
FOCUSED NATIONAL INDICATORS WORKSHOP

PASCOE, DAVE

Manager, Emergencies and Enforcement Division, Environmental Protection Branch
Ontario, Environment Canada, 4905 Dufferin Street, Downsview, ON, Canada,
dave.pascoe@eg.gc.ca

SUMMARY

This paper provides a basic introduction to the use of indicators, drawing heavily from the information provided in the “Performance Measurement Guidance for Compliance and Enforcement Practitioners” document.¹ It also describes the structure and initial results of the initial environmental compliance and enforcement indicators pilot project in Canada.

1 INTRODUCTION

The International Network for Environmental Compliance and Enforcement (INECE) has devoted considerable effort to developing and promoting the use of environmental compliance and enforcement (ECE) indicators to measure the effectiveness of environmental laws. The need for ECE indicators was raised by several countries at the 6th INECE Conference in Costa Rica in 2002. In 2003, the Organisation for Economic Co-operation and Development and INECE was given the opportunity to jointly sponsor a workshop to bring countries together to allow the exchange of ideas and experiences with regard to the development and use of ECE indicators. That workshop led to the development of a document entitled “Performance Measurement Guidance for Compliance and Enforcement Practitioners” by an international working group under the leadership of the Michael Stahl, Director of the U.S. Environmental Protection Agency’s Office of Compliance and the INECE Secretariat. Many countries contributed to the document through an e-dialogue established by INECE in late 2004.² The Guidance Document sets out a process for developing, testing, and using ECE indicators. It is a

valuable resource for countries considering the use of indicators, those countries that have begun to develop them, or those that are well advanced in their use. This background paper relies heavily on the information provided in the Guidance Document; portions of it have been reproduced in this background paper. Readers are encouraged to review the Guidance Document in its entirety.

2 WHAT ARE ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT INDICATORS?

Simply put, indicators are quantitative or qualitative measures that can be used to represent the state of the environment, and illustrate the effects of certain stresses or behaviors on that environment. The table below is a logic model that describes and provides some examples of the basic indicators (outputs, intermediate outcomes, and final outcomes). Logic models graphically depict the relationships between resources invested, activities undertaken and the results of those activities.

As stated during the INECE Indicators e-dialogue, ECE indicators are intended to respond to three needs:

Table One

Inputs <i>Resources</i>	Outputs <i>activities</i>	Intermediate Outcomes <i>behavior change</i>	Final Outcomes <i>environmental impact</i>
Personnel	Inspections conducted	Greater understanding of how to comply	Reduced pollution emissions
Funds for salaries, contracts, IT, etc.	Enforcement actions taken	Improved facility management practices	Improved ambient water quality
	Fines assessed	Increased compliance	Reduced contaminant burden in wildlife species

- to assist program management in monitoring operations of compliance and enforcement programs;
- to enhance the accountability of environmental compliance and enforcement programs; and
- to provide a framework to assess the performance of environmental compliance and enforcement programs.

For details on these three elements, refer to the Guidance for Practitioners document.

As discussed in the Guidance Document, there are four categories of indicators: comprehensive national indicators; comprehensive sub-national indicators; focused national indicators; and focused sub-national indicators. This background paper addresses focused national indicators, the subject of workshop 2D at the 7th INECE Conference.

2.1 Focused National Indicators

Focused national indicators are used when a national environmental agency wants to assess the environmental conditions associated with a particular sector or regulation; or the effectiveness of a national initiative related to that sector or regulation. For example, focused national indicators might be developed to address a specific national non-compliance pattern or environmental risk associated with a given industrial sector. They might also be used

to measure the effectiveness of a targeted enforcement initiative to improve compliance with all national air or water pollution requirements. They could also be used to determine the relative effectiveness of compliance promotion and enforcement programs in attaining compliance with a regulation.

A program involving focused national indicators is more manageable than one using a comprehensive national approach because it focuses on a specific component or piece of the national program. For a focused national effort it is often advisable to develop indicators that are short-term and specifically tailored for the initiative being measured, rather than developing permanent long-term indicators that would be necessary for a comprehensive national set of indicators.

3 WHAT ARE THE VALUES, BENEFITS, AND NEEDS FOR A ECE INDICATORS?

As stated in section 2, ECE indicators are intended to respond to three key needs. Specific examples of the benefits and values of ECE indicators for each of these needs are provided below.

