



**EXPERT WORKSHOP
ON ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT INDICATORS**

**3rd - 4th November 2003
OECD Headquarters, Paris**

SUMMARY RECORD



1. INTRODUCTION

The International Network for Environmental Compliance and Enforcement (INECE) and the Organisation for Economic Co-operation and Development (OECD) hosted an international workshop to advance the development and use of environmental compliance and enforcement (ECE) indicators. The workshop, held in Paris, France, on 3-4 November 2003, convened over 50 senior practitioners from more than 20 developed, transition, and developing countries, as well as international organizations, multilateral environmental agreement secretariats, and nongovernmental organizations.

The participants engaged in a lively and insightful discussion that confirmed the growing importance of ECE indicators worldwide and asked the INECE and its Partners to work further on methodologies and guidance for their design and use. The workshop also resulted in the commitment of many officials and experts to continue and/or initiate indicator pilot projects in their home countries.

Workshop topics included: an examination of the design and application of ECE indicators; an exploration of the use of indicators in performance assessment and in decision making; a discussion of the use of indicators in communicating with diverse stakeholders; and an assessment of the opportunities of and barriers to the development of country pilot projects for ECE indicators. This summary highlights the key points from the discussions on the purpose and criteria for using and selecting ECE indicators, and presents the key groups of indicators in use. It also presents the country specific experience from using the indicators, and on that basis proposes some key principles for their further development. Next steps are also presented.

2 OBJECTIVES AND PURPOSE OF ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT INDICATORS

Although there are many sets of environmental indicators in use, including those developed within the OECD Pressure-State-Response framework, indicators that monitor and demonstrate the results of compliance and enforcement activities are not yet sufficiently developed. While indicators of environmental pressures and of environmental conditions are important tools, they are not fully appropriate to provide information on performance-based management of environmental or enforcement authorities. Indicators on environmental conditions, in particular, cannot readily be used to compare performance between different units of enforcement authority (both horizontally and vertically) which may operate in the context of different environmental, economic and other conditions.

Presentations during the meeting showcased a broad range of initiatives within which environmental compliance and enforcement indicators are being developed and applied, and described the stimuli behind the creation of such initiatives.

Governments have developed ECE indicator projects in response to survey results indicating that the systematic use of performance indicators improves overall business performance. Governments also favor indicators as a method for comparing programmes across multiple government sectors or agencies. In particular:

- ❖ Several speakers underlined that increased use of performance indicators can respond to demands to demonstrate results of government activities to the decision makers and the public. The indicators can present complex information gathered within the compliance programme in a transparent and easy-to-appreciate manner. ECE indicators can signal trends, achievements, and implementation gaps that require policy or society responses.
- ❖ Furthermore, the ability of indicators to assist in understanding, evaluating, and improving performance of compliance assurance programmes is stimulating interest in their development. ECE indicators can point to the areas where the management may need to be adjusted to account for changing conditions and external factors. The ultimate aim of these adjustments is the improvement of programme effectiveness and efficiency.

- ❖ Equally, the indicators can help to assess the actual impact of individual enforcement actions, leading to the selection of measures with the greatest impact and cost-effectiveness.

Studying the use of indicators can also lead to the identification of measurement gaps that, in turn, stimulate the development of more appropriate indicators. This contributes to development of better tools and systems for performance evaluation.

3 TYPES OF ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT INDICATORS

Workshop participants provided many examples of enforcement and compliance indicators. For example, the United States Environmental Protection Agency's (USEPA) performance measures include: pounds of pollutants reduced by enforcement actions; pounds of soil treated or removed; gallons of groundwater treated; number of companies/facilities self-disclosing violations under USEPA policies; number of entities seeking assistance from USEPA centers; and statistically valid compliance rates. In the Russian Federation, indicators include: number of regulated facilities; number of permits and licenses checked for compliance; number of violations revealed; and cases transferred to the judicial branch, as well as number of violators fined; total amount of fines; and damage compensations charged and received.

