

Fix the link where science and policy meet

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The connection between science and public policy within the federal government is broken, and the consequences for Canada are becoming disastrous. We propose four ways to fix this problem.

But first, how is the connection broken, and why should Canadians care?

The federal government has severely degraded its internal scientific capacity, including its ability to perform and publicize its own scientific research, track outside scientific research, and monitor and assess policy issues with complex scientific content.

Federal ministries have created rules that require government scientists – especially those working on resource and environmental topics – to get approval from senior bureaucrats before publishing their research. They have also sharply restricted travel to scientific meetings and blocked their scientists from communicating with journalists without prior authorization, and even then often only under supervision. Across the federal government – but especially within the departments of Fisheries and Oceans, Environment, and Natural Resources – large numbers of scientists have been laid off and vital labs and libraries closed. Remaining scientists speak of a climate of fear and self-censorship.

Here's just one example of degraded capacity. The Department of Fisheries and Oceans recently shuttered all its labs monitoring pollutants in ocean ecosystems. Among other activities, these labs studied the levels of pesticides, flame retardants and industrial compounds like PCBs in Canada's coastal marine life, including salmon and killer whales. Although Canada has oceans on three sides, we now have essentially zero federal scientific capacity to monitor pollution trends in our coastal waters or assess the safety of seafood caught by recreational or aboriginal fishers.

DFO also can't deliver expert advice on matters such as the impact of sewage on marine life, the degree to which other nations are polluting Canadian oceans, or baseline levels of hydrocarbon contamination in B.C. coastal zones that could be sites of liquid natural gas or bitumen exports.

The federal government's internal scientific capacity started dropping in the mid-1990s when the Liberals slashed the public service. But the Conservatives have turned financial exigency into an ideological weapon. Whenever science seems likely to generate knowledge that could create difficulties for their political agenda, they try to bury the knowledge and destroy the government's capacity to generate it. These actions reflect much more than the usual conservative commitment to smaller government. They're a willful effort to manufacture ignorance and a fundamental rejection of evidence-based public policy.

Successive federal governments, but especially the Conservatives over the past decade, have also sharply downgraded the status of scientific advice within national policy-making. The Conservatives closed the Council of Science and Technology Advisers in 2007, phased out

the position of National Science Adviser in 2008 and ended the National Roundtable on the Environment and the Economy in 2013. Now channels for scientific advice to senior levels of the federal government, including the Prime Minister, are fragmented across ministries. Those that remain are tightly circumscribed and mostly provide advice on private-sector technological innovation.

Promoting innovation is a key task of government. But scientific advice should play a central role in just about every task modern governments perform, from defending against pandemic disease to ensuring the security of communication networks. Such tasks and the scientific issues they raise always cut across ministerial boundaries, so effective government needs integrated scientific advice – clearly and regularly delivered to the highest levels.

What should the Canadian federal government do? Our four recommendations are derived from broad consultation on this issue led by one of us, Heather Douglas, over the past two years.

First, the federal government should begin rebuilding its scientific capacity. Modern nations that want to remain competitive and secure need a solid foundation in government science, because universities and corporations can't undertake the kind of long-term, large-scale, interdisciplinary scientific studies the government needs.

Second, the government should introduce legislation, as currently exists in the United States, mandating the publication of all government-funded research and all government science advice, where national-security concerns are not at issue.

Third, the government should establish a statutory Science Adviser reporting directly to the Prime Minister and enjoying the same independence and security of tenure as the Auditor-General.

Fourth, the existing Council of Canadian Academies should be reformed so that it can undertake independent research and provide advice directly to the federal government on matters where science and policy intersect.

By rebuilding capacity and broadening and stabilizing channels for scientific advice, these changes would greatly improve the quality of that advice. They'd also improve democratic accountability. To judge whether the government's decisions are grounded in scientific knowledge, the public needs access to the expertise and information decision-makers use. Restricting this access damages our democracy.