3.1 Monitoring Program Operations

Even a very basic set of output indicators will increase understanding about what is being accomplished, and when combined with data about inputs,

judgments can be made about whether resources are being used efficiently. At a minimum, basic output indicators can help determine whether program staff are performing fundamental program activities.

3.2 Enhancing Accountability

When programs or agencies are able to establish a set of performance indicators for their compliance and enforcement efforts, the indicators provide a window through which the public can view results and ensure program accountability, and a demonstration to regulated facilities and companies that compliance is expected and taken seriously. Performance indicators help these external audiences understand and support program activities. Output indicators can convey to the public that funds are being used to conduct inspections, enforcement actions, or other activities. Outcome indicators can convey that these activities are resulting in important outcomes such as reduced pollution, increased compliance, and improved environmental management at facilities.

There is much truth to the statement that “What gets measured gets done.” Performance indicators send a clear signal to program personnel about what needs to be accomplished. Setting a goal to achieve a certain amount of a specific output tends to organize and focus some portion of resources on achieving the goal.

3.3 Assessing Program Performance

By using indicators as a management tool, goals can be set regarding the activities or results that should be produced over a period of time. Indicators can also be used to identify needed adjustments in the mix of activities or results the program is producing.

Output and outcome indicators can be analyzed to determine whether resources need to be increased, shifted, or altered in some way to meet goals and achieve desired results. Indicators provide an understanding of the relationship between outputs and outcomes, thereby enhancing the ability of program managers

to increase resource investment in preferred outcomes.

Indicators that can be organized by type of output or outcome, by organizational unit, and by program area increase program managers’ ability to identify performance problems and design solutions.

4 HOW DO YOU ESTABLISH A FOCUSED INDICATOR PILOT PROJECT?

The process for developing ECE indicators is shown in the diagram from “Performance Measurement Guidance for Compliance and Enforcement Practitioners.” The diagram illustrates three stages: identifying indicators; designing, testing and implementing indicators; and using indicators. Each stage contains several recommended steps from which to select when developing ECE indicators. Implementation of pilot projects is one of the steps in stage 2.

4.1 The Process

The example pilot project being used to demonstrate the application of the process is the agriculture sector study being conducted in Canada. This project involves the selection of specific watersheds in which to measure the effects of various compliance promotion and enforcement actions to address pollution resulting from poor manure management practices. Baseline measurements were taken in 2002-03, a period during which farms were visited by compliance promotion officers to educate farmers about the methods and benefits associated with manure management practices. A second set of measurements was conducted the following year (after the period of compliance promotion), and a further set of measurements was conducted after a period of enforcement (a further year).

By reviewing the results we intended to measure the outputs, and also hoped to determine the intermediate outcomes (the things farmers had done to improve their operations) as a result of both

compliance promotion and enforcement actions. We also hoped to get some understanding of improvements in the environmental quality (final outcomes) as a result of our compliance promotion and enforcement work over the multi-year period.

4.2 Initial Results

Results are still being evaluated, however, the following findings can be stated:

- outputs are generally easy to measure, and provide a short-term indication of what was done (although not the effect of what was done);
- some outputs and intermediate outcomes are far easier to measure than others;
- some results can be misleading, and therefore require thorough explanations;
- quantitative final outcomes are extremely difficult to tie to specific inputs or activities;
- pictures can be used as valuable final outcome indicators.

4.3 Costs

The costs associated with the indicator pilot project were not significant in terms of the overall compliance promotion or enforcement work.

4.4 Lessons Learned

Design and testing of new indicators is a critical step that may be overlooked in the rush to begin using indicators. Time should be taken to define accurate and reliable performance indicators in detail, pilot test them and correct mistakes before reporting indicator data to the public or using it to assess and improve performance.

The following lessons were taken from the Canadian agriculture pilot project:

- be as creative/open as possible when setting potential measures at the start of a project (don't limit your selection of potential outputs and outcomes);
- if an indicator doesn't work, discard it;
- obtaining meaningful results takes time (be prepared to stick with a project for several years);
- there are benefits to close cooperation between compliance promotion and enforcement.

5 REFERENCES

- ¹ For the full text of the Performance Measurement Guidance for Compliance and Enforcement Practitioners document, visit <http://www.inece.org/conference/7/>.
- ² Introduction to the INECE Indicators E-dialogue, available at http://inece.org/forumsindicators_dialogue_bkg.html.