

Spring 2003

CSTA Update

Fostering excellence in government S&T

CSTA Launches New Study

The CSTA is pleased to announce the launch of its most recent study. In March 2003, the Cabinet Committee on Economic Union (CCEU) asked the CSTA to conduct an examination of S&T linkages in support of government excellence. The Council will explore how the government can use linkages to marshal the most appropriate S&T talent and resources, wherever they reside in Canada, to enhance the federal government's performance of S&T. The CSTA expects to present its final report to Cabinet in the spring of 2004.

The Honourable Dr. Rey D. Pagtakhan, Minister of Veterans Affairs, Secretary of State (Science, Research and Development) and Chair of the CSTA, stressed the importance of linkages to the federal government's management of S&T. "Ministers are accountable for the decisions they make, and the public expects these decisions to be made on the basis of the best available information," Minister Pagtakhan stated. "Therefore, the government must draw on the best expertise and experience in Canada to ensure that sound science advice informs our policy and regulatory decisions."

CSTA reports to date have identified the importance of linkages to the government's conduct of S&T. In *Science Advice for Government Effectiveness (SAGE)*, the CSTA stresses the importance of drawing on a variety of scientific sources and experts, both internally and externally. In its second report, *Building Excellence in Science and Technology (BEST)*, the CSTA identifies linkages as one of the three fundamental principles (along with alignment and excellence) that should guide the conduct of all federally performed and funded S&T. In *BEST*, the CSTA maintains that linkages are essential to ensure that the federal government's conduct of S&T capitalizes on the best available inputs and that overlap and duplication are minimized.

The CSTA will explore the topic of S&T linkages along two dimensions: (1) S&T linkages across the federal government; and (2) federal S&T linkages with others in the national innovation system.

See **New Study** on page 2



Message from the Secretary of State (Science, Research and Development)

As the Chair of the CSTA, I am very pleased with the significant contribution the CSTA has made to the management of federal S&T in Canada.

Indeed, I can say with certainty that this tradition will continue as the Council undertakes a new study on federal S&T linkages in support of government excellence – a topic that is of strategic and timely interest to science-based departments and agencies.

CSTA reports to date have had a positive impact on the federal S&T community. We have seen a number of departments take steps to implement the CSTA's recommendations. This reflects the government's ongoing commitment to promote excellence in its S&T and to ensure that its decisions are informed by sound science and science advice.

I would like to extend my appreciation to all of our science-based departments and agencies for their valuable support in advancing the work of the CSTA.

A handwritten signature in black ink, appearing to read "R. D. Pagtakhan M.P.", written in a cursive style.

Hon. Dr. Rey D. Pagtakhan
Minister of Veterans Affairs and Secretary of
State (Science, Research and Development)

New Study (cont'd)

The CSTA proposes to look at issues such as:

- the benefits and risks of S&T linkages;
- the barriers to establishing and maintaining effective S&T linkages;
- the principles and best practices that should guide the development and management of S&T linkages; and
- the means by which the government can foster an organizational culture that embraces linkages as a productive way to do business.

The report will offer recommendations on how to create, organize and manage internal and external S&T linkages to promote excellence in government S&T.

S&T linkages can help the government maximize the use of finite resources and improve the quality and impact of its S&T projects and programs. Linkages also promote an information flow among players, which transmits knowledge and generates new knowledge and economic and social benefits.

Linkages can help the government improve its S&T performance and thereby fulfill its role in the national innovation system and enhance the economic and social well being of Canadians.

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SPOTLIGHT ON REPORTS

Informing, Persuading, Engaging the Public - *SCOPE* Provides Advice on Federal S&T Communications

Effective communication of science and technology (S&T) information and issues is fundamental to Canada's economic and social well being. As a key player in the national innovation system, and as a democratic government responsible to its citizens, the federal government has a duty to communicate openly and effectively about its S&T and S&T-informed policy. So contends the CSTA in its most recent report, *Science Communications and Opportunities for Public Engagement (SCOPE)*, which the Cabinet Committee on Economic Union (CCEU) approved in March for public release.

In June 2001, the CCEU asked the CSTA to examine federal S&T communications and propose recommendations to improve its effectiveness. In response, the CSTA's *SCOPE* report:

- explores the challenges the federal government faces in communicating its S&T;
- recommends foundations, guiding principles and best practices to foster excellence in the federal government's S&T communications; and
- recommends guidelines for science-based departments and agencies (SBDAs) to consider in developing S&T communications strategies.

