

Reinforcing External Advice To Departments (READ)

**A Report of the Council of Science
and Technology Advisors (CSTA)**

May 2001

SCIENCE ADVISORY BODY REVIEW (SAB) SUB-COMMITTEE MEMBERSHIP

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REINFORCING EXTERNAL ADVICE TO DEPARTMENTS (READ)

A REPORT OF THE COUNCIL OF SCIENCE AND TECHNOLOGY ADVISORS

INTRODUCTION

In 1996, the federal government's S&T Strategy called on science-based departments and agencies to increase their reliance on expert, external advice. Accordingly, most departments have now established science advisory bodies (SABs). The Council of Science and Technology Advisors (CSTA) draws its members from these bodies, in effect forming a "council of councils".

As members of these SABs, and in the course of our work with the CSTA, it has become apparent that SABs serve different needs, perform a variety of roles, and often function very differently. At the suggestion of a number of our members, we have conducted an examination of the mandate and operations of SABs. Our report shares the findings of our examination, and offers a model that identifies a series of characteristics and practices that we believe maximize, and capitalize on, the contribution of external departmental science advisory bodies.

APPROACH

Our examination of the mandates, roles and operating parameters of SABs was conducted in two phases. In Phase I, the CSTA Secretariat collected information in April and May 2000, through consultations with SAB secretariats, on the mandates and operating parameters of 13 external SABs that advise SBDAs. A copy of our Phase I report is provided in Appendix 1. In Phase II, which was conducted during the Fall of 2000, individual CSTA members undertook consultations with the members of ten SABs, focussing primarily on those SABs that are "advisory" in nature. The purpose of these consultations was to determine, from the members' perspectives, how SABs function in practice, "what works", and the issues of concern to SABs. We also conducted interviews with the Deputy Ministers of the departments that employ these SABs to better understand, from a senior departmental perspective, the value of SABs and how their contributions might be enhanced.

KEY FINDINGS

The following is an overview of the key findings of Phase II of our examination of advisory boards. Governing boards were not reviewed in this phase. A full summary of the input we received during consultations with SAB members and Deputy Ministers is included as Appendix 2.

Specific SAB mandates and areas of study are extremely diverse. While all SABs focus on specific S&T issues and departmental strategic issues, only half are mandated to provide advice on departmental plans and priorities, the allocation of resources, and the effectiveness of SABs. A number of these SABs described their participation in these types of activities as ad hoc and typically involving only a broad review of departmental proposals. Some SABs identified themselves as being proactive in establishing work plans and agendas, while others indicated that they operate in a reactive manner by responding to specific issues and documents presented by senior departmental officials.

While the majority of SABs formally report to Ministers, few have regular contact with Ministers. SABs often report directly to Deputy Ministers, a President (in the case of an agency), or an Assistant Deputy Minister. Both SABs and Deputy Ministers suggested that SABs require access to, and solid working relationships with, the Minister and senior departmental officials in order to provide sound and useful advice.

The existing composition of SABs varies considerably, but there is consensus among SABs that members should be appointed on the basis of personal competence, relevant experience, and commitment to serve. A broad range of perspectives and expertise is considered an asset in addressing complex, multi-disciplinary S&T issues.

There was agreement among SABs that the existing staff levels and financial resources for SABs are sufficient. However, a number of SABs pointed out that additional support (financial and other resources) must be made available if SABs become more involved in providing advice on departmental strategic issues and emerging strategic issues.

Several SABs identified a number of achievements, including reports, publications, and specific activities. However, most SABs noted that the true measure of impact is the willingness of departments to accept and use their advice. SABs indicated that the key to their success was the dedication of members, and the commitment and responsiveness of senior departmental officials, secretariats, and other departmental employees. Both Deputy Ministers and SABs spoke of the important contributions SABs make to departmental S&T. Deputy Ministers, in particular, noted the importance they place on the candid advice SABs provide. Both SABs and Deputy Ministers attributed the high quality of this advice to the expertise, commitment, and diversity of perspectives represented on SABs.

In terms of recommendations, SABs and Deputy Ministers envision an enhanced role for SABs in providing strategic advice on departmental plans and priorities. They also suggested that SABs should become more involved in developing their work plans and agendas. SABs noted the importance of Ministerial and departmental feedback on their advice, and many called for improved efforts in this area. Finally, SABs and Deputy Ministers also recommended strengthening the linkages among SABs, and between SABs and the CSTA.

A USEFUL MODEL FOR SABs -- KEY CHARACTERISTICS AND PRACTICES

We believe that the following characteristics and practices provide a useful model to enhance the contributions of SABs. This model reflects a number of existing practices, as well as the recommendations received from SAB secretariats, SAB members, and Deputy Ministers. It also draws on the experience of SABs in other countries. This model was developed to provide guidance for the operation of departmental science advisory bodies. However, several elements could be applied equally to other types of external advisory bodies.

The characteristics and practices proposed in the model are intended to be practical and detailed enough to provide useful guidance to SABs and SBDAs. However, we also recognize the importance of flexibility. In working with the model, SBDAs should be cognizant of the unique character and qualities of individual SABs, and should also be guided by departmental mandates, priorities, structures and operating practices.

I. Well-defined terms of reference

Effective departmental SABs have well-defined terms of reference that establish clear mandates, responsibilities, and priorities.

SABs are mandated to:

- Provide advice on:
 - S** the strategic direction of, and priorities for, departmental S&T;
 - S** the alignment, relevance, and adequacy of S&T in support of departmental mandates and missions;
 - S** broad strategic issues, priorities, and policies from an S&T perspective; and,
 - S** pressing S&T issues facing SBDAs.
- Identify emerging challenges and opportunities, develop possible responses, and participate in horizon-scanning and long-range planning exercises.
- Report to the Minister or Deputy Minister.

Operations

- SABs meet at least twice annually. Working groups or sub-committees may meet more frequently.

- SABs establish sub-committees, task forces, working groups, and conduct consultations, as appropriate. Sub-committees, task forces and working groups are chaired by a SAB member. Non-SAB members can participate in these bodies, as appropriate.
- SABs commission outside studies and invite experts to make presentations to support deliberations, as appropriate.
- Meeting agendas and work plans balance long term strategic questions with short term and pressing issues.

Support

- SBDAs ensure adequate financial and human resources are provided to support SABs in fulfilling their mandates and roles.
- SBDAs, through the Secretariat, ensure that SABs receive briefings, data and analysis to support their deliberations. This includes departmental annual reports, strategy documents, performance reports, organization charts and other relevant documents. SABs meet with departmental science managers and participate in familiarization tours of key S&T facilities.
- Secretariats provide administrative and logistical support for meetings and the ongoing work of the SAB and its working groups.
- Secretariats take minutes of SAB meetings and circulate them among members for approval. Minutes are provided to senior departmental officials for information purposes.

II. Expert, external, independent advice

Effective SABs are composed of individuals drawn from outside of government and capable of providing independent, expert advice. The basis for selection is expertise in areas relevant to the mandate of the department, and an ability to commit the time and effort required to execute the responsibilities of SAB members.

- Members representing relevant areas of expertise are appointed from outside of government based on their personal merit and experience. Members also represent a diversity of perspectives. Factors relating to balance (e.g. sectoral affiliation, gender, language, regional representation, age) are considered only after the qualifications of individuals have been established.
- SAB chairs nominate members based on consultations with SAB members, departmental officials and other stakeholders. Final selection and appointment is made by the Minister or Deputy Minister.

- The number of SAB members is limited to that required, with due attention to the range of expertise needed.¹
- There is a maximum period of service and a structured rotation of members to ensure an appropriate mix of experience and perspectives.
- Departmental officials are not normally SAB members. However, they may be invited, by the Chair, to participate in deliberations.

SAB members commit to:

- Serve for the term of their appointment and carry out the responsibilities and duties required, including regular attendance at meetings.
- Actively contribute to deliberations and SAB recommendations, follow codes of conduct governing SAB membership, and perform their responsibilities in accordance with the terms of reference of the SAB.

What members receive in return:

- An opportunity to contribute to challenging issues requiring strategic advice.
- Pertinent information, analysis and support required to address the issues considered by the SAB.
- Feedback from the Minister or Deputy Minister on how their advice has been considered.
- Reimbursement for travel, accommodation and incidental expenses associated with SAB membership.

III. Strong leadership

Leadership comes from the Chair of the SAB, the Minister, the Deputy Minister, and appropriate Assistant Deputy Ministers. They work together to ensure that the SAB is appropriately mandated and performs roles of value to the SBDA.

The role of Ministers and Deputy Ministers is to:

- Approve the terms of reference for the SAB.
- Make the final selection and appointment of SAB members and the chair.

¹ New Zealand. Ministry of Research, Science and Technology, *Independent Science Panels: A handbook of guidelines for their establishment and operations*, September 1998.

- Ensure that SABs have the necessary resources to fulfill their mandate.
- Meet with SABs on a regular basis.
- Facilitate interactions between the SAB and departmental science managers and policy advisors.
- Receive all SAB reports and recommendations.
- Provide feedback to, and make decisions with respect to, the advice received from SABs.

SAB Chairs

- Are appointed by the Minister or Deputy Minister from the existing SAB membership, if possible.
- Have a strong understanding of the department, its priorities, challenges and opportunities.
- Have the respect and confidence of senior departmental officials and SAB members, and have the capacity to draw out and use the various skills and abilities of other members.
- Ensure that the views of all members are taken into account in the preparation of reports.
- Develop meeting agendas in consultation with SAB members and senior departmental officials.
- Act as a liaison between the SAB and senior levels of the SBDA.

IV. Transparency

SBDA's strive to maximize the transparency of their SAB within the limitations that exist with respect to the release of information. Transparency contributes to enhanced stakeholder and public awareness of the SBDA's efforts to encourage diversified perspectives and advice on departmental S&T.

- SAB members conform to confidentiality agreements and guidelines on media relations.
- SBDA's publicly release information relating to the terms of reference and composition of the SAB and, when appropriate, release SAB reports.
- SBDA's disseminate SAB terms of reference, minutes of meetings, and reports within the department.

- Recommendations made by a SAB are confidential unless approved for public release by the Minister or Deputy Minister.

V. Accountability

SABs provide independent, external advice to help departments ensure the quality and relevance of their S&T. In order to capitalize on this advice, SBDAs employ several mechanisms to ensure that the advice and recommendations of SABs are received and acted upon in a timely fashion. In turn, effective SABs ensure that reports and advice reflect active debate and are submitted on a timely basis.

- SABs provide concise and timely advice.
- SBDAs support regular dialogue between SABs and those areas of the department that perform S&T and develop policy.
- SBDAs provide written reports on how SAB advice has been considered and used within the department.
- SBDAs commission external evaluations of SABs.
- SBDAs establish codes of conduct and conflict of interest guidelines for SABs. These guidelines set out the responsibilities of SAB members based on values of public service.

VI. Linkages

SBDAs often wrestle with similar issues that benefit from open collaboration among SABs. Ongoing linkages between the SABs can aid in the identification of horizontal S&T issues of strategic interest, and diminish the duplication of effort that sometimes exists. Linkages are enhanced when:

- Ministers nominate a representative from the SAB to the CSTA.
- SBDAs circulate SAB terms of reference, work plans, and membership lists to all SABs and the CSTA.
- CSTA convenes an annual meeting of SAB chairs and CSTA members to discuss emerging horizontal issues.

