

CANADIAN
PSYCHOLOGICAL
ASSOCIATION



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INFORMATION BULLETIN

CANADA'S FUNDAMENTAL SCIENCE REVIEW

On April 10, 2017, the Government of Canada released its report on Canada's Fundamental Science Review. The report, entitled, "Investing in Canada's Future: Strengthening the Foundations of Canadian Research," was prepared by an independent, expert advisory panel chaired by Dr. David Naylor, former President of the University of Toronto, and was commissioned by Science Minister Kirsty Duncan. In 2016, the Canadian Psychological Association (CPA) made a submission to the panel that highlighted key issues affecting psychology researchers in Canada.

The panel proposes a bold and much needed plan to strengthen Canada's research ecosystem with attention to the role of social sciences and humanities research and the importance of supporting early career scientists, indigenous researchers, diversity in research, and research that cross-cuts disciplines. The panel concludes that Canada must urgently increase both resources and aspirations for research to advance and support the excellence and innovative impacts of Canadian research.

In line with the CPA's recommendations to the panel, the first priority of the report is to increase funding for independent, investigator-led research. To this end, the report recommends cumulative increases to the base funding of the federal research granting councils from the current \$3.5 billion to \$4.8 billion by 2022, phased in over four years.

The report outlines a comprehensive agenda to strengthen the foundations of Canadian research. Among its recommendations is legislation to create an independent National Advisory Council on Research and Innovation (NACRI) that will work closely with Canada's new Chief Science Advisor (CSA) to provide ongoing evaluations of all programming and the appointment of a coordinating board chaired by the CSA to oversee the governance of the four funding agencies.

The report also calls for balance across all research disciplines as a foundational principle for funding and recognizes the significant contributions that the social sciences and humanities make to Canada's ability to thrive in the 21st century. As we mentioned in the CPA's submission to the panel, the Social Sciences and Humanities Research Council (SSHRC) is underfunded: It currently receives just 15 percent of federal investments in the granting councils.

In addition to increased balance in funding, the report recommends increasing support to diversity in research — emphasizing the importance of research across disciplines, addressing gender equity, and providing support for early career scientists, visible minorities, and indigenous researchers.

Other important recommendations and priorities of the report are to address new forms of support for multidisciplinary and international funding, support for students through scholarships and fellowships, and greater coordination and collaboration among the granting councils. These recommendations align well with those made in the CPA's submission to the panel.

The CPA extends its sincere thanks to Minister Duncan for convening the review and to the panel for completing this very important work. The association looks forward to engaging its psychology researchers in the coming months regarding both the report's recommendations and future directions for the CPA's advocacy efforts on behalf of psychological science, as well as to working with government and the broader research community to make the report's recommendations a reality.

List of the Report Recommendations

This list of recommendations is drawn directly from the text of the report. The first number refers to the chapter in which the recommendation appears, and the second to the order of appearance within that chapter. Please see the full report for more details

([http://www.sciencereview.ca/eic/site/059.nsf/vwapi/ScienceReview_April2017.pdf/\\$file/ScienceReview_April2017.pdf](http://www.sciencereview.ca/eic/site/059.nsf/vwapi/ScienceReview_April2017.pdf/$file/ScienceReview_April2017.pdf)).

1.1 Consistent with the recommendation by the Advisory Council on Economic Growth, the Government of Canada should undertake a wide-ranging and multi-departmental review of innovation-related programming, including both direct and indirect supports for business research and development.

Recommendation

4.1 The Government of Canada, by an Act of Parliament, should create a new National Advisory Council on Research and Innovation (NACRI) to provide broad oversight of the federal research and innovation ecosystems. Recommendation

4.2 The Science, Technology and Innovation Council should be wound down as NACRI is established.

Recommendation

4.3 NACRI should have 12 to 15 members, appointed through Orders in Council, comprising distinguished scientists and scholars from a range of disciplines as well as seasoned innovators with strong leadership and public service records from the business realm and civil society. Domestic members should be drawn from across Canada and reflect the nation's diversity and regions.

Recommendation

4.4 An external member should hold the Chair of NACRI with the CSA serving as Vice Chair. NACRI should be supported by a dedicated secretariat working within the larger expert team supporting the CSA.

Recommendation

4.5 The Privy Council Office, working with departmental officials and the newly appointed CSA, should examine mechanisms to achieve improved whole-of-government coordination and collaboration for intramural research and evidence-based policy-making. xxvi Investing in Canada's Future: Strengthening the Foundations of Canadian Research Recommendation

4.6 As a council of senior volunteers with a broad mandate of national importance, NACRI should have a publicly acknowledged working connection to the Prime Minister/PMO, parallel to that established for the CSA. NACRI should report to and interact most directly with both the Minister of Science and the Minister responsible for Innovation and Economic Development. It should also have open channels of communication with the Minister of Health and other ministers of key departments involved in intramural and extramural research. Recommendation

4.7 A Special Standing Committee on Major Research Facilities should be convened by the CSA and report regularly to NACRI. The committee would advise NACRI and the Government of Canada on coordination and oversight for the life cycle of federally supported MRFs.

4.8 Ongoing interactions and annual in-person meetings should be established to strengthen collaborative research relationships among federal, provincial, and territorial departments with major intramural or extramural research commitments. The CSA, with advice from NACRI, should take the lead in promoting a shared agenda on matters of national concern, such as human resource planning to strengthen research and innovation across Canada.