The CSTA sets the direction for the *SCOPE* report with its definition of communications. Communications in government has tended to be interpreted as a uni-directional action – communicating *to* an audience to increase awareness, educate and persuade. The conception of communications must also encompass the idea of communicating *with* citizens – engaging them in dialogue, deliberation and decision making. Such “participatory” communications acknowledges the importance of inclusiveness. It considers the “local” knowledge and perspectives of various geographic, cultural and interest-based communities. In the CSTA's view, government S&T communications can inform, persuade and *engage* audiences.

The heart of the *SCOPE* report examines the foundations necessary to foster excellence in federal S&T communications. It explores the key principles and best practices that should guide all government S&T communications. In this context, the Council examines issues such as transparency, openness and accountability, and the balance to be struck among them.

The CSTA believes that senior managers must embrace communications as an integral part of

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SPOTLIGHT (cont'd)

SCOPE (cont'd)

S&T and S&T-informed policy. Senior managers must integrate communications planning early in the S&T cycle, through the development of comprehensive S&T communications strategies. The Council offers guidelines related to the development of such communications strategies.

The *SCOPE* report concludes by recommending to Ministers that SBDAs:

- embrace the concept of participatory communications, whereby audiences engage in dialogue, deliberation and decision making;
- adopt communications as an integral part of the management and conduct of S&T and S&T-informed policy, integrating communications planning early in the S&T cycle;
- develop comprehensive S&T communications strategies to complement and support the conduct of S&T, respecting the principles and best practices identified in the report; and
- invest in S&T communications planning, training and delivery, to foster excellence in S&T communications.

EDGE Highlights Federal S&T HR Issues

The Federal S&T Community Management Secretariat is coordinating an interdepartmental working group to prepare the government's response to the CSTA's report, *Employees Driving Government Excellence (EDGE)*. The working group expects to present a response to Cabinet for approval in the fall of 2003.

The *EDGE* report focuses on the renewal of S&T human resources in the federal public service. It was publicly released in December 2002 and widely distributed to representatives from federal and provincial governments, industry, academia, science and business media, as well as international contacts. CSTA Deputy Chair, Dr. Kevin Keough, complemented the distribution through a series of presentations delivered to various S&T committees, including:

- the S&T ADMs' Committee, an interdepartmental group of Assistant Deputy Ministers of the SBDAs;

MEMBER NEWS

- The CSTA bid farewell to **Dr. Tony Diamond**, whose two-year term with the Council came to an end last summer. Senior Chair of the Atlantic Cooperative Wildlife Ecology Research Network at the University of New Brunswick, Dr. Diamond was appointed to the CSTA in the fall of 2000 by Environment Canada. Dr. Diamond made a valuable contribution to the work of the Council. He sat on the CSTA sub-committee for S&T human resources in the federal public service, which resulted in the report *Employees Driving Government Excellence (EDGE)*.
- Last summer, Environment Canada appointed a new representative to the CSTA, **Dr. Peter Victor**. Dr. Victor is Professor of Environmental Studies at York University in Toronto, where he was Dean of the faculty from 1996-2001. Prior to York University, he was Assistant Deputy Minister of the Environmental Sciences and Standards Division within the Ontario Ministry of Environment and Energy. Dr. Victor received his Ph.D in economics from the University of British Columbia in 1971. As First President of the Canadian Society of Ecological Economics, Dr. Victor continues to undertake research on a systems analysis of economic growth, employment, poverty and the environment. Currently, Dr. Victor is the First Vice President of the Royal Canadian Institute for the Advancement of Science and a member of the Environment Committee of the Laidlaw Foundation and the Environment Advisory Committee of ITER Canada. The CSTA welcomes Dr. Victor to the Council.
- **Dr. Robert Slater**, formerly Senior Assistant Deputy Minister of Environment Canada, participated on the Council in an ex officio capacity representing the ADM Committee on Science and Technology. Dr. Slater left the Government of Canada in the spring of 2003 to pursue other interests. His input and expertise were highly appreciated by the Council members.

SPOTLIGHT (cont'd)

EDGE (cont'd)

- the Science ADMs' Advisory Committee (SAAC), a sub-committee of the S&T ADMs Committee, addressing S&T human resource issues specifically;
- the Research Community Advisory Committee (RCAC), a committee that addresses HR issues related to the federal Research (RE) community; and
- the COSO S&T Human Resources Sub-Committee, which addresses the recruitment, retention and learning needs of the S&T community.