CHALLENGES

In an era of rapid social, economic, and technological change, advances in S&T have affected and enriched the lives of Canadians. S&T has become increasingly critical to sound decision-making by individuals, industry and governments. Within government, S&T underpins the government's ability to perform its roles and responsibilities and is an important element in public policy making. Science and technology also support the establishment and management of standards and regulations; public health, safety, and environmental and defence requirements; and, economic and social development.

In addition to internal advice from policy makers and scientists, Ministers and their departments rely on expert, external science advisory boards. These boards provide SBDAs with a valued and independent source of credible advice on the conduct and management of federal S&T. As departments face increasing demands to effectively use S&T in support of a diversity of functions and responsibilities, the role of SABs is likely to become even more critical. However, SBDAs face clear challenges in employing SAB advice to advantage.

SBDAs need to continue to attract individuals capable of providing independent, timely, expert advice on S&T issues. However, there is increasing demand for, and burden on, volunteers with the experience and expertise required to provide sound advice. In making a commitment to serve, volunteers are seeking an opportunity to contribute to the economic and social well-being of their country. In order to fully tap this rich resource, SBDAs need to provide SABs with challenging and meaningful work, and demonstrate their commitment to consider and implement SAB advice. As a minimum, departments need to provide formal and informal feedback on how they have considered the advice and what actions, if any, have been taken in response to SAB recommendations.

THE WAY FORWARD

As the number of policy issues with S&T dimensions increases, so too does the need for broad level S&T advice for departments. Not only do SABs bring relevant knowledge and expertise to S&T issues, but they also offer departments a source of advice on broader policy issues from an S&T perspective. Their advice ensures that diverse perspectives from the private sector and academe are brought to bear in fulfilling the many roles of government.²

Based on our review, it is clear that SABs are valued by SBDAs as a result of the high calibre, relevant, and candid advice they provide. We firmly believe that Ministers and SBDAs have a rich resource at their disposal, and an unique opportunity to solicit and receive timely, expert advice on substantive issues relating to S&T. As such, we call upon Ministers and SBDAs to

² In the CSTA's *Building Excellence in Science and Technology (BEST) Report*, we identified the following four roles of government S&T: support for decision making, policy development and regulations; development and management of standards; support for public health, safety, environmental and defence needs; and enabling economic and social development.

use SAB advice to greater advantage. We encourage Ministers and SBDAs to employ this model to complement existing successful practices and to support the creation of new SABs, as appropriate. We believe that the model is a valuable tool that can foster more open, dynamic and productive relationships between SBDAs and SABs.

APPENDIX 1.1 - PHASE I SUMMARY REPORT

CSTA Review of Departmental Science Advisory Bodies' Mandates and Operational Parameters

A Descriptive Summary

As the first phase of our study, the CSTA Secretariat collected information on the mandates and operating parameters of 13 external science advisory bodies (Table 1), including boards of directors and governing councils, as appropriate, that advise federal science-based departments and agencies. The CSTA Secretariat interviewed 19 individuals associated with the SAB secretariats. These individuals also provided information such as terms of reference, operational guidelines, and other documents. This phase was conducted in April and May 2000.

FINDINGS

What follows is a descriptive overview of the findings. It is important to note that no SAB members were interviewed. All information, including information about the impact of the SABs, was provided by secretariat officials. They were provided an opportunity to correct any factual errors or omissions in the summaries.

Table 1: Science Advisory Bodies
Agriculture and Agri-Food Canada – Research Branch Advisory Committee (AAFC-RBAC)
Canadian Institutes of Health Research – Governing Council (CIHR)
Communications Research Centre Board of Directors (CRC)
Environment Canada – Science and Technology Advisory Board (EC-STAB)
Fisheries and Oceans – Science Advisory Council (DFO-SAC)
Indian Affairs and Northern Development – Canadian Polar Commission Board of Directors (CPC)
Health Canada – Science Advisory Board (HC-SAB)
National Defence – Defence Science Advisory Board (DND-DSAB)
National Research Council – Governing Council (NRC)
Natural Resources Canada – Minister’s Advisory Council on S&T (NRCan-MACST)
Natural Sciences and Engineering Research Council – Governing Council (NSERC)
Prime Minister’s Advisory Council on Science and Technology (ACST)
Social Sciences and Humanities Research Council – Governing Council (SSHRC)

Mandates

As one would expect, a fundamental difference in mandate exists between those SABs that act as “governing boards” and those which are strictly “advisory” in nature. Governing boards have decision-making authority. The SABs which operate as governing boards are:

- the Board of Directors of the Canadian Polar Commission;
- the Council of the Canadian Institutes of Health Research;
- the Council of the National Research Council;
- the Council of the Natural Sciences and Engineering Research Council; and
- the Council of the Social Sciences and Humanities Research Council.

The other SABs operate as advisory boards. Most are mandated to provide broad strategic level advice on the S&T issues faced by their departments, but a number of differences exist with respect to additional functions. While some of the advisory SABs provide advice on the relevance of their department’s S&T activities, most are not involved in the evaluation of in-house S&T operations. Exceptions include the CRC Board which can request peer reviews and program evaluations and the EC-STAB which will review results of external program evaluations. The DFO-SAC and the NRCan-MACST help identify and refine their department’s science priorities but do not evaluate in-house science operations of their departments.

Reporting

As shown in Table 2, the SABs report to various levels within government departments ranging from Ministers to Deputy Ministers and Assistant Deputy Ministers. The governing boards report to Parliament through a Minister—CPC through the Minister of Indian Affairs and Northern Development, CIHR through the Minister of Health, and the NRC, NSERC, and SSHRC through the Minister of Industry. In many cases, the person or body the SAB officially reports to may not be the person with whom the SAB, in practice, primarily interacts.

Science Advisory Board	Reports to:	In practice, directly interacts with:
AAFC-RBAC	Assistant Deputy Minister	Assistant Deputy Minister
CIHR Council	Parliament	President
CRC Board	Minister	President
EC-STAB	Deputy Minister	Deputy Minister
DFO-SAC	Assistant Deputy Minister	Assistant Deputy Minister
Polar Commission	Parliament	Assistant Deputy Minister
HC-SAB	Minister	Assistant Deputy Minister
DND-DSAB	DM & Chief of Defence Staff	Director General, Strategic Planning
NRC Council	Parliament	President
NRCan-MACST	Minister	Minister
NSERC Council	Parliament	President
Prime Minister's ACST	Prime Minister	Cabinet Comm. for the Economic Union
SSHRC Council	Parliament	President

Chairpersons

The Granting Councils and the NRC are each chaired by the organisation's President, a Federal employee. The Polar Commission and most of the advisory boards are chaired by members from outside government. In the case of the ACST, the Minister of Industry serves as Chair and the Secretary of State for Science, Research, and Development serves as Vice-Chair, but an external member serves as Deputy Chair and, in practice, manages the Council. Most SABs also identify a Vice-Chair (or equivalent) who is either an external member or government official (see Table 3).

Science Advisory Board	Chair	Other
AAFC-RBAC	External	Co-Chair (ADM), Vice-Chair (external)
CIHR Council	President	Vice-President (external)
CRC Board	External	None
EC-STAB	External	None
DFO-SAC	External	Co-Chair position being considered
Polar Commission	External	Vice-Chair (external)
HC-SAB	External	Chair advised by ADM
DND-DSAB	External	Vice-Chair (external)
NRC Council	President	N/A
NRCan-MACST	External	Vice-Chair (external)
NSERC Council	President	Vice-President (external)
Prime Minister's ACST	Minister	Vice-Chair (SOS); Deputy Chair (external)
SSHRC Council	President	Vice-President (external)

Membership

Please note that this information was current as of May 2000.

As shown in Table 4, the number of individuals serving on the SABs ranges from 12 to 25. In some cases these numbers include ex-officio members. In all cases members serve terms of up to 3 years. However, there is variation in whether terms are renewable and whether appointments have an established schedule (e.g., staggered terms) to provide a structured rotation of members. For example, one-third of the members of DFO's Science Advisory Council are replaced annually.

Table 4: Membership				
Science Advisory Board	Members	Term (yrs)	Renewable	Structured Rotation
AAFC-RBAC	up to 12	3	up to 5 years	no
CIHR Council	about 21	3	once	1/3
CRC Board	up to 22	3	yes	no
EC-STAB	up to 14	3	no	1/3
DFO-SAC	up to 15	3	no	1/3
Polar Commission	up to 12	3	once	no
HC-SAB	up to 22	2-3	no	no
DND-DSAB	up to 25	3	once	yes*
NRC Council	up to 22	3	once	no
NRCan-MACST	at least 10	3	yes	no
NSERC Council	up to 25	3	once	yes*
Prime Minister's ACST	14	3	once	1/6
SSHRC Council	up to 22	3	once	no

* In these SABs, a structured rotation is in place but does not involve a specific fraction of the SAB membership.

Operations

As shown in Table 5, the number of meetings held annually ranges from 2 to 5 with most SABs meeting at least 3 times per year. The AAFC-RBAC meets in person only once annually and once by tele-conference. Most SAB meetings last from one to two days.

In a few SABs, the bulk of the board's work is conducted at the meetings. In most, members are involved in activities outside of meetings such as:

- work in Executive committees, standing committees, or other sub-committees;
- in-depth examination of issues through study groups, expert panels, or by commissioning studies; and,
- participating in public consultations, conferences, and workshops.

Few SABs have the power to commission studies directly although many can request that studies be conducted or commissioned by their secretariats.

The output of SABs varies considerably. Governing boards for CIHR, SSHRC, NSERC and NRC make decisions regarding the strategic direction of these organizations. Other SABs typically provide committee reports which make recommendations on matters ranging from specific strategic issues (e.g., human resources, science communication, linkages/partnerships, etc.) to departmental research priorities and strategic directions. SABs provide an external perspective on the S&T challenges and opportunities facing departments and review their effectiveness in responding to them. SABs review, challenge and provide advice on the relevance of proposed research directions. Much of this guidance is provided during meetings and is documented in minutes or in letters to the official the SABs report to.

Table 5: Operations			
Science Advisory Board	Meetings	Length (days)	Other Activities
AAFC-RBAC	1 + 1	1.5	rare
CIHR Council	3	1-2	committees, studies, consultations
CRC Board	3	1	study groups
EC-STAB	3-4	1-2	study groups
DFO-SAC	3-4	2	study groups
Polar Commission	4	1-4	studies, conferences, workshops
HC-SAB	4	2	rare
DND-DSAB	2	N/A	study groups
NRC Council	3	2	committees
NRCan-MACST	2	1.5	committees, studies
NSERC Council	3	1.5	committees, studies, consultations
Prime Minister's ACST	5	1	expert panels, studies
SSHRC Council	3	2	committees, studies, consultations

The nature and extent of departmental participation in the functioning of SABs varies considerably. In some SABs, government officials are full members. For example, the CRC Board and SSHRC Council include members from other government departments. On other SABs, government officials may serve as ex-officio members. In most cases, government officials and staff may be invited to give presentations. The extent to which non-member departmental staff may sit “at the table” and participate in deliberations varies. As examples, in the ACST, the governing councils, and the Health Canada SAB, staff in attendance are expected to respond to questions but not participate otherwise. The DFO-SAB and AAFC-RBAC operate more informally and departmental staff participate more actively.

As described in the individual summaries, there is also considerable variation in SAB procedures with respect to:

- reaching consensus and addressing dissenting opinions,
- confidentiality of recommendations,
- media contact, and
- declaring potential conflicts of interest.

Most SABs attempt to reach, but do not require, consensus on recommendations. The five governing councils and the HC-SAB will, if necessary, take a vote with a simple majority carrying the motion (except in HC-SAB which requires a 75% majority). Dissenting opinions are usually captured in the minutes or in some other manner. The EC-STAB refrains from making recommendations when dissenting opinions exist.

