



Manager's Guide

to

Implementing Performance-based Management

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I. Introduction

How will this guide help you?

The purpose of the *Guide* is to:

- help Environment Canada managers develop a basic understanding of how to develop a Performance Framework
- provide suggestions for identifying key results areas, performance measures and measurement strategies
- develop ideas for credible performance reporting.

What is Performance-based Management?

Simply stated, performance-based management is about managing for results. In a government setting, this implies that the expected results to be achieved through various programs, policies and services should be clearly articulated, that meaningful measures of success are selected and that accomplishments achieved are reported in a fair and credible manner. Performance information can be used to monitor the progress of a program, policy or service as well as to make decisions about their strategic objectives and resource allocations.

What is the need?

Public sector managers face increasing pressures from all sides to reduce costs, improve service levels, make progress towards the achievement of priority outcomes, and increase accountability. In order to accomplish these things, **a strong vision of success (goals) is vital**. At the outset, managers must clarify the vision and broad objectives that define the desired long-term impacts policies and programs were designed to achieve. From there they can identify and focus upon the short- and medium-term results that should contribute to achieving those impacts and the measures that will

allow progress to be tracked and reported on over time.

In science-based departments, the difficulties in planning, measuring, and reporting performance are particularly acute. Science-related changes are often abstract and take place over considerable periods of time. For this reason, **it is in fact more important to articulate a clear success vision for environmental protection and sustainable development initiatives** than it would be for less complex programming.

What is the solution?

The required 'system' for performance-based management should provide for a precise articulation of priority results with an emphasis on addressing target group (client) needs. The approach should also allow all key delivery participants to 'own' the system (i.e. the people delivering the services believe that the performance system appropriately articulates their results, goals and values). The required system must be useful for all aspects of management including planning, priority setting, resource allocation, monitoring and adjustment. It should also be useful to all levels of management from senior executives right through to science managers and operating staff.

The system advocated in this *Guide*, that meets these requirements, is a seven-step analytical and interactive process. It commences with a clear articulation of a **Performance Framework** or "logic" model of the program - which answers the question "*what's our business?*" The Framework then serves as a basis for defining key performance areas, measures, measurement strategies and reporting

practices - answering the supplementary question "how's business?".

Why is it relevant to Environment Canada?

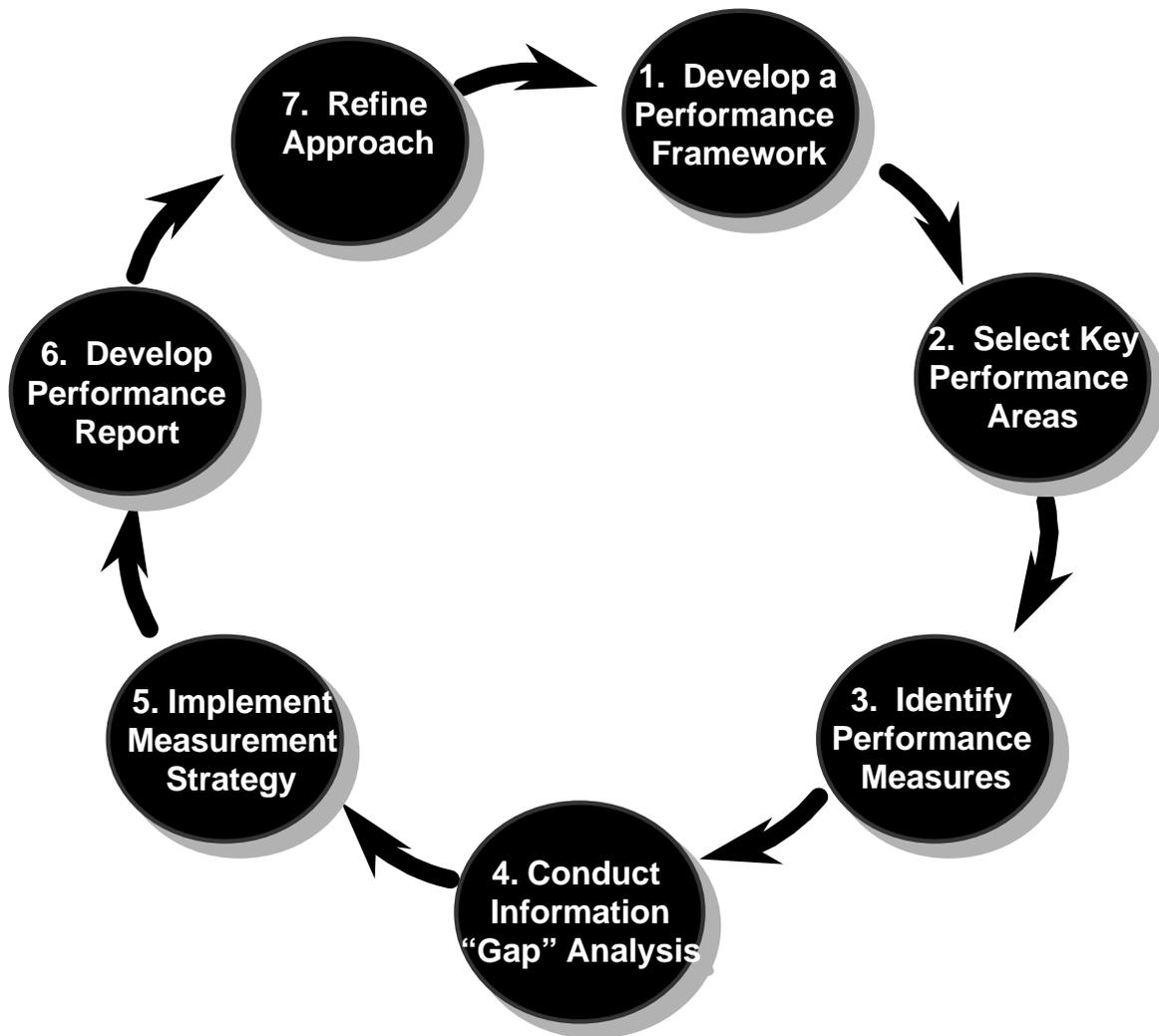
The approach recommended here can help managers respond to a number of specific concerns within Environment Canada:

