

BOOSTING INDUSTRY'S ENVIRONMENTAL PERFORMANCE

Pilot Implementation of a Performance Rating Scheme in Ukraine



ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT

The OECD is a unique forum where the governments of 30 democracies work together to address the economic, social, and environmental challenges of globalisation. The OECD is also at the forefront of efforts to understand and to help governments respond to new developments and concerns, such as corporate governance, the information economy, and the challenges of an ageing population. The Organisation provides a setting where governments can compare policy experiences, seek answers to common problems, identify good practice, and work to co-ordinate domestic and international policies.

The OECD member countries are: Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, the Slovak Republic, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States. The Commission of the European Communities takes part in the work of the OECD.

The opinions expressed and arguments employed herein do not necessarily reflect the official views of the Organisation or of the governments of its member countries.

© OECD (2007)

No reproduction, copy, transmission, or translation of this publication may be made without written permission. Applications should be sent to OECD Publishing: rights@oecd.org or by fax (+33-1) 45 24 13 91. Permission to photocopy a portion of this work should be addressed to the Centre Français d'exploitation du droit de Copie, 20 rue des Grands-Augustins, 75006 Paris, France (contact@cfcopies.com).

FOREWORD

In countries of Eastern Europe, Caucasus, and Central Asia (EECCA), the outcomes of environmental regulation and compliance assurance remain modest. Generally, companies focus on immediate profits and the region experiences pervasive non-compliance. This is largely due to inadequate incentives faced by the business sector, the imperfect design of compliance assurance instruments and strategies, and scarce resources for ensuring regulatory, compliance monitoring, and enforcement functions.

Attaining a higher level of environmental protection imposes the need to identify and apply approaches that could correct the incentive framework without raising the costs of monitoring and enforcement. Empirical data show that governments can achieve this objective if traditional enforcement policies based on inspection and sanctioning are supplemented by innovative instruments, which increase the probability of detecting non-compliance, create a higher deterrence effect, and reduce administrative costs of enforcement.

Information provision, in particular, can trigger community and market reaction to pollution incidents or non-compliance in general. Over the last decade, an increasing number of countries have used information disclosure to complement enforcement action. The OECD in its work on Pollutant Release and Transfer Registers (PRTRs) has been promoting such an approach. Since PRTRs are quite resource-consuming, simpler schemes of performance rating and disclosure, sometimes reduced to lists of poor performers, have emerged. The impact of these schemes on the firms' behaviour appears to be positive. In addition, simplified systems are associated with lower costs.

In EECCA, the regional Regulatory Environmental Programme Implementation Network (REPIN), which functions under the umbrella of the EAP Task Force, was instrumental to promoting international practices of performance rating and disclosure. Following the 2003 REPIN meeting, the OECD/EAP Task Force Secretariat launched a feasibility study in Ukraine. Subsequently, the scheme was implemented on a pilot basis in the Lviv region of Ukraine.

The current publication aims at summarising the results of this work. It is addressed to environmental officials and practitioners, NGOs, and industry - all those who are interested to use innovative tools for improving the outcomes of environmental management in countries of EECCA.

The EAP Task Force is an intergovernmental body that aims to facilitate reform of environmental management systems in the EECCA region. It brings together policy makers from EECCA, Central Europe and donor countries, as well as international institutions and other stakeholders. The Task Force was established at the 1993 "Environment for Europe" Ministerial Conference in Lucerne, Switzerland. The secretariat is hosted by the Environment and Globalisation Division of the OECD Environment Directorate.

TABLE OF CONTENTS

FOREWORD	3
EXECUTIVE SUMMARY	7
ENVIRONMENTAL PERFORMANCE RATING AND INFORMATION DISCLOSURE (PRIDE): AN OVERALL INTRODUCTION	10
Purpose	10
Benefits	12
Major limitation in the scope	14
Critical elements of the PRIDE scheme	14
IMPLEMENTATION OF THE PRIDE SCHEME IN UKRAINE	16
Background	16
Feasibility study	16
Pilot project in Lviv oblast	17
Rating criteria	19
Potential barriers	21
METHODOLOGY FOR DESIGNING AND IMPLEMENTING THE SCHEME	23
Definition of the programme's environmental scope	23
Selection of industries to be involved in the scheme	24
Defining criteria and the algorithm of rating	24
Disclosure strategy	28
Data collection and verification, and information management	29
Building stakeholder support	29
Other enabling conditions	29
ANNEX 1. POSSIBLE RATING DIAGRAM (BASED ON EXPERIENCE IN CHINA)	34
ANNEX 2. POSSIBLE WORKING PROCEDURE FOR PERFORMANCE RATING	35