Although formal confidentiality agreements are rare, the deliberations and recommendations of most of the SABs are confidential (or at least not actively made public). Exceptions include the HC-SAB which posts its Record of Decisions on the department's public website and the EC-STAB which makes its reports public.

Guidelines with respect to contact with the media are the exception rather than the rule. In some cases members can speak on behalf of their SAB if it has taken a position on an issue, but in most cases members would speak as individuals when speaking with the media, or direct media requests to the department or chair.

Most of the SABs have in place or are implementing specific policies and procedures regarding conflict of interest. The CRC, DND-DSAB, NRCan-MACST, and ACST do not require written declarations of potential conflict of interest.

Support and Remuneration

All SABs are supported by a secretariat. The specific full-time equivalent (FTE) figures shown in Table 6 should be treated as rough estimates. However, it is safe to say that the level of activity in support of SABs varies from one person providing part-time support to many individuals providing full-time support. Budget amounts are approximate and are for direct expenses; they do not include salaries of federal employees or overhead expenses except where noted.

In most SABs, members serve without remuneration but get reimbursed for the expenses associated with their participation. In addition, in three SABs the individuals serving in executive positions receive remuneration. Compensation of members is an option under the CIHR legislation.

Table 6: Support & Remuneration			
Science Advisory Board	FTEs	Budget	Remuneration
AAFC-RBAC	0.2	\$15,000	Expenses
CIHR Council	2	\$130,000	To be determined
CRC Board	0.25	small	No
EC-STAB	1	\$159,000	Expenses
DFO-SAC	0.3	\$50,000	Chair; Expenses
Polar Commission	6	\$300,000	Expenses
HC-SAB	3	\$1.5 million (incl. salaries)	Expenses
DND-DSAB	N/A	\$200,000	Chair, Vice-Chair; Expenses
NRC Council	0.5	\$70,000	Expenses
NRCan-MACST	0.25	\$25,000	Expenses
NSERC Council	1.5	\$106,000	Expenses
Prime Minister's ACST	7	\$1,000,000	Deputy Chair; Expenses
SSHRC Council	3	\$111,000	Expenses

Impact

The EC-STAB is the only SAB that has recently been the subject of a formal performance evaluation. Some of the recommendations of that evaluation include:

- The Department should re-confirm that an essential role of the Board is to provide an external review of the relevance of the Department's R&D program;
- The Board should have one standing Working Group on R&D Priorities; and,
- Approximately one-third of the Board members should be rotated each year.

Evaluations of the DFO-SAC and NRCan-MACST are likely in the near future.

Representatives of the SAB secretariats were asked to provide their views of the impact of their advisory board. Clearly, the governing councils have a direct impact on the functioning of the CPC, NRC and Granting Councils. Secretariats of some of the advisory boards were also able to point to areas in which the SAB's recommendations are resulting in concrete actions within the department. Examples include:

- Creation of a Science Communications Framework for Environment Canada;
- Creation of the Office of Consumer Affairs and the Office of the Chief Scientist at Health Canada; and,
- Development of a "polar science" educational outreach program at the Canadian Polar Commission targeting high school students and younger children.

APPENDIX 1.2 -LIST OF INDIVIDUALS INTERVIEWED

Please note that this information was current as of May 2000.

List of Individuals Interviewed

(All interviews were conducted in April and May 2000)

Agriculture and Agri-Food Canada -- Research Branch Advisory Committee

Bruce Mitchell, Director General, Research Planning and Coordination
Nicole Charest, Senior Policy Analyst

Canadian Institutes of Health Research

Carol Anne Esnard, Secretary to Council

Communications Research Centre Board of Directors

Judy Boulay, Secretary to the Board

Environment Canada -- Science and Technology Advisory Board

Phil Enros, Senior S&T Policy Advisor
Marnie McCall, S&T Policy Advisor
Nadia Sakeley, S&T Secretariat

Fisheries and Oceans -- Science Advisory Council

Karen Davison, Policy Advisor

Indian Affairs and Northern Development -- Canadian Polar Commission

Stephen Bigras, Executive Director

Health Canada -- Science Advisory Board

Kata Kitaljevich, Senior Secretariat Advisor
Suzanne Bassett, Senior Secretariat Officer

National Defence -- Defence Science Advisory Board

Major Tom Radford, Staff Officer
Ingar Moen, Director S&T Policy

National Research Council – Governing Council

Serge Hamel, Secretary to Council

Natural Resources Canada -- Minister's Advisory Council on Science and Technology

Stéphan Mercure, S&T Policy Advisor

Natural Sciences and Engineering Research Council -- Governing Council

Isabelle Blain, Corporate Secretary to Council

Prime Minister's Advisory Council on Science and Technology

Ken Hart, Senior Policy Advisor

Social Sciences and Humanities Research Council -- Governing Council

Janet Halliwell, Special Advisor to the President
Ruth Marfurt, Corporate Secretariat Officer

APPENDIX 1.3 - SUMMARIES OF SCIENCE ADVISORY BODIES REVIEWED

Please note that this information was current as of May 2000.

Agriculture and Agri-Food Canada (AAFC) Research Branch Advisory Committee (RBAC)

The RBAC was created in 1988 to provide advice and counsel on R&D priorities and programs to the Research Branch of Agriculture and Agri-Food Canada. With the exception of the Research Centres of the Atlantic Region which share an advisory committee, each AAFC Research Centre also has an Industry Advisory Committee which addresses more technical matters.

Mandate

The RBAC provides a focus for food and agricultural research priority-setting to support the competitiveness of the agri-food sector by identifying broad research needs, reviewing research activities, and recommending a balanced response to both regional and national needs.

Specifically, RBAC is mandated to:

1. Make recommendations with respect to the development of food and agricultural research programs and priorities.
2. Advise on ways to foster more effective technology development, application and transfer to client groups.
3. Advise on ways to increase private sector investment in agri-food R&D.
4. Evaluate the business plans of the Research Branch and advise on operational issues.
5. Advise on strategic research directions and ways to avoid competition with existing private sector, university and provincial government activities.
6. Foster communication between public sector researchers and industry.

In practice, items 2, 3, and 6 are the primary functions. The RBAC is not directly involved in the evaluation of AAFC's in-house scientific operations. The RBAC addresses primarily science issues, but also discusses policy, trade, and marketing topics. Recent issues include:

- Investment in research;
- Technology transfer;
- Sustainable practices and integrated pest management; and
- Labelling of genetically modified organisms.

Membership

RBAC consists of up to 10 private sector members, the Assistant Deputy Minister for Research, and two senior AAFC officials as required. The Chair of the Canadian Agri-Food Research Council (CARC) sits as an ex-officio member. Appointments are approved by the Chair and the ADM. Private sector members are selected for their sector knowledge. They represent agribusiness, processors, producers, and consumers and the overall composition reflects gender, language, and regional considerations. Members serve 3 year terms that may be extended by 1 to 2 years to a maximum 5 year term. No structured rotation of appointments exists.

Reporting Relationship

The RBAC reports to the ADM for Research, who also serves as Co-Chair and always attends meetings. Informal contact with Members is common.

Operations

RBAC can create sub-committees and can ask AAFC to conduct or commission studies, although such activities are rare.

Chair

The Chair is selected on a seniority basis and by consensus of Members. The Chair serves 3 years and runs meetings with the advice of the ADM. A Vice-Chair position was recently created.

Meetings

RBAC meets 2 times per year: for 1.5 days in-person in the Spring and for 2 hours by telephone in the Fall. Spring meetings are hosted by a Research Centre and include a tour and presentations by Centre staff. The Secretariat drafts agendas for the Chair's approval. Minutes are taken, approved by Members and distributed internally and to all Centre Directors.

Role of Department Officials

In attendance are the ADM, the 3 research Directors General, the Secretary, and the Director and senior management of the hosting Centre. Meetings are informal but officials tend to participate only when prompted. "In the corridor" networking provides vital intelligence to the ADM.

Confidentiality/Media Contact

Recommendations are confidential. Members do not speak on behalf of RBAC to the media.

Reporting

RBAC provides a wide range of advice. Consensus recommendations are not required.

Legal Issues

New guidelines introduced in 1999 address indemnification, potential liability, and similar issues. Proprietary information is not discussed. Conflict of interest rules are being implemented.

Support

RBAC is supported by a Secretary (Senior Policy Advisor) and administrative staff in the Science Policy and Planning Division. Total activity is approximately 0.20 FTE. The ADM manages an operating budget of \$15,000. Members' expenses are reimbursed.

Impact

An indicator of RBAC's success is the increasing interest of people to serve on it. RBAC's advice is welcomed by the Centre Directors and has provided positive reinforcement and a reality check on actions of the department. Pressing operational issues include getting information to Members on an ongoing basis without overwhelming them.

RBAC "works" because:

- Members recognize it is an advisory body which provides one of many inputs to the ADM;
- Members do not lobby--they serve as individuals, not as representatives of organisations;
- It is a long-standing body and trust has been built over time; and,

- It provides a “window on user needs” that is not too formal or bureaucratic.

Canadian Institutes of Health Research (CIHR) Governing Council

The Canadian Institutes of Health Research (CIHR) was established by Act of Parliament in April 2000. It replaces the Medical Research Council (MRC). The operational details of the CIHR are still being worked out so the information presented here should be considered preliminary. Some details of how the Council of the MRC operated are provided in square brackets. The Council of the CIHR may operate similarly.

Mandate

The CIHR Council will be the pre-eminent advisory body on health research in Canada, responsible for setting the strategic direction of the health research agenda. The Council will function as a governing board and, as such, will:

- oversee the operational aspects of CIHR;
- provide final approval in the peer review process for granting awards;
- establish 10-12 virtual research institutes and evaluate them every 5 years; and,
- increase the international profile of Canada as an important niche player in health research.

Membership

The Council will consist of 18 members including the President. The Prime Minister’s Office will make Order in Council appointments following a public nomination process. Terms will normally be for 3 years, renewable once, and staggered so that a third of the members will be new each year. Ex-officio members will include the Deputy Minister of Health Canada, the Presidents of NSERC and SSHRC, and perhaps others.

Reporting Relationship

The Council will report to Parliament through the Minister of Health. [Under the MRC, the Minister has participated in meetings. The MRC Council also met on occasion with the DM of Industry Canada to make the links with Genome Canada.]

Operations

The Council has an Executive Committee and a Health Research Integration Committee. It can commission studies and consult the public. Public fora were used during the transition to CIHR.

Chair

The President of CIHR will serve as Chair of the Council. [Under MRC, an external Member was selected to serve as Vice-Chair.]

Meetings

The Council will probably meet 3 times per year. [The MRC meetings were in-person for 1-2 days each. The Executive Committee often met by tele-conference. Agendas were developed in consultation with the President and Members. Minutes were taken and approved by Members at the next meeting. Action items for MRC management were highlighted.]

Role of Department Officials

There was a concern that the MRC Council may have been intimidated by the “cast of thousands” attending the meetings. The CIHR Council will “own its agenda” and not be dominated by staff.

Confidentiality/Media Contact

[The MRC Council met *in camera* when necessary to deal with sensitive issues.] Guidelines regarding confidentiality, media contact, conflict of interest, etc., will be voted on by the CIHR Council. The Communications Department provides media support and training.

Reporting

Whether the Council will require consensus recommendations and whether or not the recommendations will be confidential has not been determined.

Legal Issues

The Secretariat is seeking legal opinion on issues of liability, etc., and such issues will be discussed at new Member orientation.

