CSTA
Council of Science and Technology Advisors

Fall 2003

CSTA Update

Fostering excellence in government S&T

WORK ON S&T LINKAGES STUDY CONTINUES

The CSTA's examination of federal S&T linkages is well underway. The Council's sub-committees on internal linkages and external linkages (chaired by John Eyles and Suzanne Fortier, respectively) met jointly on November 14, 2003 to continue their discussions on this subject.

As part of this meeting, the CSTA convened a session with members of the Assistant Deputy Minister (ADM) S&T Integration Board, to hear first-hand about the challenges the government is encountering in attempting to foster greater horizontal S&T collaboration. In addition, Dr. Robert Slater, former Senior ADM at Environment Canada, met with CSTA members to share his perspectives on collaborative S&T.

To inform its discussions, the CSTA contracted with consultants to undertake background research on S&T linkages. This research included in-depth case studies of two horizontal S&T initiatives in Canada (the Northern Contaminants Program and the Toxic Substances Research Initiative) and six in-depth case studies of collaborative S&T initiatives in foreign jurisdictions (U.S., U.K., Netherlands, Australia and New Zealand). Preliminary reports on this work were presented to the CSTA at a joint S&T linkages sub-committee meeting on August 14, 2003.

To supplement these case studies, the CSTA also commissioned Sussex Circle to undertake a broad "environmental scan" of Canadian federal institutions (e.g. departments, agencies, granting councils, NCEs), to better understand their experiences with collaborative S&T initiatives and determine what could be learned from them. Sussex Circle presented the preliminary results of this work to CSTA members at their November 14 meeting.

A number of presentations from guest speakers at CSTA meetings has complemented this background research. At the CSTA Full Council meeting last May, Barry Bozeman of Georgia Tech provided a theoretical overview of S&T collaboration, while Ron Freedman, co-founder of the Impact Group, spoke about the 5NR MOU, and Bob Walker, Director General of R&D Programs at National Defence, shared his perspectives on the CRTI experience. At the S&T linkages joint sub-committee meeting in August, Brigita Gravitis-Beck and George Samiotis of the Treasury Board Secretariat (TBS) shared with the Council information about TBS funding processes and their application to collaborative S&T initiatives.

In March 2003, the Cabinet Committee for the Economic Union (CCEU) asked the CSTA to undertake a study on federal S&T linkages. Specifically, the Council is examining how federal departments and agencies can effectively collaborate with other players

*See **S&T Linkages** on page 2*

SPOTLIGHT ON REPORTS

Update on Government Response to *BEST* and *STEPS*

Industry Canada continues to coordinate the interdepartmental working group preparing the government's response to the CSTA's reports, *Building Excellence in Science and Technology (BEST)* and *Science and Technology Excellence in the Public Service (STEPS)*. The draft *Framework for Federal Science and Technology (S&T)*, which constitutes the government's proposed response, is expected to be ready for Cabinet consideration in spring 2004.

*See **Response to BEST and STEPS** on page 2*

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

Chair of the CSTA

As we enter into an exciting period of change and opportunity, we as a government continue to ensure that Canada enjoys economic growth, gains a competitive edge internationally, and maintains our high standard of living and quality of life. In order to accomplish all of these goals, science and technology must, and does, remain a priority for the Government of Canada.

In response to this changing environment, the CSTA initiated work on S&T linkages this past spring, a topic that is timely and relevant to science-based departments and agencies (SBDAs) and to the government's ability to reach its goals. The CSTA's upcoming report on linkages will provide concrete, practical recommendations on how SBDAs can collaborate with each other and with other players in the national science and innovation system, in order to effectively identify, address and resolve national S&T-based issues. The importance of these linkages is increasingly recognized across SBDAs - for example, the Assistant Deputy Minister (ADM) S&T Integration Board was recently created in order to promote enhanced S&T collaboration across government.

I would like to take this opportunity to thank the members of the CSTA for their dedication and hard work in preparing the CSTA's next report.

The positive impact of the CSTA's advice is shared across SBDAs. Currently, work is being done to develop the government's response to the CSTA's reports, *Building Excellence in Science and Technology (BEST)* and *Science and Technology Excellence in the Public Service (STEPS)*, as well as the government's response to the CSTA's report, *Employees Driving Government Excellence (EDGE)*. Indeed, the CSTA continues to provide timely and informed advice to government on fostering excellence in government S&T.

