Government of Canada
Gouvernement du Canada

A Framework for Science and Technology Advice

Principles and Guidelines for the Effective Use of Science and Technology Advice in Government Decision Making

Canada

The Government of Canada has adopted a new Framework for Science and Technology Advice. The Framework includes a series of principles, guidelines and implementation measures to improve the use of science and technology advice in government. These principles and guidelines provide guidance to federal government departments and agencies on how to anticipate science-based issues, and how to secure and use sound science advice to make informed decisions.

The emergence of the knowledge-based society has underscored the importance of sound science advice as a key input to government policy formation and regulatory decisions. Science and technology now affect most core government functions. As we enter the 21st century, the government faces increasingly complex issues. Decisions on such issues often have profound impacts on societies and economies. Science is one of the most powerful tools the government has to help make these decisions. Adherence to the Framework for Science and Technology Advice will ensure that federal departments and agencies can demonstrate, in an open and transparent fashion, that key decisions have been based on science advice.

The Framework draws from a report of the Council of Science and Technology Advisors (CSTA), *Science Advice for Government Effectiveness (SAGE)*, and reflects extensive consultations within government and with external stakeholders.

Science Advice Principles

The six principles summarized here will guide the actions of federal government departments and agencies. The Framework also includes guidelines to ensure adherence to the principles.

Principle I
Early Issue Identification

Those issues requiring science advice will be identified as early as possible to facilitate timely and informed decision making. Departments must maintain strong linkages with, and actively seek science advice from, an extensive advisory base that includes internal, external and international sources.

Principle II
Inclusiveness

Advice will be drawn from a variety of scientific sources and from experts in relevant disciplines, to capture the full diversity of scientific schools of thought and opinion. A diverse science advisory base enhances the debate by considering conflicting viewpoints and drawing in scientific findings that might not otherwise be considered. Inclusiveness can also reduce the impact of conflicts of interest or biases that may exist in science advice.

Principle III
Sound Science and Science Advice

The government will employ measures to ensure the quality, integrity, and objectivity of the science and science advice it uses, and ensure that

science advice is considered in decision making. Due diligence procedures, open publication of scientific findings and analyses, and improved communication between scientists and policy makers are critical to ensuring the quality and reliability of science and science advice.

Principle IV
Uncertainty and Risk

Science in public policy always contains uncertainty that must be assessed, communicated and managed. Scientists and science advisors will ensure that scientific uncertainty is explicitly identified in scientific results and is communicated in plain language to decision makers. Departments will employ risk management approaches to identify scientifically sound, cost-effective, integrated actions that reduce risks while taking into account social, cultural, ethical, political, economic and legal considerations.

Principle V
Transparency and Openness

Government departments are expected to employ decision-making processes that are open, as well as transparent, to stakeholders and the public. Transparency involves communication of government decisions, and public access to scientific findings and advice. Openness involves early and ongoing consultation with stakeholder groups, as well as public discourse, to ensure that public concerns are considered in decisions on complex or controversial science-based issues.

Principle VI
Review

The government will subsequently review key science-based decisions to determine whether recent advances in scientific knowledge have an impact on the science advice used to inform the decision.

Implementation

The Framework also includes implementation measures to ensure that the science advice principles and guidelines are adopted and adhered to throughout government. The Framework requires science-based departments and agencies to appoint a "science advice champion" to be accountable for the Framework, report on the adoption and effectiveness of the Framework in the federal Science and Technology Annual Report, and participate in evaluations of the Framework.

For copies of the complete Framework for Science and Technology Advice, which includes principles, guidelines and implementation measures, please contact:

Information Distribution Centre
Communications Branch
Industry Canada
Room 205D, West Tower, 235 Queen Street
Ottawa, ON K1A 0H5

Tel.: (613) 947-7466
Fax: (613) 954-6436
E-mail: **publications@ic.gc.ca**

Cat. No. C2-501/2000
ISBN 0-662-65003-4
53130B