Support

The Council will be supported by a full-time Secretary to Council, the Executive Director and senior staff, and one administrative staff person. [The MRC Council had a budget of \$130,000 to support meetings. Members’ expenses were reimbursed.] Compensation of Members is an option under the CIHR legislation.

Impact

Early indications of CIHR success will be securing Phase II funding and continuing reliable funding. The Members will want to make sure that the diverse members of the health research community feel they have a ‘home’ within the CIHR structure. They will also be concerned with ethics, openness, and transparency in the new organisation.

Performance measures will be developed and reported annually. International benchmarking of CIHR is expected.

Communications Research Centre (CRC) Board of Directors

The CRC's Board of Directors was created in 1992.

Mandate

The Board provides advice to the Minister of Industry and the Deputy Minister on CRC's strategic directions including:

- the effectiveness, relevance, and quality of the research;
- its research plans and priorities;
- its human resource strategies; and,
- public relations, promotion and marketing of CRC's capabilities and assets.

The Board can request peer reviews and program evaluations and make recommendations to the DM. In practice, the Board serves a general advisory function—it has no controlling authority. The Board provides an informal forum for discussion among representatives from the private sector, academe, and government.

Membership

There are 22 members including 12-15 external members drawn from industry and academe. They are selected to balance gender, region, language and to represent the major players in the communications sector. The Board also includes Members from major government clients (DND, CSA, NRC, IC). Members are appointed by the Minister for up to 3 years, renewable as appropriate. A structured rotation schedule may be set up in the near future. The DM and the CRC President are ex-officio members.

Reporting Relationship

In theory, the Board reports through the President to the Minister. The Board is supposed to meet annually with the Minister. In practice, the President takes the Board's recommendations under advisement and reports back on actions taken.

Operations

The Board has created sub-committees to develop reports on strategic issues.

Chair

The Chair is an external member appointed by the Minister, based on recommendations by the President and DM. He serves at the Minister's discretion.

Meetings

The Board meets in-person 3 times per year to coincide with CRC's planning cycle. It meets either in Ottawa or is hosted by a Member. Draft agendas are prepared by the Secretariat with input from Members and approved by the Chair. Minutes are taken by the Secretariat, reviewed by the President and Chair, and approved by the Board at the next meeting.

Role of Department Officials

Please note that this information was current as of May 2000.

When the Board meets in Ottawa CRC's Management Committee are invited as guests. Officials may give presentations but do not participate in discussions. Government Members do not dominate the Board's discussions.

Confidentiality/Media Contact

The minutes pertaining to discussion of research results may be edited to protect intellectual property. No media guidelines exist.

Reporting

Dissenting opinions are noted during roundtable discussions.

Legal Issues

CRC has obtained legal opinion that Members are in no way liable for the advice they provide. No conflict of interest declarations are made. Members are reminded of the sensitivity of some of the items discussed.

Support

The Executive Assistant to the President serves as Secretary to the Board. She is supported by 2 staff for a total activity of 0.25 FTE. A small budget supports meeting expenses.

Impact

The Board has had an impact on CRC planning, although both the CRC and the Board wish to increase the Board's contribution to decision making. CRC is looking forward to the reports of the current sub-committees to help provide strategic direction.

The Board "works" because it provides an important networking forum.

Environment Canada (EC) Science and Technology Advisory Board

Environment Canada created the R&D (now S&T) Advisory Board in 1996. An evaluation has recently been completed and, based on its findings, EC is implementing changes to the Board's operations. The information below reflects these changes.

Mandate

The Board reports to the Deputy Minister (DM) and provides:

- broad, strategic advice on the relevance of the department's entire S&T portfolio;
- advice on EC's strategic plans and Business Line research agendas; and,
- review of particular S&T issues upon the request of the DM.

The Board does not, in practice, help define EC's scientific priorities, although it may begin to help define processes for establishing priorities. The Board has not been involved in the evaluation of EC's in-house scientific operations, although it has helped push EC to develop a "science agenda" to tie its S&T activities to core business lines. The department has published a Framework for External Review of R&D. The Board will review results of external reviews.

The Board was initially presented with 6 issues of interest to the department, from which it chose 5 to examine. A list of issues will be negotiated annually with the DM. Recent issues included:

- R&D priority-setting and S&T capacity;
- Science advice;
- Science communication; and,
- Integration of the social sciences.

Membership

The Board has up to 14 members (initially 11) appointed by the DM. Members "will be senior level individuals, chosen for the contribution they can make, but providing broad representation of key sectors (private sector, labour, universities, ENGOs, etc.) and regions." However, currently the distribution is more discipline-based rather than sector-based. After an initial term of 3 years for all members, EC is now implementing a structured rotation schedule; once steady state is reached terms will be 3 years, and perhaps renewable.

Reporting Relationship

The Board has a private session with the DM at each meeting. The current DM is interested in developing a strong working relationship with the Board.

Operations

Previously, the Board had created working groups consisting of at least 2 Members along with EC officials. The Board can commission studies.

Chair

The DM recruits a Chair to run meetings and provide input on the direction of the Board.

Meetings

The Board will meet 3 to 4 times per year (previously 2 times). Meetings are in-person although working groups also met by tele-conference. The S&T Executive Committee attends Board meetings. Agendas are prepared by the Secretariat in conjunction with EC staff and reviewed by the Chair. Minutes are taken, approved by the Chair, and distributed to attendees and EC's S&T Management Committee (Directors General and Directors).

Role of Department Officials

Initially, departmental participation was extensive, especially in the working groups, each of which had a senior staff member as champion.

Confidentiality/Media Contact

Members sign a confidentiality agreement when appointed. If approached by the media, Members must speak as individuals, not on behalf of the Board.

Reporting

The Board Members of Working Groups formulated the recommendations to be presented to the full Board. Following discussion among the full Board, including input from department officials, the Board would formulate the recommendations to be made to the DM. The Board refrains from making recommendations when dissenting opinions exist. Reports are available to the public and are posted on the EC website. The department provides the Board with formal responses to their recommendations.

Legal Issues

Conflict of interest information is collected and any legal concerns are discussed with the Executive Secretary (the ADM responsible for science).

Support

The Board is supported by a secretariat in the Science Policy Branch under the ADM for science. It consists of 3 policy analysts and 2 administrative staff (approximately 1 FTE). An annual budget of \$159,000 supports direct expenses. Members' expenses are reimbursed.

Impact

EC developed an Evaluation Framework that provided specific performance criteria. The report of the external evaluation is available. As a result of Board recommendations EC has:

- Begun developing research agendas for business lines;
- Completed the Framework for External Review of R&D in Environment Canada; and,
- Begun implementing a Science Communications Framework for Environment Canada.

Pressing operational issues include:

- a need to increase the Board's budget given the increase in members and meeting frequency;
- ensuring adequate human resources to support the Board; and,
- members have difficulty making the connections between EC's mandate and S&T activities.

Please note that this information was current as of May 2000.

The Board “works” because it prompts departmental action that may not have occurred in its absence.

Department of Fisheries and Oceans (DFO) Science Advisory Council (SAC)

The Department of Fisheries and Oceans created the Science Advisory Council in 1997.

Mandate

The Council provides advice on broad strategic matters in S&T. Key elements are:

- To advise on strategic research directions and ways to collaborate with the private sector, universities and provincial governments in research and technology development;
- To review and advise on the direction, balance and relevance of DFO's S&T priorities and programs, with due regard to DFO's conservation mandate and the needs of its clients from a national and regional perspective;
- To assist in integrating national S&T issues arising from pertinent DFO advisory bodies, into the broader agenda of the department; and,
- To provide a challenge function to ensure that DFO's programs are consistent with the needs of Canadians within national and global economic and social environments.

The SAC helps identify and refine DFO's science priorities but it does not evaluate DFO's in-house scientific operations. Issues to be examined by the SAC are determined through consultation with the Chair, Members and senior department officials (i.e., National Science Directors Committee, ADM of Science, ADM of Oceans). Current issues include:

- Consultation on the Science Sector Strategic Plan;
- The development of effective partnerships between DFO and other parties;
- S&T capacity; and
- Strategic science communications.

Membership

The SAC has 15 seats. Members serve 3 years with one-third rotated off each year. Terms are generally not renewable. Members are selected for their expertise in key sectors or disciplines (including new or emerging areas) and their ability to contribute in a Council environment. The composition reflects considerations for region, gender, language, visible minorities, and Aboriginal peoples.

Reporting Relationship

The SAC reports to the ADM of Science who participates in the meetings.

Operations

The SAC can form sub-committees of 2 or more Members to address a specific issue.

Chair

An external member is selected to serve as Chair by the ADM Science in consultation with senior departmental officials. Responsibilities include:

- Preparing meeting agendas, in consultation with Members and DFO officials;
- Chairing meetings and ensuring Members participate and focus on agenda issues;

- Reporting to DFO officials through the minutes and in letters or reports as required.

Meetings

Meetings are held 3 to 4 times per year at the call of the Chair. Usually, meetings are in-person. Minutes are taken and distributed to Members, DFO officials in attendance, and the ADMs of Science and Oceans. The minutes are posted on the DFO intra-net site.

Role of Department Officials

The department provides the SAC with direction with regard to pressing issues that DFO feels require, and will benefit from, the attention of the SAC. Meetings are well attended by DFO officials and there is a free-flow exchange of information and ideas between all in attendance.

Confidentiality/Media Contact

Recommendations of the SAC are not made public although Members are not bound by a confidentiality agreement.

Reporting

Consensus recommendations are reached through open discussion of diverging opinions.

Legal Issues

The Chair is bound by the DFO Consulting and Professional Services Contract that includes provisions concerning conflict of interest.

Support

The SAC is supported by a one-person Secretariat in the Program Planning and Coordination Directorate, Science Policy and Liaison Branch. Level of activity represents about 0.30 FTE. The annual operating budget is about \$50,000 which covers per diem expenses of the Chair (including time spent preparing and conducting meetings and associated administrative costs) and meeting expenses. Members' expenses are reimbursed.

Impact

A performance evaluation of the SAC will be undertaken in 2000. Performance criteria will be developed to determine what impact the SAC is having on the department.

Pressing operational issues include:

- Whether to create a Co-Chair position and whether to allow alternates at meetings;
- Membership renewal and maintaining a balanced composition;
- Developing a longer-term strategic workplan for the provision of advice; and,
- From the perspective of the Members, the assurance that their advice will be used by DFO may be an issue.

The SAC “works” because of:

- The genuine enthusiasm and commitment on behalf of the Members;
- The free-flow of information, exchange of ideas and opinions; and,

- The ability of DFO to benefit from the diverse range of Members' expertise.

Health Canada (HC) Science Advisory Board

The Science Advisory Board was created in 1997. As of April 2000, the Health Protection Branch (HPB) has effectively been split into three branches. The Board will no longer be solely concerned with matters affecting the HPB, but with the Department as a whole.

Mandate

The Board provides independent advice to the Minister of Health on how best to position the scientific, technical and policy aspects of the programs of the Health Protection Branch (HPB). Although evaluations of in-house S&T programs may be brought to the attention of the Board, it has no decision-making authority over programs or regulatory functions, nor is it responsible for the implementation of its advice. The Board provides advice on:

- The ongoing measures required to ensure HPB science retains public confidence;
- The scientific adequacy of HPB programs, procedures, methodologies, protocols, and tests, and the basis of frameworks for proposed guidelines, standards or regulations;
- New information needs and future human resource needs for S&T programs;
- Partnerships and strategic linkages with local, regional and international agencies, recognizing the particular importance of collaboration with provinces and territories; and,
- S&T trends in a global context and the issues and opportunities that are driving change.

