



Advancing Open Science – Policy and Research perspective

Masha Cemma, PhD

Canadian Research Knowledge Network
June 8, 2022



Office of the Chief
Science Advisor of Canada

Bureau du conseiller
scientifique en chef du Canada

Canada



International landscape

- UNESCO Recommendation on Open Science was unanimously ratified by 193 member states in 2021.
- Philanthropic organizations, like the Wellcome Trust, Gates Foundation, and Chan Zuckerberg Initiative, see Open Science as a way to increase the impact of their investments in research.
- International funders focus more on **immediate access to publications**, FAIR data and data management plans, supporting infrastructure and research assessment.



Canadian landscape

- 2008, CIHR Open Access Policy
- 2015, [Tri-Agency Open Access Policy](#)
- 2016, [Tri-Agency Statement of Principles on Digital Data Management](#)
- 2019, DORA declaration - [Tri-Agency & Genome Canada signed the San Francisco Declaration on Research Assessment](#)
- 2021, [Tri-Agency Research Data Management Policy](#)
- In 2021, [FRQ has joined cOAlition S](#) (Plan S) and will require immediate Open Access to scientific publications starting in March 2023.



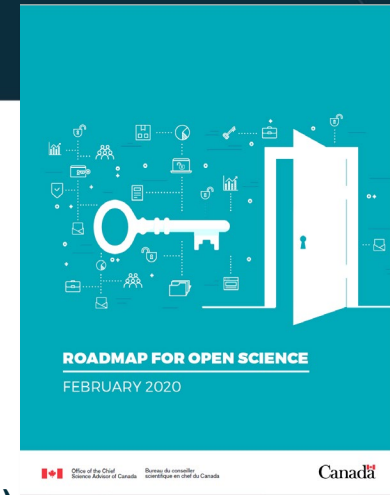
Mandate of the Chief Science Advisor

- Ensuring **public access** to government science
- Ensuring that the government considers science in its **decisions**
- Ensuring that government better **supports** Canadian science
- Improving the science **advisory** function in government
- Raising **public awareness** of science

More information and annual reports can be found at:

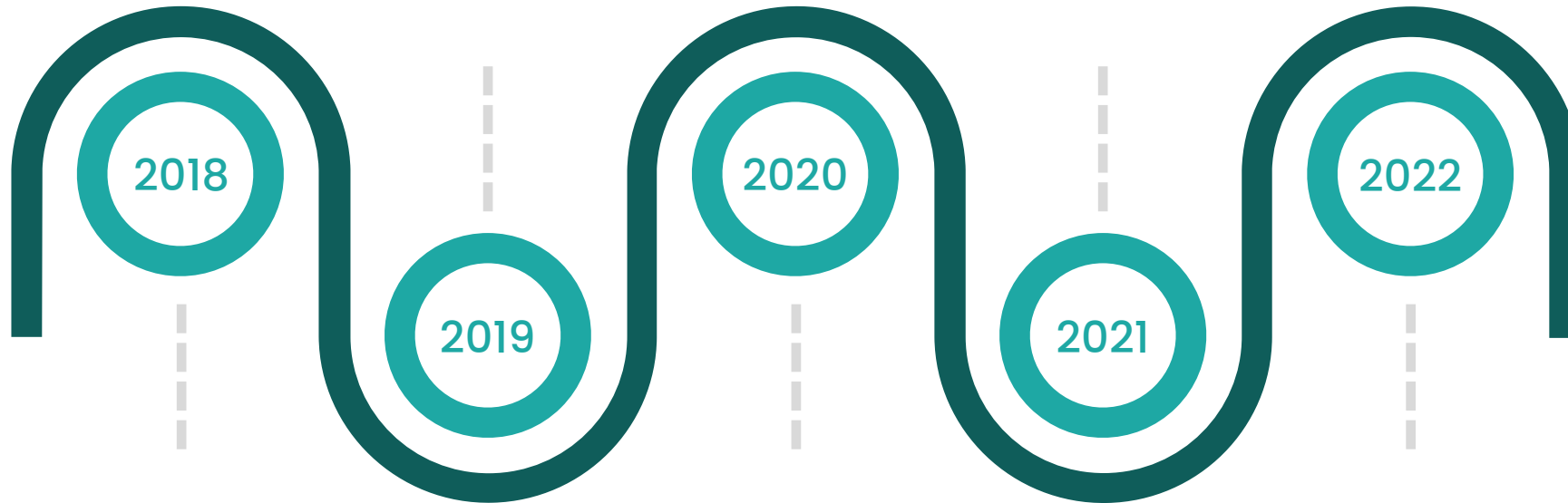
https://www.ic.gc.ca/eic/site/063.nsf/eng/h_97646.html.