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

S&T Linkages (cont'd)

(across government, academia and the private sector) and thereby capitalize on the most appropriate S&T expertise, experience and resources wherever they reside in Canada.

The Council's study is focussing on institutional linkages (as opposed to relationships among individual scientists), and is addressing elements such as: the impact of contextual factors on the government's approach to S&T; the benefits and challenges of S&T linkages; the balance between linkages and departments' discharge of their mandated responsibilities; and the key ingredients for success in sustaining effective S&T linkages. The CSTA's final report will offer recommendations on how both internal and external linkages can be created, organized and managed efficiently and effectively.✦

SPOTLIGHT (cont'd)

Response to BEST and *STEPS* (cont'd)

This *Framework* aims to ensure that the science performed by the Government of Canada continues to contribute to the development of sound policy and regulatory decisions and to the delivery of superior services to Canadians. It offers science-based departments and agencies (SBDAs) guidance on the implementation of the principles and guidelines in the *BEST* and *STEPS* reports.

The thrust of *BEST* and *STEPS* recommendations was to improve the management of federal S&T. The *Framework* response is based on three foundations, which mirror the principles of *BEST* – alignment, linkages and excellence. The *Framework* also includes four enablers - people, leadership, engagement and infrastructure. Together, these foundations and enablers support the roles of the federal government in performing S&T, as described in the *BEST* report. The *Framework* also addresses accountability in terms of performance management initiatives currently underway. The result is a framework for federal S&T that draws not only on the CSTA's work to date, but leaves room for future Council reports such as that related to S&T linkages. In this way, the *Framework* is designed to be a "living" document, incorporating lessons of the past and present,

See ***Response to BEST and STEPS*** *on page 3*

SPOTLIGHT (cont'd)

Response to BEST and *STEPS* (cont'd)

and offering enough flexibility to anticipate and absorb future CSTA and government work and continued advancements in S&T.

Since the release of the *BEST* and *STEPS* reports, in December 1999 and August 2001, respectively, SBDAs have been active in implementing the CSTA's recommendations. The *Framework for Federal Science and Technology (S&T)* will add cohesion across government in terms of both the interpretation and implementation of the CSTA's advice. It will also provide a mechanism for accountability and build on many of the practices currently employed by federal government departments.

For further information about the response to the *BEST* and *STEPS* reports, please contact Karen Johnstone-Hobbs at Industry Canada (johnstone-hobbs.karen@ic.gc.ca)✦

Update on Government Response to *EDGE*

An interdepartmental working group, coordinated by the Federal S&T Community Management Secretariat, has drafted an *S&T Strategy for Effective Human Resources Management* as the government's response to the CSTA's report *Employees Driving Government Excellence (EDGE*).

This strategy is the result of consultations with both science policy and human resources staff from science-based departments and agencies (SBDAs), as well as representatives from unions and central agencies. It was presented to the Science ADMs Advisory Committee (SAAC) for approval on October 27, 2003. The working group expects to have the finalized strategy ready for Cabinet consideration in the spring of 2004.

The *S&T Strategy for Effective Human Resources Management* maintains the themes of the current S&T Community Strategic Plan – recruitment, retention, learning, community management and communications. It also adds new elements, such as accountabilities at the community and SBDA levels; partnerships among the community, SBDAs, bargaining agents and central agencies; and an implementation plan with performance indicators and evaluation requirements.

Through the consultations, participants realized that many departmental initiatives are already underway to address the recommendations proposed in the CSTA's *EDGE* report. These existing initiatives offer many examples of best practices, and there is a lot of value to be added to S&T HR management by sharing them among SBDAs.

A new working group is being developed to validate and develop an action plan to implement the *Strategy*; identify the costs and timeframe associated with its implementation; and identify the performance measures to evaluate progress. This working group will coordinate with the *BEST/STEPS* response working group to integrate the *S&T Strategy for Effective Human Resources Management* within the response to *BEST* and *STEPS*, the *Framework for Federal Science and Technology (S&T)*.