- implementing the revised Planning, Reporting and Accountability Structure (PRAS)
- handling increased scrutiny of federal programs by groups such as the Office of the Auditor General and Commissioner of the Environment and Sustainable Development
- coping with the complexity inherent in national integration of highly decentralized programs
- meeting increased demands for service with stable or declining budgets.

Where can you go for help, advice and support?

The development of this *Guide* has been partially funded by the Departmental Learning Fund under the direction of the Commercialization and Management Practices Branch (CAMP), Corporate Services. The Branch has supported a number of departmental groups in implementing a performance-based approach through workshops, advice and assistance. As a next step, CAMP plans to develop a supplementary guide for managers that specifically links the use of the seven-step process to meeting the requirements of the departmental planning and reporting processes.

Exhibit 1: Steps to Performance-based Management



II. Overview of the Approach

What are the basic steps involved in implementing a Performance-based Management Approach?

Exhibit 1 shows a high level diagram of the performance-based management approach. This is a guideline, intended to show the overall process generically. Section III of this *Guide* provides a detailed description of the elements of each step.

Planning phase

Step 1: Develop a **Performance Framework** to describe what your program is all about. This involves a description of your organization's mission or key objectives, activities and outputs, reach (clients, co-delivery agents, stakeholders, etc.) and the desired intermediate and ultimate outcomes.

Step 2: Identify the most important elements, or **key performance areas**, which are most critical to understanding and assessing your program's success.

Measurement phase

Step 3: Select the most appropriate **performance measures**.

Step 4: Determine the "**gaps**" between what information you need and what's available.

Step 5: Develop and implement a **measurement strategy** to address the gaps.

Reporting and continuous improvement phase

Step 6: Develop a **performance report** which highlights what you **accomplished** and what you **learned**.

Step 7: Learn from your experience and **refine** your approach as required. Keep in mind that the development of a performance

management approach is an iterative process.

Exhibit 2: Generic Performance Framework

Mission Statement: Who does what to whom and why.				
■		●	◆	
RESOURCES		REACH	RESULTS	
How?		Who?	What do we want?	Ultimate outcomes
Activities	Outputs	Users / clients / co-deliverers / beneficiaries	Direct and intermediate outcomes	Ultimate outcomes
<p>What resources are required to run the program (people, \$, information, other assets)?</p> <p>What are the key activities carried out to achieve desired results?</p>	<p>What products or services do we provide?</p>	<p>Who must we influence to make progress to achieving our outcomes?</p> <p>Who must we work with or rely upon to help us achieve our desired results?</p> <p>What role do others play?</p> <p>Do we need to focus on specific groups or segments of the population in order to achieve results?</p>	<p>What level of client service do we want to provide? (Eg., - address needs - meet / exceed expectations).</p> <p>What influence do we want to exert on our key target group in the intermediate-term? (Eg., influence people's behaviour in order to increase awareness, understanding and knowledge; change attitudes / perceptions; or make decisions and take action.</p>	<p>Why does our program exist?</p> <p>What results do we ultimately want to achieve?</p> <p>What are the long term benefits, effects or states are we looking for?</p>
↑↑	↑↑	↑↑	↑↑	↑↑
<p>Influencing Factors</p> <p>What external forces / factors could affect the achievement of our desired results?</p>				

III. Step-by-Step Approach

Step 1:

Develop a Performance Framework

A **Performance Framework** (Exhibit 2) is a tool for developing a logical description of a program¹. The Framework can be used as a description of how Environment Canada translates its objectives into measurable results. It describes:

- the “**results**” that EC programs aim to achieve in terms of a continuum of outcomes from near-term to ultimate
- the “**reach**” of the program or its intended scope of influence
- the “**resources**” being utilized to perform activities and create outputs.

The Framework focuses directly on management needs by responding to stakeholders' key questions about the value-added of a program in a straight forward manner:

- How have results been accomplished?
- Who has been influenced?
- What has been accomplished? Why?
- What are the relationships between resource utilization, reach and accomplishments?

Elements of the Framework

The Performance Framework approach simplifies government programs and services into the following categories:

¹This guide uses *programs* as the case example for the Performance Framework approach. The approach applies equally to a *policy, service or organizational area*.

- mission statement
- inputs
- activities
- outputs
- reach
- intermediate outcomes
- ultimate impacts
- influencing factors

A brief description of these categories follows. The reader is then encouraged to complete a Performance Framework following a defined process.

Overall mission

A **mission statement** should describe '*who does what to whom and why*' in an organizational entity. It basically reflects the global objectives and mandate of an organization and provides the strategic direction for a policy or program

HOW (resources)

Inputs are the funds, labour, skill types and core competencies required to carry out activities.