In spite of a variety of approaches and terminology, similarities in the application of ECE indicators have been observed and the participants agreed on the following:

- ❖ Environmental authorities commonly use environmental indicators to measure "final outcomes", i.e. the ultimate state of, and changes to, the environment. However, such "final outcome" indicators are not sufficient for assessing the effectiveness of enforcement activities because environmental quality may be influenced by factors outside the enforcement agency's actions.
- ❖ In most countries, enforcement capacities or activity levels are measured. These measures are called "input" and "output" indicators. Examples of "input" indicators include the number of inspectors and the enforcement agency budgets, while examples of "output" indicators are the numbers of inspections and the numbers of enforcement actions.
- ❖ Even though these three types of indicators are used frequently, they have some limitations. They cannot account for new assistance and incentive approaches, cannot measure environmental changes resulting from specific activities. They may not allow assessing progress in addressing environmental goals and problems as a result of the whole enforcement programme. These indicators cannot also measure:
 - Precise degree and duration of non-compliance;
 - Seriousness of nuisance, damage and accidents;
 - Impact on human health;
 - Specific emission reductions; and
 - Positive/negative change in organization / behavior of companies.
- ❖ In order to respond to these shortcomings, some countries launched programmes that use "intermediary outcome" indicators as an additional measure of behavioural changes of the regulated community as a result of enforcement and compliance promotion actions. These indicators can include: number and types of responses to inspections, rates of compliance, and actual impacts of compliance assurance on changes in environmental quality. A change in ambient concentrations of a pollutant brought about by a specific enforcement action can also be regarded as an "intermediary outcome" indicator, though in many cases such cause-effect link is difficult to establish.
- ❖ However, none of these types of indicators can be used alone. There is a need to the use "input", "output," or "intermediary outcome" indicators in conjunction for better determination of the efficiency and effectiveness of enforcement programmes. Analysis and presentation of these measures in

combination can inform the management structures and policy makers in a comprehensive way and serve the full range of audiences and purposes.

4 CRITERIA FOR SELECTION OF ADEQUATE ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT INDICATORS

A number of criteria for selecting performance indicators were presented and discussed at the workshop. In this regard, work carried out by the OECD Environmental Information and Indicators Programme provided an important reference. Participants suggested that the performance indicators should be relevant to agency goals, objectives, and priorities, as well as the needs of external stakeholders. Performance indicators must also be well defined and transparent to promote understanding of programme performance among staff and managers, other agencies, the regulated community and the general public. Finally, they should be based on data that is complete and accurate to certify credibility and to ensure that their value to the programme outweighs cost of implementation and maintenance. It was also recognized that there is no absolute set of indicators that can be applied to all situations. What works for one country or one regulation might not work for another. Careful selection of adequate indicators is therefore required.

A number of other criteria have been discussed, such as measurable, informative, comparable and compatible. Participants considered, however, that these criteria need to be adapted to country specific circumstances and that further work is needed to develop a comprehensive list of these criteria and their definitions.

5 ON-GOING PROGRAMMES TO DEVELOP MORE ADEQUATE PERFORMANCE INDICATORS

Throughout the workshop, countries described their programmes and efforts to develop more adequate performance indicators. For example, in the US a comprehensive programme of developing performance indicators, launched in 1997, placed the main emphasis on developing "intermediary outcome" indicators which measure the changes in behavior of people/companies and pollution reduced as a result of enforcement and compliance promotion actions. In most OECD countries, such as Canada, the Flanders region of Belgium, Finland, Ireland, Scotland, a combination of "output" and "outcome" indicators is extensively applied. In the European countries the "outcome" indicators are being also used for the European Union (EU) reporting requirements. Some countries, including Canada and Mexico, are engaged in carrying out of pilot projects in selected areas to measure outputs, intermediary and final outcomes, associated with compliance promotion and enforcement activities. There is a general tendency towards developing a relatively limited set of carefully chosen indicators to measure performance.

In some economies, including the Czech Republic, Croatia, Russia, Poland, and Thailand, enforcement authorities most frequently use the "input" and "output" indicators. However, in many countries of Central and Eastern Europe, several problems have been encountered with the existing assessment systems. These included the overburden with a multitude of indicators, their inadequacy for performance management, and problems with comparisons between different units of enforcement authorities.