In June 2001, the 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.✦

ALSO OF INTEREST

Roundtable with Sir David King

On November 19, 2003, members of the CSTA, the Advisory Council on Science and Technology (ACST) and the Assistant Deputy Minister (ADM) Committee on Science and Technology (S&T) participated in a roundtable discussion with Sir David King, the U.K.'s Chief Scientific Adviser (CSA) and Head of the Office of Science and Technology (OST).

*See **Sir David King** on page 5*

MEMBER NEWS

The CSTA and the **Advisory Council on Science and Technology (ACST)** have reached a reciprocal agreement whereby their Deputy Chairs will each sit on the other council in an *ex-officio* capacity. This arrangement is intended to facilitate closer relations between the two groups, as they both work to advise the Government of Canada on S&T issues. As a result of this agreement, the CSTA is pleased to welcome ACST Deputy Chair **Jacquelyn Thayer Scott** to the Council. Dr. Scott is Professor of Organizational & Public Administration at the University College of Cape Breton (UCCB) Foundation in Sydney, Nova Scotia. From 1993 to 2002, she served as President and Vice-Chancellor of UCCB and, previously, as Director of the School of Continuing Studies at the University of Toronto. She has also been on the faculty at the University of Manitoba, operated her own public relations and management consulting firm, and worked as a journalist for The Canadian Press and The Columbian newspaper.

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John Leggat, Assistant Deputy Minister (Science & Technology) for the Department of National Defence and Chief Executive Officer of Defence R&D Canada (DRDC), recently joined the Council in an *ex officio* capacity, representing the ADM Committee on Science and Technology. Dr. Leggat received his education at the Royal Military College of Canada (BEng, 1971) and the University of British Columbia (MASc, 1973 and Ph.D., 1976) in the field of aeroacoustics. From 1980 to 1990, he was an adjunct professor in the engineering, physics and mechanical engineering departments at Dalhousie University. Dr. Leggat replaces Dr. Robert Slater on the CSTA.

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The CSTA thanks outgoing member **John de la Mothe**, whose term on the Council came to an end in October, 2003. Dr. de la Mothe was appointed to the CSTA in 2000 by the Social Sciences and Humanities Research Council (SSHRC). He sat on the CSTA sub-committees for excellence and communications, which took the lead in producing the Council's reports *Science and Technology Excellence in the Public Service (STEPS)* and *Science Communications and Opportunities for Public Engagement (SCOPE*), respectively. Dr. de la Mothe is Professor of Science and Government in the Faculty of Administration at the University of Ottawa, Director of the University's Program of Research on Innovation, Management and Economy (PRIME), and Adjunct Professor in the University's Faculty of Science.

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The CSTA welcomes SSHRC's new appointee to the Council, **Stuart Martin Taylor**. Dr. Taylor is Vice-President, Research, University of Victoria. He has a BA in Geography from the University of Bristol (UK), and an MA and Ph.D. in Geography from the University of British Columbia. From 1974 to 1998, he was a professor in the Department of Geography at McMaster University. Here, he served as Chair of Geography (1991-97), founding Director of the Institute of Environment and Health (1991-96), and Acting Vice-President, Research (1994-95). Dr. Taylor brings to the Council his knowledge of both government and academic science.

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CSTA member **Alan Pelman** was appointed to the Board of Directors of Genome British Columbia in June of this year. Genome British Columbia is a research organization that invests in and manages large-scale genomics and proteomics research projects and platforms focused on areas of strategic importance such as human health, forestry, fisheries and the environment. Dr. Pelman is Vice-President (Technology - Canada), Weyerhauser Ltd. and has been an active member of the CSTA since its inception in 1998.

FAST FACTS

Following the release of the CSTA's report, *Science Communications and Opportunities for Public Engagement (SCOPE)*, CSTA S&T communications sub-committee chair Peter Johnson was interviewed by Ottawa Citizen Business T.V. In the May 2003 interview, Dr. Johnson noted the importance of S&T communications: "Increasingly, science is being recognized as being behind a lot of policy decisions and it's necessary for governments to be aware of the need to talk about science with various communities." In response to questions from the interviewer, Dr. Johnson talked about a number of the *SCOPE* report's recommendations, including the need for communications strategies to be incorporated early in the science process and the advantages of providing communications training to government scientists. Dr. Johnson expressed the hope that science-based departments and agencies (SBDAs) will implement *SCOPE's* recommendations and develop communications strategies that strike an appropriate balance among openness, transparency and accountability.