Research Money, a publication that provides information and analysis of S&T policy and investment trends, covered the *EDGE* release in its December 16, 2002 issue. ITBusiness, an electronic publication that offers daily news on the IT industry, also covered the release in its December 10, 2002 issue.

In June 2001, the Cabinet Committee on Economic Union (CCEU) asked the CSTA to examine the challenges the government faces in renewing its S&T personnel and to offer recommendations to address these challenges. In response, the CSTA produced the *EDGE* report, which:

- identifies features that distinguish federal S&T workers from those in academia and industry, and from federal public servants in general;
- describes the foundations for creating and sustaining excellence in the federal S&T human resources system; and
- offers recommendations to address barriers in the current federal S&T human resources system.

In the report, the CSTA maintained that, in order for Canada to realize its goal to rank among the world's top five R&D performers, the federal government must fulfill its role in the national innovation system. This requires a dynamic, high-calibre internal S&T workforce. The CSTA concluded that the government must act decisively to address its S&T human resource challenges. It must ensure a competitive working environment supported by human resource policies and practices conducive to the exercise of modern science.

FAST FACTS

Last fall, the Federal Science and Technology Forum engaged over 350 public servants and external stakeholders in a dialogue about the future of federal S&T. **The Honourable Dr. Rey D. Pagtakhan, Minister of Veterans Affairs, Secretary of State (Science, Research and Development) and CSTA Chair**, addressed the Forum, stating the government "has its work cut out for it". Minister Pagtakhan called on the federal S&T community to adopt new opportunities for the conduct of S&T and increase its partnership with other sectors in the national innovation system.

Dr. Alan Winter represented the CSTA at the Forum on a panel that included Dr. Samy Watson, Deputy Minister of Agriculture and Agri-Food Canada; Margaret Bloodworth, Deputy Minister of the Department of National Defence; and Alan Nymark, Deputy Minister of Environment Canada. Dr. Winter offered the CSTA's vision for federal S&T, in which the government would:

- conduct world-class, leading-edge S&T;

- respond effectively to public policy needs;
- adjust to emerging opportunities and priorities;
- cooperate with industry, academia and the global S&T community; and
- engender public confidence.

CSTA members **Dr. Art Collin, Nick Francis, Brian Giroux, Dr. Peter Johnson, and Dr. Kevin Keough**, as well as former member **Dr. Irwin Itzkovitch**, also participated in the Forum.



From left to right: Alan Winter, Margaret Bloodworth, Samy Watson and Alan Nymark at the S&T Forum

SPOTLIGHT (cont'd)

Government Prepares Response to BEST and STEPS

Industry Canada (IC) is coordinating an interdepartmental effort to respond to the CSTA's reports, *Building Excellence in Science and Technology (BEST)* and *Science and Technology Excellence in the Public Service (STEPS)*. This initiative will result in the development of the Framework for Excellence in Federally Performed S&T. This framework will provide science-based departments and agencies (SBDAs) with guidance on the implementation of the principles and guidelines recommended in the reports. The framework is expected to go to Cabinet for approval in the fall/winter of 2003.

To date, the federal government has responded formally to one of the CSTA's reports, *Science Advice for Government Effectiveness (SAGE)*, with the adoption of the *Framework for Science and Technology Advice*.

The response to *BEST* and *STEPS* is expected to have a similar impact. The Framework for Excellence in Federally Performed S&T will enhance a culture of excellence in federal S&T. It will strengthen the ability of government S&T to serve the interests of Canadians through better integration, alignment and excellence.

In *BEST*, the CSTA identifies key roles for the government in performing S&T. The report also outlines the three criteria – alignment, linkages and excellence – that should be applied to the conduct of all federally performed and funded S&T. *BEST* concludes that the government must maintain a strong in-house capability in S&T to ensure the well being of Canadians.

The *STEPS* report focuses on the theme of excellence outlined in *BEST*. It identifies the distinguishing characteristics of federally performed S&T and offers a framework for excellence. The framework includes four pillars (quality, relevance, transparency and openness, and ethics) that define federal S&T excellence.

In addition to the pillars, the *STEPS* report defines a foundation for the excellence framework, which includes leadership, management, capacity and science/policy interface.