Activities are the specific deeds, tasks or actions that contribute to the production of goods or provisions services through which results are achieved. Activities typically generate costs of some kind. These need to be articulated in precise terms along with the activities performed. For example EC activities might include:

- project management;
- develop educational materials;
- feasibility studies;

- meetings with key stakeholders;
- inspections; and
- review project applications.

Outputs are the direct products and services produced through program activities. Outputs can include communication contacts which are produced and consumed instantaneously and they can include hard copy agreements, contracts or other physical evidence which is preserved over time. Outputs are typically considered to flow outside of a service/program function, however, they could include internal communications, plans or services. For example, EC outputs could include:

- financial assistance to community-based organizations;
- voluntary codes of practice;
- emissions standards;
- public awareness materials;
- regulations; and
- legislation.

WHO? (reach)

Reach is defined as the group, or groups, which are reached by program/service outputs. Clearly this may include clients as well as internal staff, co-delivery agents and other stakeholders and beneficiaries. For example EC's reach could include:

Primary Clients

- industry, academic institutions

Co-delivery Agents/Partners

- other government departments

- provincial and municipal governments

Other Stakeholders

- environmental groups
- service clubs, associations.

Reach is a scoping category in the Framework. It identifies the breadth and depth of influence being targeted to bring about change. It is often useful to think about primary and secondary groups being influenced by the program's outputs.

*WHAT do we want?
(results)*

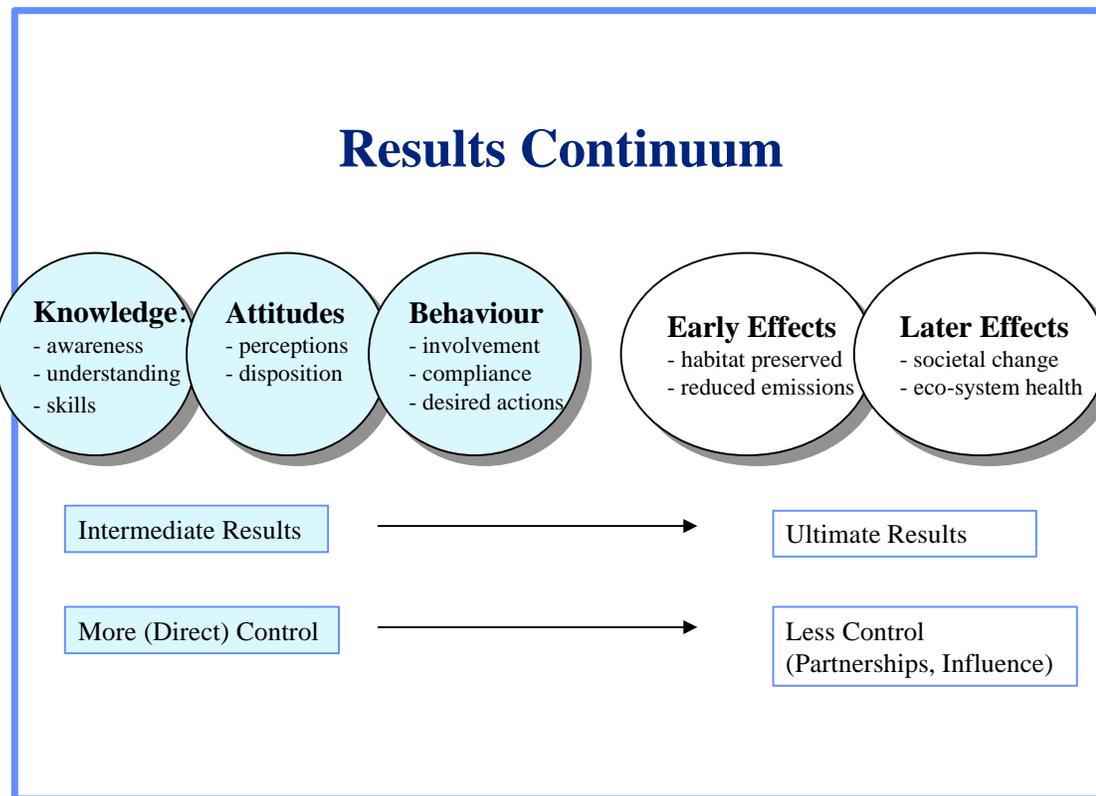
Intermediate outcomes occur in the group(s) immediately reached by program outputs and/or on the environment. Typically, the outcomes are a perceptual, attitudinal and/or behavioral response on the part of the group(s) reached; and an improvement in the health of the natural environment. This response or improvement then leads to longer-term outcomes and impacts along a causal chain (see Exhibit 3 which follows). For example direct outcomes could include:

- increased awareness, understanding, skills, and knowledge;
- people practicing environmentally responsible behaviour (e.g., home energy conservation, proper disposal of pesticides, protection of native species/habitats);
- increased capacity of community-based groups to take action on issues of national importance;
- land use practices which demonstrate stewardship;
- reductions in release of toxic substances; and

- increase in populations of endangered species.

This is a key category of the Performance Framework. It represents the understood “theory” of how a programs tangible products and services bring about or contribute to broad societal or environmental change.

Exhibit 3



The **ultimate outcomes** of a program should relate to the mission and mandate of the program provider (e.g., if the mission relates to the reduction of negative impacts of human activity on the atmosphere, then the ultimate outcomes should

show decreases in the use of ozone-depleting substances). In all cases, the ultimate impacts reflect the broader strategic objectives of EC reflecting its role in contributing to the environment.

Influencing Factors

In addition to the above seven categories, it is important to consider **outside influences** which effect every category but which become most important in the reach, intermediate, and ultimate outcomes areas. Indeed, outside influences such as the state of the economy or political environment can have an overwhelming influence on program/service performance — especially for initiatives which often have results occurring over long-term periods.