ACRONYMS

COD	Chemical oxygen demand
EAP	Environmental Action Programme
EECCA	Eastern Europe, Caucasus, and Central Asia
ELV	Emission Limit Value
EMS	Environmental Management System
ISO	International Organisation for Standardisation
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
PM	Particulate Matter
PRIDE	Performance Rating and Information Disclosure on the Environment
PROPER	The Program for Pollution Control Evaluation and Rating in Indonesia
PRTR	Pollutant Release and Transfer Register.
REPIN	Regulatory Environmental Programme Implementation Network
SO₂	Sulphur dioxide
TSS	Total Suspended Solids
TSP	Total Suspended Particulates
UNECE	United Nations Economic Commission for Europe

EXECUTIVE SUMMARY

Schemes that are based on information disclosure proved to be a promising complement to conventional regulations. Adapted from Indonesia's PROPER programme, the "Performance Rating and Information Disclosure on the Environment" (PRIDE) scheme of EECCA enables environmental authorities and non-governmental stakeholders to assess firms' environmental performance using five colour labels (green, blue, yellow, red and black).

After verification with enterprises, the results of rating are disseminated through the mass media. They are periodically reviewed and updated, in such a way providing enterprises with an additional incentive to improve their environmental performance.

Overall, the scheme helps governments to:

- (i) understand environmental performance within different segments of large industry;
- (ii) provide an user-friendly access to environmentally-related data of high relevance for the general public;
- (iii) channel public and media pressure on industry for promoting better compliance with environmental requirements; and
- (iv) establish a meaningful dialogue between enterprises, enforcement agencies, NGOs and the public to seek more effective and efficient solutions to environmental problems.

The public disclosure approach has been applied in several emerging and transition economies¹. A simplified rating approach was also used in the 1990s in Poland. The experience from these countries shows that even the low-income communities may be willing and able to put pressure on polluters and influence their environmental behaviour when clear, facility-specific information on corporate environmental behaviour and performance is available. In their turn, enterprises exhibit an increased openness to improve their environmental practices in the presence of such pressure.

This report presents the background and key features of the PRIDE scheme, lessons learned from the pilot project in Ukraine, and a general methodology for designing and implementing the PRIDE scheme. It aims at facilitating the application of the PRIDE scheme in EECCA countries.

The major phases in the design and implementation of this scheme are described, including:

- Definition of scope and identification of enterprises to be involved in the scheme;
- Development of the rating strategy, in particular, the rating criteria and the algorithm of their application;
- Development of the disclosure strategy in order to generate social and market (customer) pressure on polluters;
- Data collection and verification;
- Information management approaches;
- Actions to build stakeholder support; and
- Assigning responsibilities to various parties involved in the implementation of the scheme.

¹ Most of these initiatives were supported by the World Bank. Several reports from these programmes are available.

The report underlines the particular importance of rating criteria. In this context, a distinctive feature of the PRIDE scheme is its focus on criteria that demonstrate compliance with environmental legislation.

Based on lessons learned from Ukraine, the report identifies potential barriers in the implementation of the PRIDE scheme. These include confidentiality of information, low reliability of data, and the issue of unclear impact. The significance of these barriers and ways to overcome them are discussed.

The report has been compiled by the EAP Task Force Secretariat. Contributions to this report from Mr. Andriy Andrushevych and Mr. Hua Wang are greatly appreciated. Financial support to the implementation of the project has been provided by the governments of the Netherlands and the United Kingdom.