As a result, all these countries have started more comprehensive reform of the assessment systems with the objectives to make them more impact- and result-oriented. In the Czech Republic, an initiative of developing a combined performance indicator, called "Gross Inspectorate Product" which is similar in concept to the "gross national product" was launched. The "Gross Inspectorate Product" builds on the contributions of numerous departments and can present the overall performance of the inspectorate. However, the concerns were raised that such an approach may hide some important factors that can influence the actual performance.

In many countries, indicators are being used to assess performance on a facility-by-facility basis and demonstrate it to the general public. The USEPA uses the Toxic Release Inventory as a resource to target inspections. In the Netherlands, the Pollutant Release and Transfer Registry system is used for the same purpose. In Poland, a list of "worst polluters" has been used for monitoring compliance and assessing performance of inspectors. In the US performance indicators are used to promote best practices among the states and the performance results are used to determine the ways government grants are provided.

The workshop provided an opportunity for the representatives of non-governmental organizations, including the World Resources Institute (WRI) and Conservation International, to present initiatives that aim to create a framework for assessing performance in environmental management, policy implementation and public participation. WRI and its partners in The Access Initiative (TAI) developed a common methodology that allows users to assess how well governments are performing on access to information, public participation, and justice in environmental decision-making.

The representative from Conservation International (CI), who has extensively researched enforcement economics, described CI's enforcement disincentive model. The model, which defines the parameters of disincentive to include probabilities of detection, arrest, and prosecution, suggests that assessment schemes are required for each element of the enforcement chain. CI also pointed out that performance assessment must account for the time of enforcement response, because delayed enforcement actions or non-compliance responses can lower their impacts and deterrent values.

6 MAIN CHALLENGES TO IMPLEMENTING ENVIRONMENTAL COMPLIANCE AND ENFORCEMENT INDICATORS

Although significant progress has been made in the OECD and Central and Eastern European regions, there are countries where formal compliance and enforcement programmes are either fragmented or do not exist. Therefore, no systems of performance assessment have been developed. The lack of progress in this field can be negatively influenced, as in the cases of Brazil or Argentina, by institutional complexity and cultural differences between regions, lack of historical context for ECE indicators, and fragmented capacity to generate data.

In less developed countries, including Ghana, the lack of political will to establish the rule of law and assure compliance is a primary reason for lack of performance assessment schemes. The extreme shortage of environmental staff and capacity create additional problems.

However, participants agreed that, regardless of a country's level of accomplishment at building a performance assessment system, all countries face a number of institutional capacity and implementation challenges. These challenges are summarized in the table below.

Institutional Challenges	Implementation Challenges
<ul style="list-style-type: none"> • Lack of awareness of environmental issues and legislation • Lack of political will • Political instability • Lack of resources • Poverty and illiteracy • Lack of management interest • Jurisdictional issues between federal, state and local governments • Staff turnover • Better performance information can threaten stakeholders' interests 	<ul style="list-style-type: none"> • Performance indicators are complicated • Selecting the best indicator is difficult • Obtaining the data is difficult • Interpreting the data is challenging • Extrapolating from pilots may not be accurate • Inexperience with indicators • Drifting back to old approaches

7 KEY PRINCIPLES FOR MAKING FURTHER PROGRESS

Over the course of the workshop discussion, a number of important principles to base the future development of indicators to measure environmental compliance and enforcement were identified. This list, while it cannot be regarded as comprehensive, summarizes the key messages discussed at the workshop.

