

# Performance Measurement Strategy

Measuring performance is a key element of modern public management. It helps us determine the effectiveness and efficiency of selected strategies, assists in setting priorities, enables more effective demonstration of program impacts, and ultimately is intended to improve Departmental performance.

Some aspects of performance have always been measured. Inputs of monetary and human resources are generally tracked, and outputs such as reports produced or inspections carried out have also been counted. A major challenge in moving to results-based management is the development of measures of outcomes, that is, of the impacts of programs and services on the public and other clients.

## *Challenges for Performance Measurement*

**Changes in environmental conditions often take decades to become visible.** Most environmental issues progress through a cycle that extends 25 years or more. For example, acid rain was known to have significant effects in the 1970s, yet it was not until 1985 that agreements with the provinces could be reached on cutting emissions levels, and these reductions continue to be implemented now. The actions of Environment Canada and its partners have been successful in reducing emissions and some improvement in affected lakes has been seen, however, other areas continue to deteriorate and additional controls may yet be required. The length of this issue cycle poses difficulties for performance measurement. If an indicator of the health of aquatic ecosystems is used, it would have shown declines for many years despite effective action by the department. However, if measures of intermediate outcomes are used exclusively they may give insufficient evidence of the improvement to the environment.

**Attribution is difficult in the areas of environment and sustainable development because of the number of players that must be involved to successfully implement solutions.** In part this is because jurisdiction is shared across government and between levels of government. But many issues also require the cooperation of other countries, of Aboriginal people, of industry, of community groups and of individual Canadians. Environment Canada has an important role to play in bringing together these partners and ensuring they work together toward the ultimate objective. The challenge is how to attribute responsibility for success in cases where the benefits of joint action may

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not have been realized without Environment Canada's intervention, and yet, the Department has certainly not achieved the result on its own.

**Harms avoided through changed behaviour and preventative action are difficult to demonstrate.** A large and increasing portion of Environment Canada's work is devoted to preventing various harms from occurring. This includes the provision of weather warnings, advice on pollution prevention and eco-efficiency, and the assessment of substances before they enter the marketplace. It is impossible to say with certainty what effects would have occurred had such preventive action not been taken. While the wisdom of prevention over remediation is obvious (we need only look to the cost of cleaning up a single contaminated site or spill), the benefits of action after the fact are easier to show.

**Good measures of the impacts of scientific and technological research are not yet available.** For most issues, a key strategy involves using Environment Canada's expertise to increase understanding of the nature of environmental problems, their causes, and the effects on health, property or the environment. This understanding is crucial in building support for regulatory or other control actions, for engaging domestic and international partners, and for selecting the most efficient and effective solutions. Many organizations that engage in scientific research are struggling with this problem of measuring the impacts of scientific research efforts.

**Many of the final outcomes that are anticipated with the achievement of sustainable development have not yet been clearly defined.** While the Government of Canada and other governments around the world have adopted the goal of sustainable development, there is a lack of clarity and consensus as to what the specific outcomes associated with sustainable development should be, and how progress toward this goal might be measured.

### *Our Strategy*

Environment Canada's performance measurement strategy is designed to provide meaningful information to Parliament and the public on progress toward Departmental objectives while recognizing the above constraints. Specifically, Environment Canada will:

**Continue to develop and report measures of the state of the environment, reduction of harm to human health and safety, and economic efficiency.** These represent the ultimate outcomes of

Environment Canada's activities — making sustainable development a reality. Our success as a department will inevitably rest on our ability to effect positive change in these areas. Since many of the Department's activities serve more than one result, outcome measures are needed to assess the combined effects of many program activities.

**Develop measures of intermediate outcomes that are more directly attributable to Departmental actions.** Ultimate outcomes for environmental issues are typically achieved over many years and through the actions of many players. Intermediate outcomes are effects of Environment Canada's programs that are considered necessary for achieving ultimate outcomes, but which may not themselves provide direct public benefit.

**Adjust measures of intermediate outcomes periodically as issues mature and strategies shift.** As environmental issues mature the strategies used by Environment Canada change. For example, more effort is placed on building public awareness during the middle phase of an issue, once the causes and effects are sufficiently understood, but controls are not yet in place. Once controls have been implemented and new practices have been integrated into routines, this activity will decrease. Performance measures should be appropriate to the stage of the issue and to the strategy that the Department has selected.

**Report measures of outputs where adequate outcome measures are not available.** Measures of outputs provide valuable performance information for internal management, such as for assessing program efficiency. However, output measures are not a replacement for measures of outcomes as they do not provide a basis for choosing among alternate strategies, or for determining whether programs are having the desired effects. Development of good measures of program outcomes is continuing, but in some cases, measures of outputs may need to be used where better measures are not yet available.

**Use indirect measures of the impacts of science.** Since much of Environment Canada's contribution is dependent on the quality of its scientific research and development, work is underway to develop measures of the impacts of this activity. Several types of indirect measures have been proposed, based on: the effectiveness of subsequent policies; the quality of services (for example, weather forecasting, whose accuracy depends on understanding how the atmosphere works); how well the public understands environmental issues; and the behavioural changes Canadians make in response to science.

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**The real value of performance measures lies in promoting a culture of continuous performance improvement.**

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**Emphasize the integration of performance measures into decision making.** Reporting performance measures externally is important, but their real value lies in promoting a culture of continuous performance improvement within the Department. To do this measures must become part of management decision making and be "owned" by program managers. The process of determining what constitutes valid measures of performance forces a degree of rigour in thinking about program activities that can inform priority setting and the focusing of effort.

**Supplement performance measures with rigorous qualitative assessments to provide a more complete picture of Departmental performance.** Not everything that is important can be measured, and not everything that can be measured is important. Well chosen examples can often convey a better impression of the impact of Departmental activities than any number of measures.

**Survey public, client and staff opinions of Departmental performance, especially in areas where provision of services is paramount.** A significant portion of Environment Canada's programs involve the provision of services to the public or clients (including other federal departments and agencies). One of the best ways to determine whether intended benefits are being achieved is to use opinion surveys and other forms of consultation with the public and clients. A similar approach may also be used for internal administration and other service activities that provide their services within the Department.

**Use program evaluations and special studies to clarify the relationship between Departmental actions and outcomes.** Performance measures are derived from an understanding of the logic of program operation, that is, the relations of causation and influence that connect Departmental actions to ultimate effects. For environmental issues these relations are often complex. Many factors, only a few of which are under the Department's control, affect the achievement of ultimate outcomes. Program evaluations and other studies help to identify these relations. They also provide a much more detailed picture of program performance than is possible through a small set of performance measures.