Helpful tips!

Advice on “How to” develop a Performance Measurement Framework

- involve key managers and staff in the process (consider including key stakeholders as well)
- use a “facilitator” to guide you through the process. The Commercialization and Management Practices Branch can help you here.
- use the questions presented in the “Generic Performance Framework” presented in **Exhibit 2** as prompts
- plan on either a half or full day session depending on your group’s level of comfort with the concepts
- you may proceed through the Framework categories in whatever direction feels comfortable; experience has shown that when dealing with an established program it may be easier to start with activities and progress forward to results; when dealing with a new initiative it may be easier to start with the results you wish to achieve with specific target groups and work backwards to outputs and activities
- be sure to focus your attention on two categories - reach and intermediate results
- after completing the Framework, step back from it and assess its quality using the checklist of questions shown in **Exhibit 4**.
- refer to the sample performance framework in **Exhibit 5**. It has been developed based on EC’s goal to “contribute to ozone protection”.

Exhibit 4: Performance Framework Discussion Questions

1. Logical Consistency	<ul style="list-style-type: none"> • Is there a logical consistency between the strategic goal/mission and ultimate results statements?
2. Controllable/External	<ul style="list-style-type: none"> • Are intermediate results within the scope of EC's influence? What other external factors contribute to the outcomes?
3. Timeframe/Clarify	<ul style="list-style-type: none"> • Are the stated intermediate results achievable within a reasonable period of time? Are the results described as end states or conditions?
4. Players	<ul style="list-style-type: none"> • Do we have a clear focus on primary and secondary target groups?
5. Secondary Impacts	<ul style="list-style-type: none"> • To what extent must we watch for other significant consequences that may arise from our actions?
6. Approach/Outputs	<ul style="list-style-type: none"> • Have we got a reasonable set of initiatives adequately resourced? • Can we link all activities to corresponding results? • What information, knowledge, skills are required to achieve strategic goals? • Are our outputs stated as tangible goods and services?
7. Balance	<ul style="list-style-type: none"> • Have we got an appropriate balance in the strategy among results expectations, reach and resources?
8. Service	<ul style="list-style-type: none"> • How important is client satisfaction to our initiative? Have we reflected these concerns in our intermediate results?
9. Learning	<ul style="list-style-type: none"> • What kinds of goals and targets are relevant to organizational learning and continuous improvement?

Exhibit 5: Example Performance Framework

Mission: Reduce the negative impacts of human activity on the atmosphere and help Canadians better understand, prevent and adapt to the consequences.			
■	●	◆	
RESOURCES	REACH	RESULTS	
HOW?	WHO?	WHAT do we want?	WHY?
Activities / inputs / outputs	Users / clients / co-deliverers / beneficiaries	Direct and intermediate outcomes	Ultimate outcomes
<p>\$, # employees, science/economic policy/negotiation skills, competencies</p> <p>Voluntary Approach Work with associations and industries in the development of voluntary codes of practice</p> <p>Information and Awareness Tools Assist with development and promulgation of labelling of products containing ozone-depleting substances</p> <p>Economic Instruments Contribute to the development and implementation of a 'CFC tax' or levy on producers and sellers of products containing ozone-depleting substances</p> <p>Direct Government Expenditures Provide financial incentives to organizations to replace ozone-depleting substances in their products</p> <p>Command and Control Ban the use of ozone-depleting substances in products used in marketplace</p>	<p>Institutional partners</p> <p>Industry</p> <p>Not-for-profit organizations</p> <p>Consumers</p>	<p>Improved awareness, understanding and opportunities for employing voluntary approaches</p> <p>Actions on the part of institutional partners to allow instruments to work</p> <p>Reduction in use of ozone-depleting substances Appropriate continuance of commercial / economic activity</p> <p>Preservation of marketplace fairness</p>	<p>Protection of the ozone layer</p>

Step 2:

Select Key Performance Areas

Once a Performance Framework has laid out the full spectrum of performance for a program/ organizational unit, the next step is to identify the most important elements to focus on in understanding and measuring your program's success. This is a critical step. It is not practical nor reasonable to consider developing a performance measurement system which addresses all aspects of a program. At this point the manager, ideally in consultation with others, needs to really hone in on the most critical aspects of the program, or **key performance areas**.

Identify the key performance areas which are critical to understanding and measuring your program's success

Key performance areas are those areas within the Performance Framework which require attention to ensure the overall success of the program. When selecting key performance areas, think about it not only from the standpoint of a manager trying to ensure success but also from the perspective of internal and external stakeholders, interest groups and clients. What dimensions of performance are the focus of their interest and concern?

In the approach advocated by this *Guide*, focus is initially centered on identifying the key intermediate outcomes being sought by the program. This focus is consistent with current performance reporting trends in the federal government which require departments to account for the value-added provided by their initiatives and programs. Within the context of the key outcomes selected, it is then useful, and important, to identify corresponding reach and resource concerns.

An important concept in selecting key performance areas is **to ensure that attention is focused**

across the performance spectrum and not isolated in certain areas. It is the attention to all dimensions of the Performance Framework that brings balance and coherence to one's monitoring and reporting efforts.

While we initially center our attention on the progress being made towards the achievement of desired outcomes, it is also crucial to monitor the performance of key processes (activities and outputs) that the program must excel at, in order to ensure success, and the scope of the program's influence relative desired target groups.