The Board is also responsible for:

- Examining previous decisions to ensure the adequacy of the in-house scientific base to meet current and future scientific challenges; and
- Recommending, as appropriate, new or revised criteria or standards for setting priorities for public health issues and programs.

The Board has a role in defining the issues it examines. Current issues include:

- Legislative renewal: health information/health surveillance and drug advertising;
- Biotechnology: genetically modified foods; and,
- Human resources strategy: S&T capacity.

Membership

The Board consists of 17 members drawn from independent scientists, health professionals, consumer advocates, business people and social scientists. Scientific specialization, gender, language, and geographical distribution are considered in the selection process. Members are appointed for a 2-3 year term at the Minister's discretion. In practice, appointments have not been renewed beyond the initial term. A structured rotation of appointments does not exist. Ex-officio members include the Deputy Minister, the Associate DM, the ADM of HPB, the MRC President, and the GDW Cameron Visiting Chair, a Special Advisor to the DM.

Reporting Relationship

In practice, the Board has direct access to the ADM of HPB who attends the meetings. The DM attends when available.

Operations

Most of the Board's work is conducted at meetings. The Board has used sub-committees in the past and can commission studies but such practices are rare.

Chair

The Minister appoints an external Chair. The Secretariat expects to create guidelines soon for the duties of the Chair. The Chair runs the meetings and is advised by the ADM HPB.

Meetings

The Board meets 4 times per year for 2 days each. It meets in-person, usually in Ottawa, and a quorum is required. Agendas are developed by consensus between the Secretariat and Members. The Board has a set of "Ground Rules" for meetings.

Role of Department Officials

Other than the ADM and Secretariat the participation of officials is limited to presentations. The Secretariat reviews presentations and briefs staff on their role at the meeting. The Board, in order to preserve time for discussion, reserves the right to dismiss officials.

Confidentiality/Media Contact

A "Record of Decisions" is approved by Members and posted on the public website. Media requests are directed through the Secretariat to the Chair.

Reporting

The Board is expected to reach consensus but, if required, a 75% vote carries the decision. Recommendations are made public, although the Minister can ask for an *in camera* session.

Legal Issues

Conflict of interest declarations are kept on file. Proprietary information is not discussed.

Support

The Secretariat consists of 7 individuals. Level of support is approximately 3 FTEs. The Board's annual budget is \$1.5 million which includes secretariat salaries and operational expenses. Members' expenses are reimbursed.

Impact

The SAB has been successful in impacting the department in the creation of the Office of Consumer Affairs and the Office of the Chief Scientist (who advises the DM).

Pressing operational issues include the need to provide well-focussed briefing materials and clear indications of what is expected from the Board. It is important that Members understand HC's mission, the mandate of the Board, and the constraints on the Minister.

The Science Advisory Board “works” because of:

- the linkages individual members are able to make with other boards, the CSTA, provincial governments, etc.; and,
- the role of the Secretariat which has evolved and been improved.

Department of Indian Affairs and Northern Development (DIAND) Canadian Polar Commission (CPC)

The Canadian Polar Commission was created by an Act of Parliament in 1991.

Mandate

The CPC serves as Canada's national advisory agency on polar affairs. Its mandate is:

- to monitor the state of knowledge, in Canada and elsewhere, in respect of the polar regions, and report regularly and publicly;
- to cooperate with organisations, institutions, and associations, in Canada and elsewhere, in the determination of scientific and other priorities;
- to encourage Canadian organizations, institutions and associations to support the development and dissemination of polar knowledge;
- to advise the Minister of Indian Affairs and Northern Development, when requested, on any matter relating to the polar regions;
- to provide information about polar research to Canadians and Canadian organizations, institutions and associations; and,
- to enhance Canada's international profile as a circumpolar nation by fostering international cooperation in the advancement of polar knowledge.

The Commission's mandate includes the Antarctic although its primary focus is the Arctic and Northern regions. It does not fund research projects but it does work with national and international organisations related to polar science and polar affairs.

Issues to be examined can be proposed by Members, Ministers, Members of Parliament, or external groups. Some of the current issues include:

- Developing a National Polar Policy;
- Establishing Canada as a leading circumpolar nation;
- Transportation opportunities due to climate change;
- Increasing understanding from the social sciences;
- Increasing access to, and management of, polar information; and
- Reporting regularly on the state of polar knowledge.

Membership

The Commission consists of up to 12 members (currently 7) selected for their polar or Northern expertise or affiliation with Northern organisations. Individuals are selected from the private sector, academe, or NGOs, to serve 3 year terms that can be renewed once. A structured rotation is not currently in place but the CPC foresees implementing staggered terms in the near future.

Reporting Relationship

CPC reports to Parliament through the Minister. The Minister will on occasion attend special events of the CPC. The CPC also works with international polar organizations as well as with federal committees such as the ADM Committee on Northern S&T.

Operations

The CPC can commission studies and partner with other organisations to support conferences, workshops, publications, etc. The CPC maintains a website with links to polar research directories, international polar organisations, etc.

Chair

The Chair is appointed by the Prime Minister with input from the Minister. Duties are specified in the Act.

Meetings

The CPC meets 4 times per year with at least 2 meetings held in Northern locales. Meetings are in-person, last 1-4 days, and are usually tied in with other events. Agendas are developed by the Executive Director and Chair in consultation with Members. Minutes are taken and approved by Members.

Role of Department Officials

The Executive Director participates fully in meetings but has no vote. Other staff may also attend. Reports from each manager are on the agenda. Occasionally, the CPC meets *in camera*.

Confidentiality/Media Contact

When speaking with the media, Commissioners can speak for the CPC if it has taken a position.

Reporting

The Commission typically reaches consensus. If required, a majority vote carries.

Legal Issues

CPC's recommendations are not legally binding. Members declare potential conflicts of interest.

Support

A Secretariat in Ottawa is comprised of the Executive Director, 2 program managers, a research assistant, an accountant, and secretary. The CPC is obliged to maintain a Northern office. The responsibility for the Northern Office is divided among 3 Northern CPC Commissioners from the Yukon, NWT, and Nunavik. The CPC's annual budget is approximately \$1 million (which includes staff salaries). Approximately \$300,000 supports Commission activity expenses.

Impact

The CPC is undertaking an indicators project to develop quantitative measures of the status of the polar community. It is also developing an educational outreach program targeting high school students and children. The CPC produces two newsletters and is creating a Polar Information System.

The CPC "works" because:

Please note that this information was current as of May 2000.

- it is developing a new way of operating that is less reactive and issue-specific but rather is more visionary and long-term oriented; and,
- it develops its work plans in concert with input from stakeholders.

Department of National Defence (DND) Defence Science Advisory Board (DSAB)

The DSAB was created in 1987 under the authority of the Minister of National Defence.

Mandate

The DSAB provides an interface between the nation's S&T community and senior DND officials. DSAB acts solely in an advisory capacity and does not conduct research. DSAB's mandate is:

- To provide independent advice on Departmental objectives, policies, plans, programs, and operations from a broad scientific and technological perspective;
- To ensure that the impact of potential advances in S&T on defence are studied and those studies made available for use in Departmental planning; and,
- To ensure that the collective resources of the nation's S&T community at large are linked to the defence planning network.

DSAB provides input on issues to be examined. Current issues include:

- the roles of modelling and simulation;
- technology opportunities for the Canadian Forces in the 2010-2020 time frame;
- impact of tightened technology export controls on defence industrial R&D collaboration; and,
- geomatics trends for the next decade.

Membership

DSAB consists of up to 25 members including: a Chair and Vice-Chair drawn from the private sector, the immediate past Chair as an ex-officio member, and up to 15 members at-large drawn from industry and academe. Up to 7 government officials serve as ex-officio members including the Vice-President (Research) of the NRC.

Members at-large are nominated by the Chair based on scientific pre-eminence and are approved by the Deputy Minister of National Defence and the Chief of the Defence Staff (CDS). They serve on a rotational basis for a 3 year term for a maximum of two consecutive terms.

Reporting Relationship

The DSAB reports to the DM and CDS. However, the normal point of contact is the Director General Strategic Planning, who represents the DM and CDS at the meetings.

Operations

An Executive Committee consisting of the Chair, Vice-Chair and past Chair has specific responsibilities described in the terms of reference. DSAB can create Study Groups chaired by a Member and comprised of other Members and experts from the private sector.

Chair

The Chair and Vice-Chair serve a 3 year term and may be re-appointed indefinitely at the discretion of the DM and CDS. Their duties are specified in a contractual Statement of Work.

Meetings

DSAB meets at least 2 times annually, normally in-person at DND. The Support Contractor (under contract to provide secretariat support) develops agendas for approval by the Chair and Vice-Chair. Minutes are taken and distributed to Members and senior DND officials.

Role of Department Officials

Typically, departmental ex-officio members fully participate in meetings. Government officials do not sit on Study Groups. A Coordinating Committee, consisting of the Chair and department officials, provides the interface for policy coordination between the DSAB and the department.

Confidentiality/Media Contact

DSAB deliberations and recommendations are considered “private and privileged”.

Reporting

A covering letter accompanying reports to the DM and CDS notes when the DSAB was not able to reach consensus on the recommendations.

Legal Issues

Potential members are briefed by the Chair regarding relevant legislation and legal issues. Members are not required to declare potential conflicts of interest.

Support

The DSAB is supported by a Support Contractor, an Administrative Officer, and a Staff Officer (Major). The DSAB budget is approximately \$200,000 which supports nominal compensation of the Chair and Vice-Chair for the performance of their duties, the Support Contractor, and meeting-related expenses. Members’ and Study Group members’ expenses are reimbursed.

Impact

DSAB’s recommendations are considered part of the total input to the decision making process on defence S&T issues. Specific actions have not been taken based solely on DSAB recommendations. A pressing operational issue is the ability to attract members with relevant expertise, who have the time and inclination to serve. Members are concerned about the time required to complete projects and about gaining access to military sources of expertise and data.

The engagement of the DM and CDS with DSAB is very limited given that DND’s S&T activities represent just 2% of the DND resources.

DSAB “works” because its recommendations are mostly diffused to staff throughout the department to develop appropriate responses.

National Research Council (NRC) Governing Council

The NRC was created in 1916 by an Act of Parliament. To distinguish it from the operational part of the NRC, the governing council is referred to as “the Council”.

Mandate

The Council is viewed as the NRC’s Board of Directors and, as such, serves as a sounding board, advisory body, decision making body, and as a challenge function. The Council:

- provides strategic direction for NRC;
- makes decisions on major policy and resource allocation matters; and,
- assesses proposed initiatives and the results of all NRC activities to determine whether NRC’s broad objectives are being met.

The President, in consultation with Members, defines the issues to be examined. The Council and its committees play an extensive role (perhaps 50% of its time) in assessing the activities of NRC Institutes. Increasingly, the Council is also playing an advocacy role to promote NRC’s in-house S&T capacity and government S&T in general.

Membership

The Council consists of the President and up to 21 members appointed by the Cabinet on recommendation of the President. Members include senior executives with S&T experience but also increasingly include generalists to be more representative of various sectors and of Canada in general. Specific targets exist regarding sectoral, regional, gender, and language considerations. The Deputy Minister of Industry may be designated as an ex-officio member and the President of NSERC is considered a “guest”. Members serve 3 year terms, renewable once (or very rarely twice). No structured rotation of appointments is in place.

Reporting Relationship

The President reports annually to Parliament through the Minister of Industry. Occasionally, the Minister or DM attend meetings.