The Chief Science Advisor's work on Open Science



Open Science Advisory Committee

Roadmap implementation:
Departmental Open Science Action Plans (Rec 3)
A Framework for Open vs Closed (Rec 6)



OCSA commits to creating a Roadmap for Open Science in Open Government Action Plan

Ministerial Release of the Roadmap for Open Science

Open Science Dialogues (Rec 9)
Pilot repository for federal science departments



Open Science Dialogues

Objectives

- (1) to solicit practical suggestions on how more can be achieved in OS in Canada
- (2) to examine the question of the coherence of Open Science policies among domestic and international funders

Implementation

- Three meetings with ~45 ECR and established researchers that were selected based on being leaders in their fields.
- Meeting with the international funders from Brazil, EU, France, Germany, Japan, Japan, US, and the UK.
- Meeting with the Canadian funders including federal, provincial, foundations and institutional representatives.



Dialogues with researchers

Researchers embraced the notion of Open Science but raised practical and logistical challenges towards achieving it:

- **Ease** of the process (e.g. automated deposits, reduced reporting & administrative burden) would enable compliance with Open Access
- The **costs** associated with Open Access publishing (deemed prohibitive to ECRs & to many researchers) – **equity dimension**
- The **knowledge about different routes** to achieve Open Access, as well as how to assess the quality of Open Access journals
- The current **research evaluation system** is a barrier to achieving Open Access.



Dialogues with researchers

- ECRs need support to maximize the impact of their publications through Open Access publishing.
- Researchers reiterated their support for a cohesive approach to making publicly-funded research in Canada openly accessible.
- The rationale for domestic and international harmonization was emphasized since many projects benefit from multiple domestic and international funding and collaborations.



Dialogues with researchers

Researchers also proposed **solutions**:

- In the short term, establish an Open Access fund that would cover APCs in an equitable way.
- For the longer term, double down on collective negotiations with big publishers to drive down the price of Open Access publishing and/or to achieve cost-effective transformative agreements.
- Develop awareness and guidance for researchers on different routes to achieve Open Access publishing and to recognize predatory journals.



Dialogues with funders

- Canada is not an international leader in Open Science but could catch up if actions are taken now.
- Canadian funders (foundations, federal and provincial funders) have diverse sets of Open Science policies but are open to harmonizing their policies.
- Research evaluation metrics need to be reviewed in parallel with the evolving trends in knowledge dissemination and translation. This requires cooperation between institutions, funders and the research community.



Dialogues with funders

- There is concern about how immediate Open Access could financially affect some scientific and learned societies that have in-house publishers; models exist to mitigate such impacts.
- Current evaluations and international rankings of universities are partially based on the number of publications in leading (often not open access publishing) journals. This needs to be reviewed in the context of Open Science.



Dialogues with funders

Participants also proposed **solutions**:

- Making Open Access publishing an easy and attractive option for researchers is key to successful Open Science adoption.
- Science is a global enterprise, and Canada needs to coordinate its efforts with international partners (including in its approach to Open Access and research evaluation).
- There is an opportunity to harmonize Open Science policies across research funders in Canada, taking into account the evolving international context.



Key takeaways and what it means for TAs?

- The funders had a high-level conversation on Open Access, TAs are likely too specific and downstream for them to react one way or another.
- The Canadian research community embraces Open Access publishing as a means to increase the impact and reach of their research.
- There are multiple pain points that need to be addressed – cost, equitable access & ease of the process.
- TAs when cost-effective/cost-neutral address some of the concerns, though it takes time to negotiate these agreements.



**THANK YOU
MERCI**