It may be useful to think in terms of what aspects you have to focus on to "tell a story" about what your program is trying to achieve and how you are going about it. In other words, you would want to describe **why** the program exists, **who** you are trying to influence/change, **what you want** to accomplish over the life of the program and **how** you are going to do it using what level of resources.

There may also be concerns related to relationships between categories in the Performance Framework. For example, the relationship between resources and outputs (efficiency) or the relationship between resources and outcomes (cost-effectiveness). Looking at the relationships of results, resources and reach can also allow for an analysis of strategic trade-offs (e.g., wide reach versus high impact results).

*Helpful tips!***How to identify Key Performance Areas**

Start by looking at the “**RESULTS**” column of your performance framework. Use the following questions as prompts:

- What difference do we want to make?
- From the Deputy Minister's and key stakeholder perspectives, what are the key intended results that should be monitored and reported?
- What are the key indicators of success that need to be monitored over time as the program moves towards the achievement of its longer term objectives?

Once you have determined the most critical elements related to your desired results, consider the “**REACH**” using the following questions:

- What are the key concerns related to coverage of target groups/locations and their acceptance of the program?
- Can you identify primary and secondary target groups whom the program is trying to influence?
- Who are the programs key “partners”? What commitments need to be managed/monitored?

Use the following questions to consider key aspects related “**RESOURCES**” in terms of your activities, outputs, as well as, management processes that are important in relation to achieving desired results.

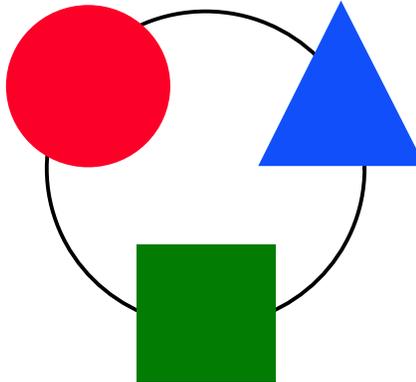
- What are the key business activities that the program must excel at, in order to ensure its success? Are there areas of risk or particular on-going concern?
- What areas within resource management must be managed/monitored to ensure that the program sustains its ability to change and improve? What is the importance of human, financial, technological resources considerations?

Refer to **Exhibit 6** which builds on the “contribution to ozone protection” example presented as **Exhibit 5** in Step 1. A key performance area would be the “increased awareness, understanding and opportunities for employing voluntary approaches”

Exhibit 6: New Voluntary Codes of Conduct

Reach

- evidence of progress in target industry sectors (critical mass)
- number of partners (consumers' associations involved in approach)



Results

- increased awareness, understanding and opportunities for employing voluntary approaches

Resources

- quality of research
- level of investment

Step 3:

Select Performance Measures

Through the development and use of performance measures, progress towards achieving desired results can be examined. Measures have been defined in many different ways. In this *Guide* a performance measure is simply an indicator that will tell us over time how well we are doing in each of the key performance areas.

Measures will tell us which direction we are going: up or down, forward or backward, getting better or worse or staying the same. Measures can be “quantitative” (i.e., quantities, percentages, unit costs, efficiency or productivity ratios, etc.) or “qualitative (i.e., attitudes, opinions, observed behaviours, etc).

Measures must support a story line - first for managers, then for internal and external stakeholders - which explains how the resources committed to specific objectives did or did not make a difference. Exhibit 7 provides sample performance measures selected for the example case, Environment Canada's contribution to controlling ozone depletion.

Helpful hints!

“Why managers should develop their performance measures?”

Performance measures should be developed by those responsible for the program. The reason for this is twofold. First, those responsible for the program are also likely to be the resident experts, and the best equipped to determine what constitutes good performance. Second, if the measure is to communicate to and motivate people, the measure should be something they can identify with, something which has meaning to them.

Exhibit 7: Performance Measures

Mission: Contribute to ozone protection.		
■	● ◆	◆
HOW?	WHO? WHERE? WHAT do we want?	WHY?
Activities / Outputs	Reach and Intermediate Outcomes	Ultimate Outcomes
<p>Voluntary Approach</p> <ul style="list-style-type: none"> the EC level of effort in fiscal year xx based on # FTES and \$000s. # initiatives for voluntary emission standards undertaken <p>Information and Awareness Tools</p> <ul style="list-style-type: none"> the EC level of effort in fiscal year xx based on # FTES and \$000s # initiatives undertaken in fiscal year xx. <p>Direct Government Expenditures</p> <ul style="list-style-type: none"> the EC level funding for fiscal year xx 	<p>New Voluntary Codes of Conduct</p> <ul style="list-style-type: none"> # industry groups agreeing to set-up voluntary emission targets for ozone-depleting substances x, y, z. acceptance and agreement by other nations at conference x to voluntary emission targets. <p>Universal Labelling</p> <ul style="list-style-type: none"> # and types of products containing ozone-depleting products x, y, z required to place warning information on their packaging. % level of compliance among products in these categories. <p>Reduction in use of ozone-depleting substances in products x, y, z</p> <ul style="list-style-type: none"> # organizations received incentive funding in fiscal year xx. # organizations that received financial incentive which have replaced or reduced their use of ozone-depleting substances. 	<p>Estimated level of consumption of ozone-depleting substances.</p>

Selecting Measures

In selecting measures it is always useful to consider the maxim “what gets measured, gets attention”. Choosing the wrong measures may create dysfunctional behaviour on the part of program personnel trying to optimize the wrong results.

Exhibit 8 identifies some common measures applicable to Environment Canada’s programs. This may be a useful starting point for generating your own versions of key measures.