- ❖ **Carefully consider and reflect on the needs of different user groups:** There are different stakeholder groups who are using or could potentially use indicators. These groups include the politicians, government agencies, regulated community and the public. A careful consideration of the needs of these multiple groups and their involvement in the selection and application of indicators is important to leverage their value. All of them would use result-oriented performance indicators that are presented in clear and understandable way.
- ❖ **Meet the challenges of decision-making and programme management:** If developed correctly, performance measures should allow more sophisticated analysis of results of activities, allow comparisons of the relative effectiveness of specific tools and strategies, and lead to informed resource allocation that is more likely to achieve the desired results. Performance measures should be used to evaluate effectiveness and manage enforcement programmes.
- ❖ **Link indicators to policy targets and ensure that indicators are responsive to evolving policy objectives:** Several participants noted that the use of enforcement and compliance indicators should be closely linked to clearly defined policy targets. The indicators should be regularly reviewed and kept relevant to the adjustments of policy objectives.
- ❖ **Reflect and address factors that determine compliance:** Compliance is often influenced by many factors, including the quality of regulation, knowledge and acceptance of rules, cost/benefit considerations, capacity to monitor implementation and provide an adequate response to non-compliance, etc. Incorporating a screening of these factors into performance measurement and management, as attempted in the Netherlands, can bring the benefit of a better targeted programme to both the capacity of the regulators and the regulatees.
- ❖ **Help track progress in solving priority problems:** Problem-specific measures often cannot be aggregated in a meaningful way. Therefore, it was pointed out that performance measures should be linked to priority environmental and non-compliance problems as they can help to track progress in achieving desired objectives.
- ❖ **Recognize that indicators must be interpreted correctly and meaningfully:** Workshop participants discussed how, without context, the meaning of an indicator may be ambiguous. An increase in the number of complaints could indicate an increase in environmental damage, an increase in knowledge by the population, or an increase in the citizens' trust in the inspectorate. Participants agree that enforcement agencies not only need to develop ECE indicators, but also must learn interpretation skills to derive knowledge from the use of the indicators.
- ❖ **Use different categories of indicators in conjunction to maximize their value:** There is a need to use "input", "output," "intermediary outcome" and "final outcome" indicators in conjunction for better determination of the efficiency and effectiveness of enforcement programmes. The combined reporting can provide comprehensive information for management structures and policy makers and serve the full range of audiences and purposes.

8 NEXT STEPS

In concluding remarks, participants identified three major recommendations: the need to develop common definitions; the need for agreement on a methodology model; and the need to articulate and apply common principles for using indicators to assess performance. The realization of these recommendations will help all countries involved, not just the most developed, to develop compliance and enforcement programmes and enable their evaluation. Workshop participants emphasized that the development of guiding principles for the implementation of ECE indicators is an important and necessary task.

In order to assure further progress in supporting regional and country-specific work participants agreed on the following steps:

- ❖ **Proceedings** from the meeting will be developed and published. This includes the summary of the discussion, the background paper, as well as country-specific examples. The proceeding will be broadly disseminated among INECE participants and beyond.
- ❖ The work to develop **guiding principles for implementing enforcement and compliance indicators** will be launched. This will include the set of common definitions, methodology, models, and good practices for developing country-specific projects.
- ❖ Countries will pursue **in-country projects**. Further work will be carried out in the countries that already have experience with the ECE indicators. A number of countries expressed their interest and commitment to develop new demonstration and pilot projects.

The detailed account of the brainstorming on further steps is presented in Annex 1.

Although there is a momentum and enthusiasm for further work in ECE indicators, more resources are needed to further methodological work and enlarged application of the ECE indicators in individual countries. In supporting the follow-up work, Canada and the US offered their in-kind assistance. The World Bank Institute and OECD will support the implementation of pilot projects in the regions of South America and Eastern Europe, Caucasus, and Central Asia. Other regional organizations will be invited to assist in other regions. The INECE and its partners will work together to mobilise necessary support. The participants agreed that progress should be reviewed at a workshop in the future.

ANNEX 1.

The list below presents an account of a brainstorming on the next steps on the development of enforcement and compliance indicators that was carried out in the final session of the workshop.

The list was not edited and serves for the record keeping purposes.

1 **Develop Common Definitions**

- Focus on issues related to broad categories of indicators (outputs, outcomes, etc.)
 - When looking at output, you need to look at the entire process (which includes inputs)
- Develop definitions of compliance and performance
- Think about definitions of particular indicators (such as, what is an “inspection”)
- Gather, analyze and harmonize different countries’ use of the relevant terms
- Look at UNEP guidelines and the definitions therein
- Translate the resulting list of indicator definitions into several languages

2 **Refine the Logic Model**

- Include public participation—include public participation into inputs, outputs, outcomes and final outcomes
- Consider the Canadian and Scottish examples
- What other additional information on logic models should we consider?

