

March 1, 2016

The Honorable Kirsty Duncan  
Minister of Science  
Government of Canada

**Re: Chief Science Officer**

Dear Minister Duncan,

Thank you for the opportunity to provide feedback on the creation of a Chief Science Officer (CSO). We are thrilled that your office is moving quickly to create this new position.

Our recommendations are based on international best practices, advice from key science policy experts and consultation with our (approximately 15,000) supporters made up of researchers and concerned citizens from across Canada.

A CSO could potentially serve two very different functions. One role would be as an advisor providing science advice to government, the other would be an oversight role providing independent analysis on issues such as the integrity of government science and the extent to which the government is making policy decisions that are informed by the best available evidence. Given the very different, potentially opposing, nature of these two roles, it not advisable to try and fulfill both functions within one office or position.

Evidence for Democracy proposes that the CSO have primarily an advisory mandate to provide the government with objective, impartial, apolitical scientific information as requested to inform policy and legislative decision-making. The CSO would also work towards improving mechanisms to support evidence-based decision-making throughout government, coordinating the science done within government and academia, increasing public understanding and confidence in science, as well as number of other functions and roles outlined below.

We want to make it clear that there is also a strong need for a separate Parliamentary Science Officer, or similar office, to provide independent oversight to government science integrity, science policy and evidence-based decision-making.

It is essential that the CSO be independent, transparent and widely respected within the scientific community and across political parties, while still being able to provide advice directly to those in power. The office could report to the Privy Council Office so as to be available as a resource to the Prime Minister's Office, Cabinet as well as other parliamentarians. Wherever possible, the work of the CSO should be readily made available to all members of parliament and the public. Transparency and openness are essential for

building public trust in the scientific basis on which government policies and legislation are formed.

This model would both increase the availability of sound scientific information to the top decision-makers in government and increase confidence in parliamentarians and the public that the government is making decisions based on solid evidence.

It is important to clarify that science advice should not be limited to the natural sciences but should include the full body of scientific and indigenous knowledge. This includes knowledge resulting from experiments, systematic observations, statistical data collection and analysis, theory and modeling, and including information from a range of fields in the physical and biological sciences, social sciences, health sciences and engineering (definition taken from the Science Integrity Project, <http://scienceintegrity.ca/>).

### **General Recommendations**

1. Given the short lived office of National Science Advisor that Canada had from 2004 to 2008, it is crucially important to build cross-partisan support for the new CSO position. The position must be seen as valuable and credible by all members of parliament for the position to last beyond the current government.
2. The CSO needs to be a full office that is well resourced and staffed, not just one individual.
3. The CSO must be committed to independence, transparency and openness (following the Principles of Scientific Advice to Government created by the UK Government Office for Science).
4. The creation of the CSO should be enshrined in legislation to ensure longevity of the office.
5. There is also a need for a separate office that would report directly to parliament to provide independent oversight to government science integrity, science policy and evidence-based decision-making.

### **Question responses**

#### **1. The CSO should fulfill the following roles within government:**

- Provide the government (the Prime Minister's Office, Cabinet and members of parliament) with objective, impartial, apolitical scientific information as requested to inform policy and legislative decision-making;
- Consult the in-house government and academic research communities to provide the most up-to-date assessment of scientific research;
- Help decision-makers and the public understand the degree of uncertainty associated with scientific advice;
- Ensure that the advice and reports from their office are openly communicated to the public;

- Highlight areas of interest and or concern even in the absence of government requests;
- Be a sounding board for Ministers on science and technology policies;
- Communicate with the public to enhance societal confidence in science and technology;
- Oversee the creation of a national science strategy and a long-term vision of science that goes beyond the mandate of specific governments;
- Ensure that research is funded and supported at a level sufficient to support evidence-based decision-making;
- Help coordinate research in Canada by linking government research with that done by academics (specifically the Tri-Council Agencies);
- Chairing (and ideally) appointing members to the Science, Technology and Innovation Council;
- Create and chair a government committee comprised of Chief Science Advisors within each federal science-based government department; and
- Create and chair a government committee on Science Advice in Government Emergencies (similar to the Science Advisory Group for Emergencies in the United Kingdom).

**2. The CSO would engage with the research community and broader public in the following ways:**

- Seeking input from the research community for the development of science advice to government;
- Consultation to help determine future priorities and opportunities for investments in science and research; and
- Broad consultation with the research community and the public as part of developing a national science strategy.

An important role of the CSO would be to increase public understanding, support and appreciation for the role science and technology play in our society and in policy development. This would include:

- Ensuring that all reports and advice from the CSO's office are communicated to the public in a timely manner (except in rare circumstances when this information may need to remain confidential); and
- Putting in place mechanisms and policies to ensure that government funded science (both in-house government science and academic research) are communicated to the public in a timely manner.

**3. The primary responsibilities of the Chief Science Officer should be:**

- Ensuring public policies and legislation are based on the best available scientific evidence;
- Improving mechanisms to support evidence-based decision-making throughout government;

- Facilitating coordination of science across federal departments and the Tri-Council Agencies;
- Increasing public understanding, support and appreciation for the role science and technology play in our society and in policy development; and
- Representing and promoting Canadian science internationally to attract scientists to Canada and investments in Canadian science.

#### **4. What issues should the Chief Science Officer address first?**

The Chief Science Officer should be open to supporting the government by providing science advice for their top policy priorities. Other issues that the CSO could address in their first term could include:

- Overseeing the development and implementation of Science Integrity Policies in all federal science-based departments;
- Support ministers in their mandate of ensuring policies are based on best available evidence;
- Start planning a national science strategy to identify where the gaps are in the research landscape in Canada and lay out long-term research priorities, especially to ensure we have the research needed to deal with emerging policy issues; and
- Helping to ensure various pieces of legislation are strengthened to include a solid science foundation (for e.g., the Canadian Environmental Assessment Act, Fisheries Act, Oceans Act, Species at Risk Act).

Thank you again for considering our recommendations and do not hesitate to get in touch with us if you have any follow up questions.

Sincerely,

Katie Gibbs  
Executive Director  
Evidence for Democracy

Wendy Palen  
Chair, Board of Directors  
Evidence for Democracy