ENVIRONMENTAL PERFORMANCE RATING AND INFORMATION DISCLOSURE (PRIDE): AN OVERALL INTRODUCTION

Purpose

The underlining assumption of the PRIDE scheme is that large companies are sensitive about their reputation, care about the public image projected by their environmental performance, and are willing to improve it. In light of these incentives, the performance disclosure approach rewards above-standard results and reveals market players that try to gain competitive advantage by disregarding regulatory requirements. In such a way, the scheme provides a strong leverage for improving corporate environmental behaviour thus beefs up conventional regulatory and enforcement strategies without replacing them.

The PRIDE scheme constitutes a vehicle for public awareness and participation and responds to benchmarks established in several multilateral environmental agreements. First of all, it aligns environmental management practices with the Rio Declaration's Principle 10 that stresses that "environmental issues are best handled with participation of all concerned citizens". The PRIDE scheme also supports the 1998 Aarhus Convention² that translated the Rio Declaration commitments into specific legal obligations. The Convention pursues its objective of a healthy environment for all by upholding the right of every person to have access to information about the environment. It places clear obligations on States to ensure greater public participation in environmental decision-making and access to justice.

² UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice.

Within the framework of PRIDE, the environmental performance of industrial firms is divided into five symmetric rating categories using specific criteria. Even though the approaches may vary from country to country, commonly, there are five categories of performance: two categories (e.g. black and red) denoting inferior performance that fails meeting basic requirements; one category (e.g. yellow) denoting compliance with minimum emission limits but failure to comply with all requirements; and two categories (e.g. blue, green or gold) denoting superior performance (full compliance or beyond compliance). As the scheme recognizes three performance levels for firms that comply with basic emission standards, it provides incentives for continuous improvement: the system rewards even the efforts of non-compliant firms by offering an opportunity to be upgraded to a higher category due to improved performance.

Table 1. Simplified criteria and levels of performance in the PRIDE scheme

Green	Clean technology, waste minimization, pollution prevention
Blue	Most standards met, good maintenance, housekeeping
Yellow	Efforts meet some minimum standards
Red	Efforts do not meet minimum standards
Black	No pollution control effort, serious environmental damage

The scheme draws on four principal sources of information:

- Self-reports from industrial operators;
- Inspection reports, regulatory actions and penalties;
- Records of complaints from the general public; and
- Surveys and other analytical papers addressing firms' characteristics and their environmental performance.

After verification with enterprises, the rating results are communicated to the public through the mass media (TV, radio, daily news). The rating is periodically reviewed (every 6, 12, 18 or 24 months) and updated. This allows recognising enterprises' efforts to reduce impacts on the environment.

Benefits

Several countries, such as Indonesia, Philippines, India, China, Vietnam, and Ghana use industry performance rating and disclosure. A simplified rating approach - the list of largest polluters - was also used in the 1990s in Poland. During nearly a decade of implementation, the scheme has had a consistently positive impact on regulatory compliance. For example in Indonesia, at the launch of the programme in June 1995 only 35% of the rated plants were in compliance while two years later the number of compliant factories reached 50%. Eighteen months after the project's inception, the total organic water pollution from the monitored plants had declines by 40%. In China, before the scheme implementation, compliance rates were 75% in Zhenjiang and 23% in Hohhot. After implementing performance ratings, the compliance rates increased by 10% in Zhenjiang and by 39% in Hohhot.

Performance rating and disclosure can lead to a number of other benefits. For example, when applied in countries where corruption and political pressure enfeeble regulatory and enforcement authorities, the scheme helps to redress the situation by increasing the level of transparency in the relations between the government and the regulated community. The scheme also opens up access to compliance information, including the outcomes of environmental enforcement, in such a way promoting the public's understanding of behaviour patterns among polluters and enforcers. This contributes toward social disapproval of both non-compliance and unfair enforcement.

Environmental rating and information disclosure helps also to change the attitude of enterprises. Driven by concerns about their image and potential negative impact of bad publicity, companies become more environmentally pro-active. This transforms the process of regulation into a matter of dialogue rather than coercion.