While creating measures may not be easy, many represent intuitive judgements already made about program quality. Why is this program important? Is this program helping people? How would we know? A common difficulty lies more in quantifying “good” or “helpful”, or selecting a single measure which captures the essence of overall performance.

Choosing measures is not an exact science. The process that managers go through to identify their measures is as important as the final list of measures created. Done well, this process can build commitment for focusing attention on progress being made towards success.

Good performance measures should be meaningful, reliable, practical, and have an intended user. They should also be limited in number. Once you have developed a set of tentative measures, subject them to a screening test using the criteria set out in

Helpful tips!

“How to” select the most appropriate performance measures

- for each key performance area brainstorm a list of potential indicators for Results, Reach, and Resources using Exhibit 8 as a guide
- screen list of measures against criteria suggested in Exhibit 9.

Exhibit 8: Sample Performance Measures

Key Performance Areas	Sample Measures
Resources	<ul style="list-style-type: none"> • direct expenses by service/product • # FTEs by service/product • \$000's planned vs actual • # of potential contaminated sites • # of projects funded • \$ contribution (total) • # of inspections carried out • acreage of sensitive habitat restored • # of workshops/seminars held
Reach	<ul style="list-style-type: none"> • # of users • % of total target population • formal linkages (agreements, joint ventures, association memberships) • # of properties confirmed as contaminated sites • # of staff trained • # of property owners requesting assistance with water conservation strategies • \$ leveraged from other parties

Results (Intermediate)	<ul style="list-style-type: none">• level of client satisfaction (e.g. relevance, importance, accessibility, value-added)• level of awareness, understanding, and knowledge• change in perception/attitudes• # of contaminated sites cleaned up• % level of compliance with regulations• % storage of hazardous chemicals/waste converted to non-hazardous material• level of water consumption• % change in transit users• # of litres reduction in fuel consumption
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Exhibit 9: Screening Criteria for Performance Measures

Indicators	
MUST BE	Relevant <ul style="list-style-type: none"> • Meaningful • Significant (on its own and in combination with others) Valid <ul style="list-style-type: none"> • Measures what we want to measure
SHOULD BE	As cost-effective as possible (collection, analysis, reporting) Reliable across tests and over time Easy to communicate and therefore insightful
NICE TO BE	'Benchmarkable' to outside groups

Step 4:

Determine Information “Gaps”

Once key performance areas and measures have been selected, EC managers should systematically assess their present ability to collect and report information on the key performance areas. EC managers may discover that information which is currently being collected is not useful to reporting on performance of programs. **Exhibit 10** provides a model for conducting a “gap” analysis and includes notations as to important factors to be considered. The questions presented below should be considered with respect to each of the performance measures (selected in **Step 3**).

Exhibit 10: Gap Analysis

Key Performance Areas / Indicators	Existing Information / Sources	Gaps	Methods for Closing Gaps	Management Challenges / Resource Considerations	Recommended Next Steps
What measurement information is needed to measure success?	<p>What information is currently available to assess success?</p> <p>How good is the information (quality and consistency)?</p> <p>Where is the information available? How accessible is the information?</p> <p>What systems are in place to produce the information?</p>	What gaps exist between information needed to assess success and available information?	<p>What methods are needed to close gaps?</p> <p>Consider:</p> <ul style="list-style-type: none"> • surveys • electronic databases / files • case studies • focus groups • audits / evaluations 	<p>Who would gather the information? With what frequency?</p> <p>How much will be required in resources? What are the costs involved?</p> <p>How does one resolve trade-offs between depth of information, scope and costs?</p>	What actions are recommended as the next step in generating necessary performance information?

Step 5:

Develop and Implement “Measurement Strategy”

Once the "gaps" have been identified, it is important for EC managers to develop a measurement strategy giving consideration to the potential sources of information and data collection methods.

The term **sources** refers to the actual source of the data to be collected. Sources can include objective or quantitative data types such as financial records, statistics, contract documents, policies, procedures, and guidelines. Qualitative data is often derived from the attitudes, perceptions, and opinions of various individuals or groups such as program managers, staff, partners, collaborators, other stakeholders, as well as users/clients.

Methods refer to the techniques or combinations of approaches which can be used for measuring performance.

Environment Canada managers must tailor their measurement strategy to suit the specific circumstances of their program, organization or service area. For example, measurement methods selected for assessing performance of a general public awareness campaign would be different than methods used to assess direct outcomes of a training session targeted to a specific client group, or a funding incentive program targeted to industrial users of specific substances.

Methods for Assessing Resources

In order to simplify the discussion of performance measurement methods, the various approaches have been categorized according to the main elements of the performance framework. In other

words, measurement methods typically used for assessing processes related to activities and outputs, or the use of **Resources** would include:

- comprehensive audit;
- control self-assessment;
- financial analysis; and,
- work activity analysis.

Methods for Assessing Reach

Methods for measuring the **Reach** component of the performance framework typically use source data from user or participant records. This data may include tombstone data such as name, address, phone, fax, and e-mail, as well as data describing important aspects related to the user/client interaction with the program. For example, for programs providing financial assistance to individuals or firms, it is critical to capture when the assistance was provided, for what purpose, the level of funding.

Methods for Assessing Results

The **Results** components of the performance framework deal with the measurement of immediate and long-term impacts. The types of measurement methods commonly used to assess results include:

- surveys;
- expert opinions;
- modified peer review;
- case studies;
- socio-economic impact analysis;
- cost-benefit analysis; and,
- environmental impact analysis.