Operations

An Executive Committee consisting of the President plus 6 Members meets 3 times a year. There is a Standing Committee for audit and assessment. The Council can make by-laws and can strike sub-committees. At least 1 Member sits on each of the Advisory Boards that advise NRC Institutes. The Council can commission studies and hold public hearings, although such are rare.

Chair

The President of NRC also serves as Chair of the Council. He is appointed by the Prime Minister and acts on behalf of Parliament. He serves a 5 year term.

Meetings

The Council meets in-person 3 times a year for 2 days. Once per year it meets at one of the NRC Institutes. Agendas are developed by the Secretariat in consultation with staff and the President. Members provide input before the agenda is finalized. Minutes are taken, approved and made available, in addition to supporting documents, in the NRC Council Proceedings.

Role of Department Officials

The President, Vice-Presidents and the Secretary General attend meetings. Officials may make presentations but do not participate in deliberations. An *in camera* session is held at the end of each meeting.

Confidentiality/Media Contact

The NRC Advisory Policy documents confidentiality policies and the President meets with new Members to discuss inter alia the code of ethics. Personnel issues are not brought to the Council.

Reporting

In adopting formal motions, the Council usually reaches consensus but, if required, a majority vote carries. Abstentions are recorded but kept anonymous.

Legal Issues

The NRC Advisory Policy presents information to Members related to conflict of interest and other principles. Members agree to a code of ethics upon acceptance of appointment.

Support

The Council is supported by the Secretary General and Secretariat. Level of support is approximately 0.50 FTE. Approximately \$70,000 is earmarked for support of the Council. Members' expenses are reimbursed.

Impact

The Council "works" because the President also serves as the Chair and provides an internal perspective to the Council's external perspective.

Natural Resources Canada (NRCan) Minister's Advisory Council on Science and Technology (MACST)

The MACST was created in 1997 and represents an umbrella group at the highest level of NRCan's rather extensive advisory structure. The MACST draws from four Sector Advisory Boards (SABs), one for each sector of interest to NRCan (energy, minerals and metals, earth sciences, and forestry). Within a sector there may also exist Technical Advisory Groups (TAGs) which provide technical advice on research issues and plans. The structure is vertically integrated with the TAG Chairs serving on the relevant Sector Board, and the leaders of the four SABs serving on the MACST.

Mandate

The MACST provides advice on:

- strategic issues relating to government-wide strategies and policies that may impact on NRCan's effective delivery of its S&T to its clients;
- how the departmental S&T program can meet more effectively the needs of its clients in keeping with federal government priorities; and,
- strategic issues that are addressed by the four NRCan Sector Advisory Boards and that could benefit from a broader perspective (e.g., S&T capacity).

Although the MACST can provide advice on the scientific priorities of NRCan, they do not, for example, rank order NRCan's science agenda. Their meetings are scheduled to feed into the departmental planning process. The MACST does not have a program evaluation role; the SABs and TAGs are more likely to be involved in the evaluation of in-house scientific operations.

Members are involved in defining the specific issues to be examined. Recent examples include:

- NRCan's input to the government's response to the BEST report;
- Developing a Northern S&T Strategy (using the BEST principles);
- Building a business case for S&T capacity;
- NRCan's contribution to Government Online; and,
- Sustainable development.

Membership

The Minister appoints a minimum of 10 members (currently 11) which include the Chair and Vice-Chair (or Co-Chairs) of the four SABs plus at least 2 members at-large. The terms of reference state that "collectively, the Council represents a balance of interests from the private sector, provincial governments, universities, and other client groups". However, currently all members are from industry. Members are "senior officials who can offer strategic advice and who have an extensive knowledge of one or more sectors served by the departmental mandate." Consideration is also given to regional, language, and gender balance.

Members at-large serve a 3 year term. The terms of the 8 SAB representatives depend on their tenures on the SABs. Terms are renewable at the Minister's discretion.

Reporting Relationship

The Minister typically meets with the MACST for one hour at each meeting to hear their advice and to share his view on current challenges faced by the natural resources sector.

Operations

MACST can strike sub-committees, ask the Secretariat to provide or commission studies, or ask a SAB to conduct a study.

Chair

The Chair and Vice-Chair of MACST are selected by the Minister from among the Members and serve for 2 years. The current Chair is one of the members at-large.

Meetings

MACST meets in-person 2 times per year. Meetings are in Ottawa and usually last 1.5 days, although there is interest in extending them to 2 days. Normally, no alternates may attend. If, however, both representatives from a SAB will be absent, a delegate from that SAB may attend to ensure representation of that sector's perspective. The final hour is devoted to a discussion of agenda items for the next meeting. The Secretariat canvasses senior NRCan officials for their input and works with the Chair to finalize the agenda. Minutes are taken, approved by the Council, and sent to all attendees. Consideration is given to posting them on NRCan's intra-net.

Role of Department Officials

The Deputy Minister usually attends for part of each meeting. NRCan's Chief Science Advisor typically attends the entire meeting. In addition, the ADMs and the Directors General of Strategic Planning and Coordination, and of Communications are invited to attend. NRCan and external officials are invited to make presentations. Departmental officials respond to questions although the Chair may invite their more active participation.

Confidentiality/Media Contact

No formal agreement is signed but any sensitive information discussed is kept confidential. The DG Communications is available for assistance regarding media contact.

Reporting

MACST is not required to reach a consensus; dissenting opinions are captured in the minutes. MACST's recommendations are confidential. The Chair summarizes the recommendations in a letter to the Minister who makes it available to senior officials.

Legal Issues

No formal declarations are required regarding potential conflicts of interest. Members are selected because of their knowledge of the natural resources sectors so there may exist some advocacy on behalf of certain industries, but not for specific companies.

Support

MACST is supported by a Secretariat that resides in the S&T Policy Division, Strategic Planning and Coordination Branch which reports to the Deputy Minister. It consists of the Secretary, a S&T policy advisor, and an administrative staff person. Level of support is approximately 0.25 FTEs. A MACST line item is included in the budget of the Division (approximately \$25,000). Members' expenses are reimbursed on request.

Impact

At meetings, the Minister canvasses Members about the progress and effectiveness of the Council. An internal evaluation of the Council is likely to occur in the near future, and will likely include surveys of current and past members. A pressing operational issue is the need to manage the turnover of membership.

MACST “works” because of the:

- leadership strength of the Chair and members' commitment to the Council;
- level of interest and involvement of the Minister and Deputy Minister; and,
- vertical integration within NRCan's advisory structure which allows MACST to concentrate on horizontal issues across the department and beyond (e.g., with CSTA).

Natural Sciences and Engineering Research Council (NSERC) Governing Council

NSERC's Council was established under the 1978 Act of Parliament that created NSERC.

Mandate

The functions of the Council are to:

- promote and assist research in the natural sciences and engineering, other than the health sciences; and,
- advise the Minister in respect of such matters relating to such research as the Minister may refer to the Council for its consideration.

It operates as NSERC's governing board. As such, its main responsibilities are to set the strategy and high level policies for NSERC and allocate funds to the broad categories of grants, scholarships and fellowship programs. It is intimately involved in defining the priorities of NSERC and evaluating its operations.

The Council has great flexibility in defining issues to be examined. Recent issues include:

- new initiatives in science promotion, design engineering, and international collaboration;
- the demand for highly skilled people;
- the rising costs of research; and
- increasing the role of universities in economic and social development.

Membership

The Council consists of the President of NSERC and up to 21 external members appointed by Governor in Council. The Presidents of the NRC, SSHRC, and CIHR are Associate Members. External Members serve 3 year terms which are staggered and renewable once. They are selected to represent the research community and specific targets exist with regard to their sector, discipline, region, language, and gender. There are no foreign members on Council although NSERC's advisory and selection committees occasionally include foreigners.

Reporting Relationship

The Council reports annually to Parliament through the Minister of Industry. The Minister, the Secretary of State for Science, Research, and Development, and the Deputy Minister of Industry Canada are each occasionally invited to address the Council. The President meets with them to brief them on recent Council events, and, when appropriate, briefs the Council on the outcome of these meetings. The Minister and DM receive copies of Council material.

Operations

The Council has an Executive Committee consisting of the President, Vice-President and 6 Members. It meets 4-5 times per year by tele-conference. The Council is advised by several Standing Committees responsible, inter alia, for overseeing the work of selection committees and

panels. This structure allows the Council to focus its deliberations on high level strategy and financial issues. The Council can commission studies and consult the public.

Chair

The President of NSERC also serves as Chair of the Council. The President is a Governor in Council appointment. He serves a 5 year term that is renewable. A Vice-President selected from among the Members serves in the absence or incapacity of the President.

Meetings

The Council meets in-person 3 times a year for 1.5 days each. One of the meetings is held outside Ottawa. Meetings are scheduled 2-3 years in advance. Occasionally, special meetings may be held, generally through tele- or video-conference. Agendas are developed by the Secretariat, in consultation with the President and senior management. Members provide input and approve the final agenda. Minutes are taken, circulated, and approved by the Council at the next meeting. Once approved, they are available to the public upon request.

Role of Department Officials

NSERC's Management Committee (Corporate Secretary to Council, 3 Directors General, and 3 Directors) participate fully in meetings. Other staff are often invited to make presentations but do not generally participate in deliberations. *In camera* sessions are held occasionally.

Confidentiality/Media Contact

The Council provides confidential advice to the Minister. For decisions within the Council's jurisdiction, once measures are adopted they are made public through publications, press releases and the website. Media contact is handled through NSERC's Communications Division.

Reporting

The Council attempts to reach consensus decisions but, if necessary, a majority vote carries.

Legal Issues

Upon appointment, Members are made aware of NSERC's Code of Ethics and policies regarding confidentiality, business conduct, conflict of interest, etc. Members are required to disclose potential conflict of interest information.

Support

The Council is supported by the Corporate Secretary to Council, who reports to the President. Level of support is approximately 1.5 FTEs. The Council's annual operating budget is \$106,000. Members' expenses are reimbursed.

Impact

There has been no formal evaluation. Informal indicators of the Council's success include the confidence of the university community in NSERC, NSERC's increasing profile in the research-user sector, and the budget increases NSERC has enjoyed.

The Council "works" because:

Please note that this information was current as of May 2000.

- Meeting attendance is high and Members are very engaged; and,
- The composition of the Council brings multiple perspectives (old/young, academics/user sectors, etc.).

Prime Minister's Advisory Council on Science and Technology (ACST)

The Prime Minister's Advisory Council on Science and Technology was established in 1996.

Mandate

ACST provides the Prime Minister with expert, non-partisan advice on national S&T goals and policies, and their application to the Canadian economy. The Council is mandated to review the nation's performance in S&T, identify emerging issues and advise on a forward-looking agenda.

Specifically, the ACST's role is to:

- advise on the transition to a knowledge-based economy, and assist in determining the necessary adjustments;
- advise on how to increase the number of Canadians with the skills necessary for a knowledge-based economy;
- advise on how government and industry can work in partnership to incorporate new technology into marketplace products, processes or services;
- provide direct advice on S&T issues to the Cabinet Committee for the Economic Union (CCEU); and,
- respond to specific questions or tasks requested by the Prime Minister.

The ACST sets its work plan in consultation with the CCEU. Recent issues have included:

- Commercialization of university research;
- Skills; and,
- Canada's role in international S&T.

Membership

The ACST consists of 12 eminent Canadians, the Minister of Industry (Chair), and the Secretary of State for Science, Research, and Development (Vice-Chair). An external Member serves as Deputy Chair. Members are appointed by the Prime Minister and serve at his discretion. The composition of the Council reflects a broad range of experience and distribution by sector, geographical region, gender, and language.