In addition, the use of performance rating and information disclosure can help reduce the costs of compliance assurance strategies. The costs associated with Indonesia's PROPER are quite illustrative in this sense. PROPER required US\$61 400 to monitor 43 manufacture industries during 2002-2004. An increase in industrial performance was obtained by 60% of these enterprises. Roughly, the cost needed to be provided by the government to increase the performance of environmental management of one industry is slightly over US\$2 300. At the same time, a budget of US\$ 31 400 must be provided in order to resolve only one environmental case of non-compliance in a traditional prosecution way. A further problem was that most verdicts were light punishment, usually with a probation period. This approach had no significant deterrent effect on industries.

Table 2. Administration cost of pollution control programmes

No	Litigation *)		PROPER **)	
	Description	US\$	Description	US\$
1	Surveillance	4,000	Inspection and	38,000
2	Investigation	8,000	laboratory analysis	
3	Verdict plan	2,800	Coordination meeting	5,600
4	Trial	11,000	PROPER council	5,600
5	Appeal to high court	2,800	Peer Review	1,100
6.	Appeal to supreme court	2,800	Press briefing	5,500
	TOTAL	US\$ 31,400 / case		61,400 / 43 industries = US\$ 2,362/ case

*) Cost needed for litigation for one environmental case

**) Cost needed for PROPER to evaluate 43 industries

Source: Hermien Roosita (2005). Public Disclosure System as an Effective Tool for Pollution Control in Indonesia: The Implementation of PROPER. In: Economic Aspects of Environmental Compliance and Enforcement, OECD, 2005.

The low level of public awareness and relative scarcity of technically-informed NGOs frequently hamper public interpretation of available environmental information. Environmental information disclosure, which engages non-governmental organizations, can promote the development of these organizations, adding one more channel for the public access to information.

Information disclosure can also be an important indicator of the degree of democracy in a society, especially in the emerging economies. A participatory development of the scheme offers the opportunity to various stakeholders to put forward and exchange ideas concerning the scheme's design. At the implementation stage, NGOs play an important role in reviewing the accuracy of data and monitoring the effectiveness of both government and industry efforts.

Finally, after mastering the rating and disclosure tools, some countries have taken steps to adopt policy instruments that support progress beyond regulatory compliance, for example, voluntary corporate reporting.

Major limitation in the scope

The experience from several countries shows that the approach is most effective for large-scale companies. The reason for this is that large-scale industries are more interested in polishing the image they project both internationally and domestically. Small and medium-sized enterprises are not as environmentally concerned as large industrial companies.

Critical elements of the PRIDE scheme

The performance rating and disclosure programme can vary depending upon country needs, conditions, environmental objectives and national priorities. All systems in operation today are based on different goals and objectives, therefore, the design and operations differs. However, there are several critical elements that must be present in any scheme. The key ones include the following:

- Build upon existing legal and policy frameworks;
- Set clear goals, objectives and targets for the scheme and fully align them with national or local priorities, as well as with stakeholder interests;
- Reach consensus on potential benefits and estimated costs to the enterprises, government and society as a whole;
- Focus on conventionally-regulated pollutants, rather than toxic chemicals, as the scheme is intended to complement

traditional regulatory instruments that have not brought factories into compliance with basic emissions standards;

- Define and use a set of criteria that are practical and locally-recognized benchmarks for grading performance. In most cases, local emissions standards and environmental reporting requirements provide the criteria for acceptable performance, and environmental management standards provide the criteria for above-average performance;
- Assign locally-accepted and easy recognised colour codes or other graphic symbols to performance grades, so as the results can be easily disseminated by the media and understood by the public;
- Design the scheme, including information collection and handling, in such a way that it allows for verification of data entries and outputs with enterprises;
- Ensure close communication between performance rating agencies and audited facilities throughout the process. Typical modes of contact include pre-audit meetings for explaining the scheme; communication of preliminary ratings to firms for comments; provision of a grace period before public disclosure, during which companies can attempt to improve performance; and detailed explanation of the final ratings with explicit suggestions for improving their ratings in the next round;
- Involve both public and private sector stakeholders so that information is used by consumers, stakeholders, workers and others to encourage more environmentally friendly government and business decisions;
- Make the results of rating accessible to all affected and interested parties on a timely and regular basis through various media, such as print, electronic, TV and broadcasting, to maximize its social impact;
- Allow for modification, adjustment, and improvement of the scheme to make it tool more effective.