Helpful tips!

“How to” develop a measurement strategy:

- ! after completing the "gap" analysis in Step 4, identify data collection methods and sources
- ! refer to the chart presented as Exhibit 11 for sample indicators, methods, and sources.

Exhibit 11: Sample Measurement Strategy

Key Performance Area(s)	Measures	Methods / Sources
Resources	<ul style="list-style-type: none"> • FTEs • \$ expenditures • direct expenses 	<ul style="list-style-type: none"> • HR database/system • financial system • time reporting systems
Reach	<ul style="list-style-type: none"> • users • formal linkages 	<ul style="list-style-type: none"> • client/project database • legal documents / agreements / files
Results	<p>Self assessed impacts:</p> <ul style="list-style-type: none"> • awareness • understanding • knowledge • perception • decision • action 	<ul style="list-style-type: none"> • feedback mechanism (e.g., survey) • observation/documentation • tracking by third parties

Step 6:**Develop
Performance Report**

There are no hard and fast rules concerning the format for performance reports. The format will be governed by the requirements for information and of the manager or stakeholder and the type of information collected on the performance area. Building on the case presented in **Exhibits 5, 6, and 7**, a sample performance report is shown as **Exhibit 12**.

This sample report would produce actual performance information for a set period of time (e.g., a fiscal year quarter). Once a preliminary 'test' report has been produced, adjustments and refinements can be made.

Exhibit 12: Sample Performance Report

Vision:	At Environment Canada, we want to see a Canada where people make responsible decisions about the environment and where the environment is thereby sustained for the benefit of present and future generations.		
Business Line Goal:	Protect health and environment of Canadians by reducing negative impacts on the atmosphere and helping Canadians better understand and adapt to these consequences.		
Performance Expectations:	Consumption of ozone-depleting substances to be stabilized, reduced or eliminated and ozone layer begins to recover.		
Situation Assessment:	The state of the ozone layer is a relatively mature issue. The result of a decade of science, regulation, and global action is that we are beginning to see reduced loadings of ozone-depleting substances on the environment. However, recovery from the damage done will take decades. EC provides world-class scientific expertise and leadership in atmospheric chemistry aimed at supporting domestic priorities, as well as monitoring the ozone layer and understanding the effectiveness of international policies. EC's updated National Action Plan for CFCs is currently awaiting approval by the Canadian Council of Ministers of the Environment.		
Performance Accomplishments:			
Key Performance Area / Strategies	Resources		Reach and Results for FYxx
Voluntary approach Work with associations and industries in the development of voluntary codes of practice.	Planned	vs Actual	In fiscal year xx industry groups a and b agreed to set-up voluntary emission targets for ozone-depleting substances x, y, z which will be at or below international standards accepted and agreed by other nations at conference x.
	X FTEs \$000 x initiatives	Y FTEs \$000 Y initiatives	
	Comment: financial expenditures were less than expected because of increased cost sharing by industry associations.		
Information and awareness tools Assist with development and promulgation of labelling of products containing ozone-depleting substances.	Planned	vs Actual	A, b, c types of products containing ozone-depleting products x, y, z have been required to place warning information on their packaging. A random compliance check performed in fiscal year xx found x% compliance among products in these categories.
	X FTEs \$000 x initiatives	Y FTEs \$000 Y initiatives	
Direct government expenditures Provide financial incentives to organizations to replace ozone-depleting substances in their products.	<ul style="list-style-type: none"> the EC level funding for fiscal year xx was \$__ plus indirect costs of xx. 		CO ² emissions have continued to decline, but are not projected to reach Montreal Protocol levels by the required deadline set by the 1986 Montreal Protocol. X organizations receive incentive funding totaling \$xxxxxx in fiscal year xx. A follow-up review of x projects found that x% had successfully met project technical objectives leading to y% of those funded, replacing or reducing, their use of ozone-depleting substances. This amounts to an estimated overall reduction in substance use of x kilograms of CFCs, y kilograms and z etc. in fiscal year xx.
Lesson Learned:	Results from a random compliance check were disappointing for product type b. EC intends to modify its approach in the area of universal labelling by redirecting additional resources to manufacturers of product type b to offset labelling costs for a period of one year.		

Step 7:

Learn from Experience

The implementation of a performance-based management approach takes time. It should be viewed as an iterative process.

Performance management is being implemented throughout the world. Lessons learned from experience include:

- Top leadership support is clearly the critical element that can make or break strategic planning and performance measurement efforts;
- Personal involvement of senior line managers is critical;
- Participation of the relevant stakeholders is needed to develop useful plans and performance measures;
- Technical assistance in the design of useful performance measurement systems is often necessary but may not be available when needed;
- Uncertainty about how performance data will be used will inhibit the design of useful performance measurement systems; and,
- Start with a few measures and don't be too concerned if the measures are the "best" ones. The measures can be changed once a system is in place and employees are comfortable with it.

Exhibit 13: Conditions of Success

Environmental elements:

- Examination of earlier projects, such as planning Programming Budgeting Systems (PPBS), to analyze why they did not achieve their objectives.
- Promotion of new organizational arrangements which enhance the chances of success.
- Stimulating demand for performance measurement systems.

Human factor:

- Perseverance (since performance measurement is an ongoing process).
- Top management commitment and involvement.

Training needs:

- Familiarization with concepts linked to the underlying principles.
- On-the-job training derived from the practical framework: first learning to frame a diagnosis, to define objectives and to translate them into action. Then learning the capacity to construct performance indicators: although at first they may be abstract and general, they still have an instructive value. Using indicators in practice will also help to provide a better appreciation of their benefits and limitations.