3 **Capture Good Practices**

- Share available information
 - Share the “top 20” ECE indicators from each country
 - Describe different countries’ use of the relevant terms
 - Look at poverty reduction plans that have been developed
- Explore possibilities for and practicalities of cross-country comparisons
 - Index of congruency of inspectorates—compare performance of different regions, thus you need to compare different inspectorates.
- View the ECE indicators in connection with an integrated system of indicators (e.g., sustainability, institutional indicators, OECD’s work on country progress reports)
- Examine public participation and its interface with the identification, design, and use of ECE indicators
- Include policymaking and legislation considerations
- Refer to other environmental indicators as well

4 **Develop Guiding Principles**

- Draft in parallel with pilots
- Review in regions
- Revise, in light of experience
- Ensure that they are implementable, easily digestible, acceptable and not too academic
 - Recognize that countries are at different levels and work to make sure that the principles are broadly applicable.
 - Identify core indicators that are globally applicable
 - Accommodate regional and national needs that require special consideration.
 - Recognize that not all principles will be applicable to all countries and organizations (intergovernmental organizations, multilateral environmental agreement secretariats, regional networks, etc.)
- Examine public participation and its interface with the design, development and use of ECE indicators
- Cross-reference what has already been developed.
 - Use the good practices information gathering process
 - Honest case studies—share experiences as part of good practices

- Look to the presentations by Belgium, US, and others for criteria of good indicators—transparent, measurable, etc.
- Share the draft guidelines document among participants and other stakeholders
- Design the principles to guide and harmonize the development of pilot projects
- Guiding Principles:
 - Start by establishing the objectives. Why are we designing indicators? Indicators are representative of larger issues.
 - Build indicators based on why there is no compliance
 - Ensure quality assurance/quality control
 - Take account of all categories of all levels of environmental legislation
 - Examine whether production of ECE indicators is mandatory
 - Look at possible external influences on final outcomes
 - Examine how often you need to collect and analyze indicators and the methods (influences the cost)
 - Examine the problem of quality v. quantity of inspections
 - Analyze the system of penalties
 - Consider the whole of the institutions that are engaged in enforcement and compliance
 - Use the experience of scientific & research institutions for determination of ECE criteria
- Explore the institutional implications of establishing a system of indicators
- Consider drafting the methodology first rather than in parallel with the pilots
- Recognize that this is a dynamic process.

5 Identifying Pilot Projects

- Possible pilot projects:
 - Czech Republic, Croatia, Costa Rica, and Philippines
 - OECD/EAP Task Force has initial funding for its region (E. Europe, Caucasus, Central Asia)
 - World Bank has funding for Latin America region – Mexico, Argentina and Brazil
 - Ghana expressed interest and suggested a pilot project
- Funding is important
 - Who can do the project on their own
 - Who needs funding
 - Who can be partners
- Define methodology for the design and implementation of pilot projects as to how the various projects will be run
 - Develop a timeframe—how long are the projects going to take
 - Develop a way to ensure the engagement of stakeholders in the projects (lead organization possibly required to engage stakeholders)
 - Establish expert groups on indicators (region specific), facilitated by secretariats
 - Determine the scale of the project, i.e., task-specific or programme-specific
- Suggestions for pilot projects
 - Need an expert evaluation of the projects
 - Present evaluation criteria up front
 - Incorporate different sectors
 - Look to projects done on different scales
 - Prepare guiding principles and pilot projects in parallel—they will feed into each other
 - Cross-link pilot projects to each other
 - Implement at least one pilot project in each region
 - Aim at testing challenges discussed at the Paris Workshop (discover whether the challenges are real or imaginary)
 - Approach enforcement as a holistic system, looking at the multiple agencies involved in creating an effective deterrent
- Pairing projects between OECD countries and transition and developing economies