ALSO OF INTEREST (cont'd)

Sir David King (cont'd)

The roundtable provided the opportunity to explore S&T issues of mutual interest to Canada and the U.K. Sir David kicked off the session by reviewing the history of the CSA position since the Second World War and outlining the current roles and responsibilities of his position and the OST which he leads. He emphasized that his role is to provide *advice* on S&T issues across government, and noted the importance of his direct reporting relationship to the Prime Minister. Discussion during the roundtable focused around three key themes: balancing the role of a Chief Scientific Advisor with that of elected Ministers responsible for decision-making under their purview; fostering collaborative S&T relationships across government and with others in the national and international science and innovation system; and managing national research investment priorities and simplifying the research landscape.

CSTA Deputy Chair Kevin Keough chaired the roundtable session. The CSTA's Peter Johnson and John Leggat also participated in the session, as did ACST members Harris Liontas, Tofy Mussivand and Susan Smith.

During his visit to Canada, Sir David visited Toronto, where he delivered a speech at the University of Toronto on climate change. He also visited Vancouver, where he gave a presentation on "DNA and Beyond". While in Ottawa, Sir David also gave a lecture at the National Research Council Canada (NRC) on "Global Warming: The Need for Progress Beyond Kyoto".

For more information on the U.K.'s Office of Science and Technology and Chief Scientific Adviser, consult their web site, at www.ost.gov.uk.✦

Advisory Council on Science and Technology (ACST) Work Plan

CSTA Deputy Chair Kevin Keough and ACST Deputy Chair Jacquelyn Thayer Scott have agreed to ex-officio membership on each other's Councils in an effort to increase the cooperation and coordination between the two groups.

At the November 2002 National Summit on Innovation and Learning in Toronto, Prime Minister Jean Chrétien announced the reactivation of the Advisory Council on Science and Technology (ACST). "Canada, indeed, can use ongoing advice about the big choices we must make on our innovation agenda. For this reason, I am revitalizing the Prime Minister's Advisory Council on Science and Technology."

Industry Minister Allan Rock met with ACST members on the eve of the Summit and requested their advice on how the government can move forward with the Innovation & Learning Strategy, *Achieving Excellence: Investing in People, Knowledge and Opportunity*. Minister Rock asked the ACST to develop a strategic policy and goals framework for Canada's research enterprise and for research investments by government.

To this end, the ACST is engaged in two inter-related projects, *Taking Stock of Knowledge Performance and the Way Forward,* and *Policy Framework for Canada's Research Enterprise,* which will fit together to form a seamless set of integrated recommendations. The ACST expects to present to the Minister of Industry, in December 2003 or early 2004, broad policy advice on how to strengthen Canada's R&D and commercialization performance in the future.

Three background studies to support the projects have been completed: (1) an examination of provincial S&T innovation policy environments; (2) an examination of international S&T innovation policy environments; and (3) a study of how Canada can benchmark and measure progress and track Canada's performance on the 2010 targets identified in *Achieving Excellence*.

In addition to this work, the ACST held a roundtable on September 9, 2003 with three senior officials from science-based departments and agencies (SBDAs): Arthur Carty, President of the National Research Council Canada (NRC); Kevin Keough, Chief Scientist at Health Canada and Professor of Biochemistry at Memorial University of Newfoundland; and John Carey, Director General of the National Water Research Institute at Environment Canada. The roundtable discussion focused on issues related to research and commercialization policies and investments that pertain to government science.

For more information about the ACST and its work, please contact Robbyn McKay, Manager of the ACST Secretariat at Industry Canada (mckay.robbyn@ic.gc.ca).✦

ALSO OF INTEREST (cont'd)

ADM S&T Integration Board

The federal government must anticipate and react quickly to multidisciplinary challenges and opportunities**.** The 2002 Speech from the Throne stressed this vision and committed the federal government to strengthen federal science by integrating across departments and disciplines and focusing on the priorities of Canadians. This idea was reiterated at the 2002 Federal Science and Technology (S&T) Forum, where participants shared the vision that a more horizontal approach is needed to respond to emerging public policy issues.