For further information about the BEST and STEPS response, please contact Karen Johnstone-Hobbs at Industry Canada (Johnstone-Hobbs.Karen@ic.gc.ca).

FROM THE FRONT LINE

From the Front Line provides the opportunity for SBDAs to share with the S&T community how the Council's work has influenced their management of S&T. If you are interested in submitting an article for publication in CSTA Update, please contact Kelly Thompson (Thompson.Kelly@ic.gc.ca).

Environment Canada Puts CSTA Advice to Good Use

- Submitted by Environment Canada

Environment Canada's (EC) S&T activities are wide-ranging and geographically distributed across Canada. The department's strong S&T management system, supported by senior management champions, has allowed it to focus attention on S&T management issues such as those explored by the CSTA. EC has undertaken many initiatives that address CSTA recommendations.

EC has been a leader among science-based departments and agencies (SBDAs) in adopting the principles for linking science and policy outlined in the CSTA's report, *Science Advice for Government Effectiveness (SAGE)*. All of the department's business lines are seeking ways to strengthen their science advisory processes. Several tools to promote adoption of the *SAGE* principles and guidelines within EC have been developed, including a course on science advice in the policy process (in partnership with NRCan) and an on-line tool to enhance understanding of science-policy linkages at the working level.

EC is undertaking a number of steps to ensure the excellence of its S&T, according to the key principles (alignment, linkages and excellence) outlined in the report, *Building Excellence in Science and Technology (BEST)*. Its business line planning process ensures that its S&T is aligned with departmental and federal

FAST FACTS

In September 2002, The CSTA submitted to Industry Minister Allan Rock its response to Canada's Innovation Strategy, *Achieving Excellence: Investing in People, Knowledge and Opportunity*. The CSTA is mandated to provide advice to Cabinet on the management of the federal government's internal S&T enterprise. Its response, therefore, focused on those elements of the Strategy related specifically to federal S&T. According to the Council, the government must maintain a strong internal S&T capacity to fulfill its role in the national innovation system.

For the CSTA's full response to the Innovation Strategy, please visit the Council's web site at www.csta-cest.ca.

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FRONT LINE (cont'd)

Environment Canada (cont'd)

mandates and priorities. It has been incorporating the advice on horizontal, competitive, multi-stakeholder models for S&T into initiatives such as its Water Research Strategy and the Canadian Environmental Sciences Network. EC conducted bibliometric studies on environmental sciences that show the high quality of the department's R&D. An international peer review of the Meteorological Service's R&D noted the excellence of that work.

The CSTA's report *Science and Technology Excellence in the Public Service (STEPS)* provides a valuable benchmark against which EC can demonstrate to Parliament and to the Canadian public the high quality of its S&T. In addition to the bibliometric and peer review studies, the department developed a self-assessment tool based on *STEPS* for S&T managers. Each of the foundations and pillars of excellence highlighted in the *STEPS* report are addressed by various structures and initiatives within EC. For example, the department organized a successful series of workshops on S&T values and ethics. A comprehensive EC Research Agenda for the coming five years was developed, demonstrating the alignment of the department's planned research with the goals and results identified by its business lines.

The CSTA's report *Employees Driving Government Excellence (EDGE)* confirms the need for the federal government to modernize its S&T human resource practices. EC continues to take steps to improve its internal performance in this area. For example, the department has put in place policies on management development and adjunct professors, organized a university recruitment drive for meteorologists, established a career development web site and prepared an action plan for continuous learning.

EC looks forward to the CSTA's report *Science Communications and Opportunities for Public Engagement (SCOPE)*. The department plans to incorporate the report's recommendations into its forthcoming review of its S&T communications efforts.

Overall, the work of the CSTA has been extremely important to Environment Canada. The reports released to date have gone a long way toward helping the department deal with ongoing S&T management challenges.

The CSTA is an expert advisory body established in 1998 to provide strategic advice to the Cabinet Committee on Economic Union (CCEU) on the management of the Government of Canada's internal S&T.

The CSTA consists primarily of representatives from the external science advisory bodies that counsel science-based departments and agencies (SBDAs). The CSTA draws these members into one body to examine issues common to a number of SBDAs and highlight opportunities for synergy and joint action. The CSTA is chaired by the Secretary of State (Science, Research and Development).

For more information about the CSTA or for copies of its reports, please visit the CSTA Web site or contact the Secretariat:

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