4.9 The Government of Canada should propose and initiate planning for a First Ministers' Conference on Research Excellence in 2017. The conference would celebrate and cement a shared commitment to global leadership in science and scholarly inquiry as part of Canada's sesquicentennial celebrations. Recommendation

4.10 The Ministers of Science and Health should mandate the formation of a formal coordinating board for CFI, CIHR, SSHRC, and NSERC, chaired by the CSA. The membership of the new Four Agency Coordinating Board would include the four agency heads, departmental officials, and external experts. Reporting to the Ministers of Science and Health, the Coordinating Board would expeditiously determine and implement avenues for harmonization, collaboration, and coordination of programs, peer review procedures, and administration.

4.11 The Government of Canada should undertake a comprehensive review to modernize and, where possible, harmonize the legislation for the four agencies that support extramural research. The review would clarify accountabilities and selection processes for agency governing bodies and presidents, promote good governance and exemplary peer review practices, and give priority to inter-agency collaboration and coordination.

5.1 NACRI should be asked to review the current allocation of funding across the granting councils. It should recommend changes that would allow the Government of Canada to maximize the ability of researchers across disciplines to carry out world-leading research. Particular attention should be paid to evidence that ongoing program changes have adversely affected the funding opportunities for scholars in the social sciences and humanities.

5.2 The Government of Canada should direct the new Four Agency Coordinating Board to develop and harmonize funding strategies across the agencies, using a lifecycle approach that balances the needs and prospects of researchers at different stages of their careers.

5.3 The new Four Agency Coordinating Board should create a mechanism for harmonization as well as continuous oversight and improvement of peer review practices across the three councils and CFI.

5.4 The Four Agency Coordinating Board should develop consistent and coordinated policies to achieve better equity and diversity outcomes in the allocation of research funding while sustaining excellence as the key decision-making criterion. This priority intersects efforts to improve peer review practices and requires a multipronged approach.

5.5 The federal ministers responsible should consider hard equity targets and quotas where persistent and unacceptable disparities exist, and agencies and institutions are clearly not meeting reasonable objectives.

5.6 The four agencies should examine best practices in supporting early career researchers, augment their support of them consistently across disciplines, and track and report publicly on the outcomes.

5.7 The three granting councils should collaborate in developing a comprehensive strategic plan to promote and provide long-term support for Indigenous research, with the goal of enhancing research and training by and with Indigenous researchers and communities. The plan should be guided by the Truth and Reconciliation Commission's recommendations on research as a key resource.

5.8 NACRI should be mandated not only to review proposals to create new third-party delivery organizations, but also to assess ongoing activities of all existing third-party organizations that receive federal support. It should guide their formal periodic review processes and advise the Government of Canada on the continuation, modification, or termination of their contribution agreements.

5.9 When the intent is to support independent research, requirements for matching funds should be used sparingly and in a coordinated and targeted manner. In general, matching requirements should be limited to those situations where the co-funder derives a tangible benefit. Investing in Canada's Future: Strengthening the Foundations of Canadian Research.

6.1 The Government of Canada should rapidly increase its investment in independent investigator led research to redress the imbalance caused by differential investments favouring priority-driven research over the past decade.

6.2 The Government of Canada should direct the Four Agency Coordinating Board to amend the terms of the NCE program so as to include the fostering of collaborative multi-centre strength in basic research in all disciplines.

6.3 The Government of Canada should direct the granting councils to undertake an interim evaluation of the CFREF program before the third wave of awards is made. The CSA and NACRI should be engaged in the design of the review. The results would guide a decision on whether to launch or defer the program's third round, but not impede the fulfilment of existing commitments.

6.4 The Government of Canada should mandate the Four Agency Coordinating Board to develop multi-agency strategies to support international research collaborations and modify existing funding programs so as to strengthen international partnerships.

6.5 The Government of Canada should mandate the Four Agency Coordinating Board to develop strategies to encourage, facilitate, evaluate, and support multidisciplinary research.

6.6 The Government of Canada should mandate the granting councils to encourage and better support high-risk research with the potential for high impact.

6.7 The Government of Canada should mandate the granting councils to arrive at a joint mechanism to ensure that funds and rapid review mechanisms are available for response to fast-breaking issues.

6.8 The Government of Canada should provide CFI with a stable annual budget scaled at minimum to its recent annual outlays.

6.9 The Government of Canada should consolidate the organizations that provide digital research infrastructure, starting with a merger of Compute Canada and CANARIE. It should provide the new organization with long-term funding and a mandate to lead in developing a national DRI strategy.

6.10 The Government of Canada should mandate and fund CFI to increase its share of the matching ratio for national-scale major research facilities from 40 to 60 per cent. List of Recommendations xxix

6.11 The Government of Canada should mandate and fund CFI to meet the special operating needs of individual researchers with small capital awards.

7.1 The Government of Canada should direct the Four Agency Coordinating Board to oversee a tricouncil process to reinvigorate and harmonize scholarship and fellowship programs, and rationalize and optimize the use of current awards to attract international talent.

7.2 The Government of Canada should renew the CRC program on a strategic basis in three stages: 1. Restore funding to 2012 levels, upon development of a plan by the granting councils and Chairs Secretariat to allocate the new Chairs asymmetrically in favour of Tier 2 Chairs, and increase the uptake of available funds through improved logistics in managing numbers and reduced delays in awarding Chairs; 2. Direct the granting councils to cap the number of renewals of Tier 1 Chairs and, in concert with universities and CFI, develop a plan to reinvigorate international recruitment and retention, for review by NACRI and approval by the government; and 3. On approval of that plan, adjust the value of the CRCs to account for their loss in value due to inflation since 2000.

7.3 The Government of Canada should gradually increase funding to the RSF until the reimbursement rate is 40 per cent for all institutions with more than \$7 million per year of eligible funding. Current thresholds should be maintained to enable additional support for smaller institutions. As the size of the envelope of RSF-eligible operating grants grows, the funding of the RSF should be increased in lock-step to sustain the reimbursement rate of F&A costs on a trajectory towards this 40 per cent goal.