IMPLEMENTATION OF THE PRIDE SCHEME IN UKRAINE

Background

The potential for applying information-based instruments exists in the region of Eastern Europe, Caucasus and Central Asia (EECCA) is significant. This is linked to a considerable share of industrial production in national economies of these countries. The related environmental impacts are also high, particularly because of low compliance levels, limited effectiveness of traditional compliance assurance tools, and, sometimes, asymmetric enforcement.

The need to improve industry's compliance with environmental requirements in an effective and efficient way has attracted attention to the PRIDE programme. An important factor has been the growing role of local communities in environmental enforcement.

The PRIDE concept was discussed at several meetings of the EECCA Regulatory Environmental Programme Implementation Network (REPIN). Its pilot implementation was then included into REPIN's work programme for 2003-2007. Following the decisions made at the 2003 REPIN meeting, the Secretariat assessed the feasibility of PRIDE application. In 2005, the implementation of the scheme was launched on a pilot basis in the Lviv region of Ukraine.

Feasibility study

The feasibility study was conducted in 2004 in Ukraine and covered the following issues:

- Analysis of the legal and institutional framework;
- Use and effectiveness of the existing information-based instruments in Ukraine (lists, inventories, registers of the enterprises-polluters);

- Identification of a potential pilot region for the application of PRIDE scheme, including assessment of legal, technical, institutional and social conditions; main stakeholders; activities, timetable and costs to implement the programme in Ukraine; and potential barriers of implementation.

The feasibility study confirmed the applicability of the PRIDE scheme in Ukraine as a new tool of environmental policy tool. Most importantly, the legal, policy and institutional frameworks were quite supportive to the PRIDE adoption. For example, the Ukrainian legislation provides for various lists (inventories, registers) of polluting enterprises that creates a good basis for the PRIDE design and application. Furthermore, the territorial bodies of the Ministry of Environment have basic information to identify enterprises with the significant environmental impacts.

The study suggested a possible scope and several rating criteria. Since Ukraine is facing a widespread environmental non-compliance, it was proposed to focus the programme on verifying and disclosing the level of compliance rather than comparing environmental impacts of various enterprises.

Pilot project in Lviv oblast

The feasibility study resulted in a pilot project in the Lviv oblast of Ukraine. The Regional Administration of Environment and Natural Resources has been the leading agency working in co-operation with the Regional Division of the State Sanitary Epidemiological Service and the Lviv Oblast Administration. The Ukrainian Resource and Analysis Centre “Society and Environment” provided support to local stakeholders. Important methodological support has been provided by the World Bank staff.

The scheme’s implementation involved the following **steps**:

- Creation of a working group for the project implementation;
- Development of the project methodology by the working group (criteria and indicators for the performance rating scheme, selection of enterprises, way and steps for the information disclosure stage, software);

- Development of a web site for the State Administration of Environment and Natural Resources in Lviv oblast to place the enterprises rating;
- Holding a press conference to announce the programme;
- Completing data base and preliminary rating of enterprises;
- Holding a consultative workshop for enterprises;
- Data verification and final rating;
- Information disclosure for media;
- Follow-up activities to support enterprises efforts to improve performance and preparation of the second rating after 12 months.

An important issue for the successful implementation of the pilot project in Ukraine has been the **selection of enterprises** that are involved in the scheme. The State Administration of Environment and Natural Resources in Lviv oblast proposed to involve those enterprises that are included in the so-called “Inventory of Objects Dangerous to the Environment”. The main reasons behind this choice were:

- Data on these enterprises are available to the state authorities;
- The enterprises are the main polluters in the region; and
- An increased level of environmental performance is expected from these enterprises to reduce the environmental pollution and improve the state of environment.

Around 150 enterprises of Lviv oblast expressed their interest in the programme. Most of them have been ready to provide data for the rating voluntarily. As of 2007, the scheme is still being piloted and a total of 45 enterprises are participating in this process.