The ACST is moving toward an appointment schedule that consists of 3 year terms, renewable once, and that rotates 2 Members per year.

Reporting Relationship

The ACST reports to the Prime Minister through the CCEU. It meets with the CCEU twice a year, a unique situation in Parliamentary settings.

Operations

The ACST can form Expert Panels which may include Members. The Council can commission studies and consult the public, although they have not done the latter directly.

Chair

Please note that this information was current as of May 2000.

In practice, the Deputy Chair conducts most meetings.

Meetings

The ACST meets as needed but the practice has been 5 times per year, including 2 meetings with the CCEU. Meetings are in-person though Members may participate by conference call on an exception basis. The location of meetings varies. They have typically lasted 1 day, but recently an effort has been made to streamline them. The Deputy Chair and Secretariat develop the agenda in consultation with the Council. A Record of Discussion (with comments attributed) and Action Items are prepared and distributed to Members, but are not made public.

Role of Department Officials

The Minister and Secretary of State are members. The Deputy Minister of Industry serves as Secretary to Council and participates fully in meetings. The Secretariat provides presentations and responds to questions.

Confidentiality/Media Contact

Advice to Cabinet is confidential and recommendations are kept secret. Members can speak to the media on behalf of the Council if it has taken a position on an issue and within the bounds of their Oath of Secrecy.

Reporting

The ACST typically reaches consensus in its recommendations. If there were strong dissenting opinions, either the recommendation would be withheld or the dissent would be noted.

Legal Issues

The ACST's role is advisory not decisional so Members are not exposed to liability. Members are informed of relevant legislation. No conflict of interest records are kept.

Support

The Secretary to Council is supported by the ACST Secretariat which consists of an Executive Director (EX-02) and 5-10 staff members depending on the issues under examination. Level of activity is approximately 7 FTEs. The annual budget is \$1.4 million (which includes staff salaries) of which \$1 million supports operating expenses. One-third of the Deputy Chair's time is compensated. Members' expenses are reimbursed.

Impact

The PMO and Cabinet are increasingly interested in their interaction with, and the advice they receive from, the ACST. Indicators used to assess the Council's success include:

- Whether ACST meets with Cabinet to deliver its recommendations (this has occurred);
- Whether Cabinet takes a decision to request follow-up (this has occurred); and,
- Whether this leads to a response by government and a Cabinet decision (expected soon).

The ACST “works” because:

- It meets with CCEU, and
- It is careful to select an experienced, influential Deputy Chair.

Social Sciences and Humanities Research Council (SSHRC) Governing Council

SSHRC's Council was established under the 1978 Act of Parliament that created SSHRC.

Mandate

The functions of the Council are to:

- promote and assist research and scholarship in the social sciences and humanities; and,
- advise the Minister in respect of such matters relating to such research as the Minister may refer to the Council for its consideration.

It operates as SSHRC's governing board. As such, its main responsibilities are to set the strategy and high level policies for SSHRC and allocate funds to the broad categories of grants, scholarships and fellowship programs. It is intimately involved in defining the priorities of SSHRC and evaluating its operations.

The Council has great flexibility in defining issues to be examined. Recent issues include:

- university/community alliances and participatory research initiatives;
- the Canadian initiative on social statistics (joint with Statistics Canada);
- integrating the social sciences and humanities into the CIHR;
- international strategy for the social sciences and humanities; and,
- strategic knowledge gaps—e.g., rethinking productivity.

Membership

The Council consists of the President of SSHRC and up to 21 external members appointed by Governor in Council. The Presidents of NSERC and the CIHR are ex-officio members. External Members serve 3 year terms which are renewable once. They are selected to represent the academic community and provide a distribution by discipline, region, language, and gender. Government employees are not excluded.

Reporting Relationship

The Council reports annually to Parliament through the Minister of Industry. Members have a direct and personal relationship with the President.

Operations

The Council has an Executive Committee consisting of the President, Vice-President and at least 6 (currently 8) Members. It meets by tele-conference between full Council meetings. The Council also has several Standing Committees responsible for overseeing, inter alia, the work of selection committees and panels. The Council can commission studies and consult the public.

Chair

Please note that this information was current as of May 2000.

The President of SSHRC also serves as Chair of the Council. The President is a Governor in Council appointment. He serves a 5 year term that is renewable. A Vice-President selected from among the Members serves in the absence or incapacity of the President.

Meetings

The Council meets in-person 3 times a year for 2 days each. Meetings are held in Ottawa and scheduled 2 years in advance. Agendas are developed by the Secretariat, in consultation with the President and senior management, and approved by the Executive Committee. Members can also provide input. Minutes (with attribution) are taken, circulated, and approved by the Council and senior management.

Role of Department Officials

SSHRC's senior management participate fully in meetings. Other staff may attend and may be asked to make presentations or respond to questions; they do not generally participate in deliberations. *In camera* sessions are held at each meeting.

Confidentiality/Media Contact

Once decisions are released they are made public. Members are encouraged to have discussions with the media as individuals. The Council provides confidential advice to the Minister.

Reporting

On strategic issues the Council attempts to reach consensus. Major decisions are voted on and a majority vote carries. Dissenting opinions are addressed in the minutes.

Legal Issues

Upon appointment, Members are given a briefing book which describes policies regarding liability, confidentiality, ethics, etc. Members are required to sign a conflict of interest agreement.

Support

The Council is supported by the Special Advisor to the President and the Corporate Secretariat which consists of the Secretariat Manager, the Corporate Secretariat Officer, and a secretary. Level of support is approximately 3 FTE. The Council's annual operating budget is approximately \$111,000. Members' expenses are reimbursed.

Impact

There has been no formal evaluation. Informal indicators of the Council's success include the public image of SSHRC, and the positive feedback received from the university community and from within government. Pressing operational issues include balancing discussion vs. presentation at meetings, improving the operations of the Standing Committees, and using the Web more effectively.

The Council "works" because:

- Members are very engaged and have a high level of participation; and
- The President provides strong leadership.

APPENDIX 1.4 -LIST OF KEY QUESTIONS

List of Key Questions

In its review, CSTA asked SAB Secretariats the following questions.

Mandate

1. How is the SAB mandated? What are the key elements of the mandate?
2. Does the SAB have a role in defining its terms of reference, issues to be examined, etc.?
3. What are the major problems/issues being addressed by the SAB?
4. Is the SAB involved in helping define the scientific priorities of the Department?
5. Is the SAB involved in the evaluation of the Department's in-house scientific operations?

Membership

6. How many members serve on the SAB?
7. What criteria are used to identify and select members?
8. What is the length of term that members serve? Are terms renewable? Staggered?

Reporting Relationship

9. To whom does the SAB report--Minister, Deputy Minister, Assistant Deputy Minister?
10. Does the SAB have direct access to this person?
11. Does this person participate in the SAB meetings?

Operations

12. How does the SAB carry out its work? What mechanisms does the SAB have at its disposal (e.g., striking sub-committees, commissioning studies, public consultations, etc.)?

Chair

13. Who chairs the SAB (an external member or a department official)?
14. How is the chair selected?
15. Are there specific guidelines regarding the responsibilities of the chair?

Meetings

16. How often does the SAB meet?
17. Are meetings in-person, by tele-conference, etc.?
18. How are meeting agendas developed?
19. Are official minutes of meetings taken? Who receives them?

Role of Department Officials

20. What is the nature and extent of departmental participation?
21. What guidelines are in place regarding the roles and responsibilities of department officials in relation to the SAB?

Confidentiality/Media Contact

22. What guidelines are in place with respect to confidentiality, contact with the media, etc.?
23. Are meetings open to the public? If so, how is the public notified?

24. Are minutes available to the public? If so, how is the public made aware of them?
25. Are SAB recommendations confidential or public?

Reporting

26. Is the SAB expected to reach consensus recommendations?
27. How are dissenting opinions addressed?

Legal Issues

28. How are members made aware of potential legal issues related to their service (e.g., contractual liability, tortious liability, judicial review)?
29. How are members made aware of relevant legislation (e.g., Privacy Act, Access to Information Act, Conflict of Interest rules)?

Support

30. Is the SAB supported by a secretariat?
31. Where is it located within the department's organisational structure?
32. What resources are available (number of PY, level/function of officials, budget, etc.)?
33. Does the SAB have a budget? If so, what is it? and how is it managed?
34. How are members compensated (annual retainer, daily rate, expenses, etc.)?

Impact

35. What criteria are used to assess the success of the SAB?
36. What types of actions has the department taken as a result of SAB recommendations?
37. What are the pressing issues related to the operation of the SAB?
 - a. From the department's perspective?
 - b. In your opinion, from the members' perspective?
38. What makes your SAB work (or not work) from the department's perspective?

Other Comments

Please provide additional comments which you believe may be useful in this exercise.

APPENDIX 2.1 - PHASE II SUMMARY REPORT

Summary of Input Received from Consultations with Science Advisory Bodies and Deputy Ministers

Following the first phase of our study on science advisory bodies (SABs) (Appendix 1), CSTA members conducted consultations with members of SABs and with Deputy Ministers. This document addresses many of the same issues addressed in Phase I of our examination, as well as additional issues, from the perspectives of SAB members and Deputy Ministers. This document provides a summary of the input we received from them based on the series of questions that can be found at the end of this document. Comments are not attributed to individual Deputy Ministers, SAB members, or SABs.

MANDATE

Specific SAB mandates and areas of study are extremely diverse. All SABs focus on departmental and specific S&T issues facing departments. Approximately half of SABs are mandated to provide advice on departmental plans and priorities, and the allocation of resources. One SAB stated that it contributes to departmental priorities and policies through its recommendations to the Minister. Some SABs noted that their participation in these types of activities is ad hoc and typically involves only a broad review of departmental proposals. Others were uncertain as to their roles in this area.

Only a few SABs are involved in the evaluation of in-house S&T. Two SABs indicated that they provide advice on the relevance of departmental S&T and one takes part in the assessment of research quality. In addition, two SABs noted that they provide guidance on research priorities and two participate in peer review processes

REPORTING RELATIONSHIP

While the majority of SABs formally report to Ministers, few have regular contact with Ministers. SABs often report directly to Deputy Ministers, a President (in the case of an agency), or an Assistant Deputy Minister. Some SABs noted that they have excellent access to, and working relationships with, these officials, while others have little interaction with them. SAB members and Deputy Ministers agreed that direct access and strong relationships are necessary to ensure that the SABs' advice is taken into consideration. SABs and Deputy Ministers called for more interaction between SABs and senior departmental officials and Ministers. Many also recommended that senior government officials, including Deputy Ministers, participate on a regular basis in SAB meetings.

A number of departments provide feedback to SABs on how their recommendations have been implemented. In several cases, the Deputy Minister formally responds to board recommendations, and provides regular updates on departmental progress in implementing the recommendations. Two SABs wrote that the Minister or President provides formal feedback at SAB meetings. Those SABs not receiving regular feedback from the Minister and senior officials called for improved efforts in this area.

MEMBERSHIP

The composition of SABs varies considerably. While some SABs are dominated by members drawn from industry, others have a more diverse membership drawn from universities, non-governmental organizations (NGOs), industry, and in some cases, government. Only two SABs include members from the general public. SABs agreed, however, that members should be selected on the basis of personal competence, experience relevant to the mandate of the SAB and commitment to serve. SABs and Deputy Ministers consider a broad range of perspectives and expertise an asset.