The Integration Board seeks to provide leadership for cross-cutting S&T by providing information, a forum and services to help members initiate and manage horizontal collaboration. The role of the Board will include:

- identifying, prioritizing and deciding cross-cutting science-based issues;
- engaging and mobilizing SBDAs to develop and implement joint programs;
- providing an overview of cross-cutting S&T;
- providing a framework for joint action and integration and supporting mechanisms and processes; and
- leading outreach and communication with stakeholders.

Integrating efforts helps ensure value for money and fosters research collaboration by bringing together diverse S&T capacity and resources to address issues, problems, challenges and opportunities of common concern and interest to SBDAs, thus reducing duplication and providing an accessible and recognizable focus for scientific efforts.

For more information about the ADM S&T Integration Board, please contact Bill Doubleday at (819) 994-1185 or william.doubleday@ec.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 the CSTA Secretariat.

SCOPE Brings AAFC's Science Communications into Focus

- Submitted by Agriculture and Agri-Food

The CSTA's recently released report, *Science Communications and Opportunities for Public Engagement (SCOPE),* is required reading for science communicators at Agriculture and Agri-Food Canada (AAFC).

The *SCOPE* recommendations challenge federal S&T departments and agencies to come up with new ways to improve S&T communications. Among the more intriguing of these recommendations is to engage Canadians "in dialogue, deliberation and decision making, acknowledging the value of diverse perspectives and 'local' expertise of different sectors, cultures and geographic areas."

This concept meshes with AAFC's commmunications philosophy, as illustrated by a recent *Name that Apple* campaign. The story begins with a new apple variety out of AAFC's labs, some 15 years in the making. It has everything going for it but a name. The idea was to ask Canadians for ideas.

The campaign this summer struck a chord. National and regional media ran with the story. The *Aurora Golden Gala* emerged as the winner from 11,000 suggestions from across the country. Cheryl Hampson, the scientist responsible for developing the apple, was amazed by the results. "We were overwhelmed by the response," said Hampson. "Canadians are evidently keen to play a role when they feel included."

It just goes to show how you can build excitement in science by giving people a stake in it. It's a classic win-win: the department gets

*See **AAFC** on page 7*

FAST FACTS

The CSTA is pleased to share with the science and technology (S&T) community the Council's revamped Web site (www.csta-cest.ca). Here, you can find the Council's reports and information about CSTA activities and members. You can also find the consultants' background studies, commissioned to support CSTA deliberations, as well as government responses to CSTA reports.

As part of the on-going effort to increase awareness of the Council and share information about the Council's reports and activities, the CSTA has also developed the following new communications materials:

- A brochure, which provides an overview of the CSTA and its work;
- Fact sheets containing information about CSTA members and reports; and
- *CSTA Update* – a bi-annual newsletter containing the latest information about CSTA activities and reports.

For copies of these materials, or for information about the Council, please contact the CSTA Secretariat.

FRONT LINE (cont'd)

AAFC (cont'd)

a broader canvas for its messages, and Canadians feel more connected to the work they pay for. *SCOPE* also suggests some best practices to improve the effectiveness of federal S&T communications, including, for example, that science issues should be positioned within the context of the public agenda. Since much federal S&T has an obvious impact on life in Canada, this presents a broad palette of opportunities.

Take Kyoto, for instance. When Parliament voted to ratify the deal last December, it pushed environmental issues to the fore. To capitalize on this top-of-mind issue, AAFC organized a greenhouse gas media event, featuring five departmental scientists from across the country describing how their work will help Canada meet its Kyoto commitment. This event generated positive media coverage, with over 100 hits in both mainstream and farm media. Moreover, it presents a further instance of engaging Canadians in key public policy issues involving science.

Putting scientists in the spotlight like this does pose some challenges, so the *SCOPE* report recommends that the federal community invest in S&T communications training, planning and delivery.

In that vein, AAFC has helped develop a media training program especially for scientists. To date, about 300 scientists have graduated. "We're often called by the media to provide information on our work, but some of us are uncomfortable or uncertain how to respond to enquiries," said Charlottetown, P.E.I., scientist, John MacLeod. "But with the training, I have a much better understanding of the media and a lot more confidence in my dealings with them."

The advice and recommendations from the *SCOPE* report help confirm a more strategic approach to communicating S&T at AAFC. This will lead to broader public support for our S&T activities, as more people discover what we're doing on their behalf.✦

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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