific Integrity Policies⁸ to help ensure that government science was conducted and communicated transparently and without interference. Although many departments have implemented these policies, it has not been widespread. We recommend Budget 2021 make **commitments to ensure all science-based departments and agencies have Scientific Integrity Policies implemented as well as oversight and evaluation**

⁵ Canadian Heritage, Digital Citizenship Initiative, 2020 <https://www.canada.ca/en/canadian-heritage/services/online-disinformation.html>

⁶ Canadian Heritage, COVID19 call <https://www.canada.ca/en/canadian-heritage/services/online-disinformation.html#special>

⁷ NSERC Science Communication Pilot, 2020 https://www.nserc-crsng.gc.ca/Promoter-Promotion/ScienceComm_eng.asp

⁸ Scientific Integrity Policies, Government of Canada, November 2018 <https://www.canada.ca/en/treasury-board-secretariat/services/information-notice/scientific-integrity-policies.html>

processes to guarantee adherence.

In March of 2019, the Government of Canada released a Roadmap on Open Science, outlining steps to make federal science open for all. However, COVID-19 has slowed action on many of the recommendations. We recommend the government take steps to begin implementing the roadmap including **completing departmental consultations on open science**.

Recommendation 4: Improve coordination and collaboration of science and research through investments in innovative tools and programs.

COVID-19 is a challenge that requires intimate coordination and collaboration across research topics, jurisdictions, countries, and extramurally-intramurally. Since COVID-19, the government of Canada has created innovative platforms to help facilitate this process, such as CANCovid. Coordination is important across many topics to ensure science is conducted to the highest level and well connected to the end users. We recommend:

- **Investment in novel digital tools to support communication and collaboration of science** using CANCovid as a model.
- **Continuing to build on funding for interdisciplinary research.**
- **Mandating the Office of the CSA to lead a review and roadmap on coordination on science in Canada.**

Support for research and data collection

Recommendation 5: Support fundamental science through continued investment in the federal granting councils and scientific trainees.

Discovery science is made possible by our federal granting councils. Currently, Canadian researchers are working to understand COVID-19, develop treatments and vaccines, and create technologies but they require funding to do so. Research investments keep Canadians safe, provide evidence to inform policies, and facilitate recovery of Canada's economy.

Budget 2018 invested \$690 million investment over four years in “core” open competition programs however **we recommend increasing funding to \$1.2 billion over four years**. While Canada has invested new funds to direct research towards COVID-19⁹, it is vital that Canada lays a strong and long-term foundation for fundamental research. We are falling behind - Canada trails OECD

⁹<https://www.cbc.ca/news/politics/trudeau-science-1.5542294>

countries in overall GDP in research funding¹⁰. These investments are important to ensure we stay competitive and recover from COVID-19.

Research trainees (e.g. Masters and PhD students and postdoctoral fellows) are the backbone of Canada's research. Budget 2019 included \$114M over 5 years for graduate scholarships; however, many graduate students are feeling additional pressures of COVID-19. A disproportionate level of graduate students already faced a precarious financial situation prior to COVID-19¹¹. Now, with many universities operating at reduced capacity, job market instability, and mental health tolls, investments are needed to protect trainees¹². We recommend:

- **Increase the number of trainee scholarships and fellowships** by increasing scholarship and fellowship funding to \$140M over four years and including funding for postdoctoral trainees.
- **Harmonize the value of trainee scholarships and fellowships:** Currently the value of trainee scholarships and fellowship vary across funding agencies. We recommend harmonizing all postdoctoral fellowships across funding agencies to \$50K per year for 2-3 years, all doctoral scholarships to \$35K per year for 3 years, and all Master's scholarships to \$22K per year for one year, and abolishing 'elite' fellowships like the Vanier scholarship.
- **Create specific supports for international students:** Most international trainees are ineligible for tri-council support. Many international students are especially vulnerable to the changes of COVID-19 due to travel restrictions and inability to apply for government support programs. Special considerations must be made for international trainees.
- **Invest in additional mental health supports for trainees:** Many students across Canada are facing unprecedented challenges due to inability to create research, precarious financial situations, and stressors related to COVID-19. Dedicated funding to support mental health services at academic institutions is necessary.

Recommendation 6: Increase funding to agencies collecting critical data on COVID-19

Comprehensive data is required to make informed policy decisions. There is an urgent need to support data collection that helps our governments understand the changing situation of the pandemic and the diverse needs of Canadians. There is increasing data demonstrating that COVID-19 impacts racialized and lower income groups disproportionately¹³ and may be exacerbating the gender gap in employment and childcare duties.¹⁴ More data is needed to make informed policy

¹⁰ OECD (2020), Gross domestic spending on R&D (indicator). doi: 10.1787/d8b068b4-en (Accessed on 15 July 2020)

¹¹ https://95323b55-8978-495d-94dd-ed077c2bade4.filesusr.com/ugd/7ab2e4_17c609d90daf442197f9332e944086f2.pdf

¹² <https://www.universityaffairs.ca/opinion/in-my-opinion/whats-next-for-research-trainees-in-canada-after-the-pandemic/>

¹³ <https://www.toronto.ca/home/covid-19/covid-19-latest-city-of-toronto-news/covid-19-status-of-cases-in-toronto/>

¹⁴ Johnston, R., Mohammed, A., & Van der Linden, C. (2020). Evidence of Exacerbated Gender Inequality in Child Care Obligations in Canada and Australia During the COVID-19 Pandemic. *Politics & Gender*, 1-16.; COVID-19 and the Gender Employment Gap Among Parents of Young Children. By: Qian, Yue and Fuller, Sylvia. 2020. University of Toronto Press.

decisions that reflect the needs of all citizens. We recommend:

- **Earmarking funding for data collection initiatives** including funding through the Tri-councils for organizations and institutions collecting critical data on how COVID-19 is impacting underrepresented communities. This should also include funding to Statistics Canada for comprehensive data collection.
- **Invest in support for data collection by all sectors** including community-level data in collaboration with diverse groups.
- **Encourage open data sharing across sectors** to increase availability and use of data.

Evidence for Democracy (E4D) is the leading fact-driven, non-partisan, not-for-profit organization promoting the transparent use of evidence in government decision-making in Canada.

Through research, education and issue campaigns, we engage and empower the science community while cultivating public and political demand for evidence-based decision-making.

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