All SABs reviewed include members with scientific backgrounds. For the majority of SABs, however, this is not a prerequisite for membership. SABs that specifically require membership from the scientific community note that representatives are chosen based on their strong scientific credentials in their chosen fields. Efforts are made to ensure that representation includes a cross-section of appropriate scientific disciplines and stakeholder groups, with consideration being given to sectoral, geographic, gender and language balance. Some Deputy Minister encouraged the expansion of representation to include more “policy thinkers and practitioners”, NGOs, and Aboriginal people.

The process for appointment of members varies. In some cases, potential candidates are identified jointly by the SAB chair and high-ranking departmental officials such as an Assistant Deputy Minister or Deputy Minister. Final decisions are made by these officials in some departments, or by the Minister in others. For one SAB, members are appointed by Order-in-Council through the Minister’s office without board consultation.

The independence of SABs and their members is also an important factor. SABs agreed that members should not serve as lobbyists for the industry, institution, or organization with which they are affiliated. At the same time, SABs noted that they should avoid becoming “recruited or captured” by departments.

OPERATIONS

Most SABs meet two to six times a year, with individual members spending between 4 and 20 days each year on SAB business. This includes time involved in meetings, working groups and sub-committees, and preparatory work for the meetings. A suggestion was made that telephone conference calls could be used more often to engage SABs on pressing or immediate issues.

SABs typically use sub-committees, expert panels, presentations by departmental officials, public consultations, conferences, workshops, and external studies to support their deliberations and advice. SAB members pointed to the value of facility tours as a means of improving their understanding of how the department operates and the S&T challenges it faces. SAB members and Deputy Ministers also acknowledged the importance of interaction between SABs and science managers and researchers.

There are mixed views on the use of sunset clauses for SABs. Several SABs noted that sunset clauses are not necessary since SABs operate only at the pleasure of the departments. As such, departments may choose to terminate a SAB at any time. On the other hand, some SABs felt that there should not be sunset clauses. One SAB maintained that there should be a permanent role for SABs in

all departments, or at minimum, departments should employ some type of mechanism that provides external science advice.

Meetings and Agenda

Meeting agendas are generally developed jointly between the SAB (specifically the Chair or Vice Chair) and senior departmental officials. In several cases, the department or secretariat prepares the initial agenda and members are canvassed to identify additional issues. One Deputy Minister called for SABs and Deputy Ministers to mutually agree on agendas, in order to ensure that the work of SABs is both relevant and useful to departmental priorities and the critical issues it faces over longer time horizons (2 to 3 years). On occasion, some Ministers request that SABs provide advice on specific issues.

Some SABs identified themselves as being proactive in establishing work plans and agendas, while others indicated that they operate in a reactive manner by responding to specific issues and documents presented by senior departmental officials. Many SABs expressed interest in having more input on their work plans and agendas. Some also suggested they require more time to consider critical issues in further depth. Only one SAB indicated that it creates its own agenda, while another indicated that it has conducted annual planning sessions to determine primary agenda topics.

SBDAs do not have a consistent approach with respect to the involvement of senior departmental officials, particularly Deputy Ministers. For most SABs, the Deputy Minister, the Assistant Deputy Minister(s), or other senior departmental officials attend meetings in whole, or in part, to raise issues requiring SAB advice and to ensure that they are aware of SAB deliberations and advice. Other departmental officials frequently participate in meetings at the request of SABs to provide information, answer questions, or clarify issues. In one case, senior departmental officials participate as ex-officio members. Deputy Ministers indicated that they value the interactions with SABs as it provides them with a sounding board and assists them in identifying and responding to emerging S&T issues.

Support

There was agreement that the existing staff levels and financial resources for SABs are sufficient. Only one SAB felt that the current support levels are insufficient. However, a number of SABs pointed out that additional support (financial and other resources) must be made available if SABs become more involved in providing advice on departmental strategic issues and emerging strategic issues.

The cost of operating SABs varies enormously.¹ Departments typically reimburse SAB members for costs incurred in fulfilling their responsibilities as members. SAB members do not receive

¹ Specific information on the support and remuneration of SABs can be found in Appendix I.

compensation for the time they devote to SAB business. However, SABs suggested that departments need to recognize the value of these contributions.

IMPACT

Key results, impacts, and outcomes are different for each SAB. In terms of impact, several SABs identified a number of achievements, including reports, publications, and specific activities. However, most SABs noted that the true measure of impact is the extent of SAB influence. In particular, SABs referred to the awareness and receptivity of senior departmental officials to the issues and recommendations raised by SABs, and the incorporation of their advice into departmental plans and actions.

When asked why each SAB “works”, a number of SABs indicated that the key to their success was the dedication of members, and the commitment and responsiveness of senior departmental officials, secretariats, and other departmental employees. The willingness of departments to accept and use the advice provided by SABs was also highlighted. Other success factors included the range of interests, knowledge and experience that members bring to the table; the ability of SABs to engage in candid, open and respectful debate; and the level of independence of the SAB.

There is a common desire among SABs to review their progress in annual reports and to assess their work using measures such as benchmarking. One SAB conducted a formal evaluation of its operations. In addition to reviewing the effectiveness of the SAB in light of its mandate, the evaluation considered the adequacy and structure of the SAB and the appropriateness of the structure of the board in light of its future roles. Another SAB is planning a self-evaluation in the coming year.

TRANSPARENCY

Balancing transparency and confidentiality is an important issue for many SABs. Most SABs reported that meetings are not open to the public. Some cited the sensitive, strategic or confidential nature of their work and/or recommendations as the reason. One SAB conducts open meetings followed by an in camera session at the conclusion. A number of SABs reported that improving transparency and opportunities for public input are desirable, although exceptions should be made in cases where confidentiality is required.

Many SABs keep minutes of meetings, which are then distributed amongst members or to appropriate departmental officials. SAB decisions and recommendations are frequently communicated to departmental staff through senior officials. In some cases, minutes and board reports are made public.

COOPERATION

In light of the growing number of horizontal issues in S&T, SABs and Deputy Ministers agreed that it is important for SABs to develop better linkages with other SABs. They suggested that SABs should share best practices and work collaboratively in the identification of, and response to, departmental and horizontal S&T issues. A number of SABs proposed that the CSTA could facilitate these

linkages, and noted the value that the CSTA has provided to date in this area. Other proposals included cross-appointments of members, annual meetings of SAB executives, Deputy Ministers and Assistant Deputy Ministers. Only one SAB indicated that the issues it deals with are exclusive to its department, and as such, does not see value in establishing linkages with other SABs.

Among Deputy Ministers, there was an interest in having SABs engage external partners and stakeholders on S&T issues. Without adopting an advocacy role, it was also proposed that SABs could assist departments raise the awareness of federally-performed S&T and key S&T issues.

Some of the horizontal issues raised by Deputy Ministers and SAB members identified the following horizontal S&T issues as being of strategic importance: internal science capacity; federal S&T priority setting; excellence of government S&T; science advice; international S&T; funding for federal S&T; recruitment and retention of qualified scientific personnel; environmental issues (climate change, water, energy); biotechnology; and, S&T in the North.

**APPENDIX 2.2 - LIST OF DEPUTY MINISTERS AND SCIENCE
ADVISORY BODIES CONSULTED**

List of Deputy Ministers and SAB Members Consulted

<i>SBDA</i>	<i>Science Advisory Body</i>
Agriculture and Agri-Food Canada	Research Branch Advisory Committee
Fisheries and Oceans	Science Advisory Council
Indian Affairs and Northern Development	Canadian Polar Commission
National Defence	Defence Science Advisory Board
Environment Canada	Science and Technology Advisory Board
Health Canada	Health Protection Branch (HPB) Science Advisory Board
Industry Portfolio	Advisory Council on Science and Technology Communications Research Centre – Board of Directors National Research Council – Governing Council
Natural Resources Canada	Minister’s Advisory Council on Science and Technology

**APPENDIX 2.3 - KEY QUESTIONS FOR SCIENCE ADVISORY
BODIES**

Key Questions for SABs

MANDATE

1. What are the major problems/issues being addressed by your SAB?
2. Does the SAB primarily respond to requests from departmental management or the Minister, is it proactive in defining the issues to be examined, the meeting agendas, etc.? To what extent have issues been identified by SABs?
3. Is the focus of the SAB restricted to science and technology (S&T) issues facing the department, or does it also deal with broader policy issues from an S&T perspective?
4. Is your SAB involved in defining and addressing key departmental/agency S&T priorities, policies, problems/issues, etc.? If so, how? In particular, how is your SAB involved in defining S&T goals and priorities? If your SAB is not involved in defining S&T priorities, how are they defined?
5. Is your SAB involved in evaluating the relevance or excellence of the Department's in-house S&T operations and the S&T it performs?

MEMBERSHIP

6. What is the composition of your SAB (e.g. does the membership include representatives from academe, industry and non-governmental sectors)? How many SAB members have a scientific background? How many are lay members of the public?
7. On what basis are members selected (e.g. excellence/availability/ability to commit, etc.)?

REPORTING RELATIONSHIP

8. To whom does the SAB report?
9. To what extent does the SAB have access to this person?
10. To whom do you think the SAB should report (and have access to) and why?

11. How is your SAB informed of departmental actions in response to the SAB's recommendations?

OPERATIONS

12. In your opinion, does your SAB meet often enough? Are there expectations with respect to participation or attendance of SAB members? How many days/year do you devote to the SAB?
13. In conducting the SAB's work, what mechanisms do you find most effective (e.g., striking sub-committees, study panels, commissioning studies, public consultations, etc.)?
14. In your opinion, should there be a sunset clause for SABs (i.e. the mandate of SABs would be of a limited duration and require a conscious decision on the part of the Minister/department to renew the mandate)?
15. How are the agendas for SAB meetings developed? Do you have input?
16. How do departmental officials participate in SAB meetings?
17. How important is transparency/confidentiality with respect to the work of your SAB, and transparency/confidentiality with respect to whom? How is the work of your SAB communicated to those in the Department? to other key stakeholders? Are SAB meetings open to observers (whom?) and the public?
18. In order to fulfill your mandate, should there be linkages between your SAB and other SABs? If so, how should they relate?

SUPPORT

19. Is there an appropriate level of support for your SAB (e.g., staff, financial support, etc.)?
20. What is your estimate of the annual cost of your contribution to the SAB including an estimate of the cost of your time?

IMPACT

21. What do you see as the key results, impacts, outcomes, etc. of the work of the SAB?
22. How do you assess the performance of the SAB? What criteria are used?
23. Do you believe that your SAB has had an influence on departmental policies and directions?
24. What types of actions has the department taken as a result of SAB recommendations?
25. Overall, what makes your SAB "work" (or not work)?

HORIZONTAL S&T ISSUES

26. What, in your opinion, are the key horizontal issues facing government S&T?
27. What, if anything, is your SAB doing to address these issues?

FINAL THOUGHTS ON SAB OPERATIONS AND EFFECTIVENESS

28. What do you see as being necessary to improve the efficiency and effectiveness of your SAB?
29. How can the contribution of SABs to federal S&T be improved?

APPENDIX 2.4 -KEY QUESTIONS FOR DEPUTY MINISTERS

Key Questions for Deputy Ministers

1. Does your science advisory body (SAB), as currently structured, provide value to you and your organization? If so, why? If not, why not?
2. Based on your experience throughout government, what specific recommendations do you have that could lead to an improvement in the operation and a greater contribution of SABs?
3. What do you see as the critical horizontal science and technology issues facing the federal government in the coming years?
4. Has your SAB performed to your expectations?
5. Do you feel that you are close enough to the SAB to achieve meaningful exchanges of views, both formally and informally?