Management points:

- Group involvement in designing a performance measurement system. Although a system is seen only as a part of the improvement process, group involvement is essential for the process as a whole.
- Feed-back of the information to the lower executive levels to obtain acceptance.

Methodological points:

- A uniform basis for data collection.
- Standards governing quality of information.
- An investigation of the relevant needs for information-seeking processes.
- Methodological expertise, creativity and "handmade" (and not standardized) solutions in the system design.
- Coherence and logical relationships in the different levels of the performance measurement systems. Otherwise, accuracy and relevance may be lost.
- Avoiding having one set of rules for one level of the organization and another for lower levels. This implies that a performance based budget process for an agency should be paralleled by performance oriented management within the agency. It will be a difficult task for higher levels to talk in terms of results and performance with heads of an organization which itself is rigidly governed by rules and regulations and does not pay much attention to results.
- Clear guidelines issued from the center.
- Awareness that it may not be easy to fit performance measurement systems in areas where there is inevitably limited management discretion, or where management performance cannot easily be related to outcomes.

IV. Conclusion

This guide has set out the basic **concepts** of a Performance Framework, provided you with suggestions on how to focus on key results areas, how to select appropriate performance measures and measurement processes, and finally how to create a credible performance report.

In planning, measuring and reporting on the performance on your program, it is critical to remember that this process takes time, perseverance and commitment by managers at all levels in your organization. It also requires consensus on the part of employees and collaboration with stakeholders.

A recent study confirms that "measurement-managed" organizations significantly outperform their peers. The same study also clarifies the benefits of a measurement strategy (see Exhibit 14).

Exhibit 14: The Value of Measurement Management

Indicators of Success	Measurement-managed Organizations (%)	Non-Measuring Organizations (%)
Clearer agreement on strategy among senior management	90	47
Effective communication of strategy to organization	60	8
Open sharing of information	71	30
Good cooperation and teamwork among management	85	38
High levels of self-monitoring of performance by employees	42	16
Willingness of employees to take risk	52	22
Source: National study of 203 firms by William Schiemann & Associates, Inc. cited in Seminar Profile: Using Measurement to Transform the Organization (New York: The Conference Board, Inc., 1996).		

Appendix A: Glossary

<i>Mission statement</i>	A mission statement should describe ' <i>who does what to whom and why</i> ' in an organizational entity. A mission reflects the global objectives and mandate of an organization for a policy or program.
<i>Results</i>	Effects, benefits or consequences of outputs in targetted groups over time.
<i>Ultimate outcomes</i>	The <i>ultimate outcomes</i> of a program relate to the mission and mandate of the program/service provider and the long-term effects, benefits, or consequences sought.
<i>Intermediate outcomes</i>	An <i>intermediate outcome</i> is the initial effect, benefit or consequence of an output. Typically, the outcomes are a perceptual, attitudinal and/or behavioral response on the part of the group(s) reached; and/or related to an improvement in the health of the natural environment.
<i>Reach</i>	<p><i>Reach</i> is defined as the group, or groups, which are influenced by activities and outputs. The reach category has been segmented into three major groups:</p> <ul style="list-style-type: none">• The <i>primary targets or clients</i> are the groups upon which the outward attention of the program/service is focused and which must be influenced to behave in a certain way in order for the program/service to achieve its mission.• <i>Co-deliverer agents, intermediaries</i> are groups which must be relied on to perform in such a way as to influence the primary targets (or clients) to

adopt the desired behaviour or they may deliver complementary services which help achieve direct, intermediate, or ultimate outcomes (e.g., standards bodies)

- *Stakeholders or beneficiaries* are groups which may benefit from the program / service.

Resources

Financial, human, physical, technical, information, products and processes used to achieve results.

Inputs

Inputs refer to the funds, labour skill types and core competences required to carry out activities.

Activities

Activities are specific deeds, tasks or actions that contribute to the production of goods or the provisions of services through which results are achieved.

Outputs

Outputs are the direct products and services produced through program activities.

Performance measure

An indicator that provides information on the extent to which results are being achieved.

Influencing factors

Outside influences affect the achievements of activities and outputs but are most important in the reach and outcomes areas. Outside influences such as the state of the economy or political environment can have an overwhelming influence on program/service performance - especially for initiatives which often have results occurring over long-term periods.

Appendix B: Environment Canada's Performance Measurement Strategy

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 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.

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.

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Grande Prairie, Alberta: Emerging as one of the premiere sites relating to performance management, this site contains references for public and private enterprises.

<http://www.dep.state.fl.us/org/ossr/report/intro.htm>

State of Florida Department of Environmental Protection, this site contains the Secretary's Quarterly Performance Report which deals with measuring and reporting of environmental results.

<http://www.npr.gov/initiati/mfr/index.html>

The National Performance Review, in cooperation with OMB, has assembled a new series of web pages devoted to managing for results and the implementation of the Government Performance and Results Act. Nineteen of the twenty case studies on strategic planning and/or performance measurement are there, as are several agency strategic plans and accountability reports. The intent is to keep the site up to date with links to additional strategic plans, annual performance plans, testimony, training opportunities, and new materials as they become available.

<http://www.pmn.net>

Performance Management Network web site. This site will link you to the above and provides you with more background information on the Three Rs and other concepts used in this presentation.

http://www.tbs-sct.gc.ca/home_e.html

Treasury Board, Quality Services and Review: This site contains specific Government of Canada references and cross-references to performance management work.