The involvement of a wider range of enterprises in the PRIDE programme would be considered in the next round of rating. At the same time, it is important to balance costs and benefits of involving a wider range of companies in the scheme. International experience shows that only a very limited segment of the regulated community is highly susceptible to performance rating (Box 1).

Box 1. Criteria to select companies that are most susceptible to environmental performance rating

In Indonesia, industries to be rated are selected based on the following criteria:

- The activities should potentially damage the environment;
- High impact to the environment of medium and large-scale industries in their production capacity and waste;
- Listed companies either in domestic or international stock market;
- Export oriented.

Source: Hermien Roosita (2005). Public Disclosure System as an Effective Tool for Pollution Control in Indonesia: The Implementation of PROPER. In: Economic Aspects of Environmental Compliance and Enforcement, OECD, 2005.

Rating criteria

The identification of sound, clear, effective and easy to use criteria for rating enterprise performance has been the most important element while designing the scheme. The criteria had to reflect the compliance with national environmental legislation, facility-specific norms and requirements, as well as enterprise characteristics that have or may have impact on the environment. For example, energy and resource saving measures and equipment were considered important, as well as the history of accidents with harmful environmental and human health consequences. The environmental policy of the enterprise was considered as another important indicator.

The PRIDE criteria for assessing environmental performance of enterprises have been divided into the following groups:

- Compliance with emission limit values, including for wastewater effluents, air emissions, and waste generation.
- Compliance with the enterprise sanitary protection and water protection zones;
- Violation of environmental legislation;
- Accidents with harmful environmental and human health impacts;
- Achievement of desired environmental quality:
 - Compliance with Maximum Permissible Concentration of pollutants in the air, water and soils;
 - Compliance with standards of radiation safety;
 - Compliance with standards of noise safety;
- Technical characteristics of the installation:
 - Use of energy and resource saving measures;
 - Availability of an operational and certified air and water pollution abatement and control equipment, and waste treatment and recycling equipment;
- Criteria based on the quality of enterprise's environmental management system (officially approved and published environmental policy; existence of an environmental unit/official; regular dissemination of data on enterprise's environmental performance in mass media; and ISO 14 000 certification).

This set of criteria will be further optimised based on the results of the pilot rating.

Potential barriers

Several potential barriers for the implementation of PRIDE have been identified within the pilot project. These include:

Confidentiality of information

During the design of the PRIDE scheme in Ukraine, the issue of a free access to the environmental information contained in statistical reports was discussed. The problem that was highlighted came from contradictions between the provisions in the Law of Ukraine “On State Statistics” and the legislation in the field of environmental protection. Some data, which are being used for rating enterprises’ performance, are taken from their statistical reports which are sent to the national statistical bodies and to the regional bodies of the Ministry of Environment. The articles 22 and 23 of the Law of Ukraine “On State Statistics” guarantees the confidentiality of statistical information therefore it cannot be publicly disclosed in a non-aggregated form.

As a result, the disclosure of facility-specific data is, in principle, prohibited. They can be made publicly available in two cases: i) with the consent of the respondent and on agreed conditions; ii) if the information is received from sources accessible to the public.

The article 30 of the Law of Ukraine “On Information” of May 2004 was complemented with a recently introduced provision according to which “...the following data cannot be confidential information: i) on the state of environment; ii) on accidents, catastrophes, dangerous natural phenomena and other emergency, which happened or may happen and endanger the citizens safety; and iii) other information, access to which can not be limited according to the laws of Ukraine and international treaties ratified by the Parliament...”.

Accordingly, the information on the state of environment cannot be considered confidential in any case, including those contained in statistical reports. In addition, the article 25 of the Law of Ukraine “On Environmental Protection” provides that the Ministry of Environment and its territorial bodies, local bodies of self-government, as well as enterprises, institutions and organizations, which have or may have negative impact on environment and

human health, are obliged to guarantee the free access to environmental information for public. The environmental rating of enterprises echoes this principle of free access to the environmental information for the public.

Data quality and monitoring difficulties

In responses to the questionnaire that was developed as part of the scheme design, enterprises mentioned problems that they encounter as a result of limited monitoring capacity. They signalled that data quality is frequently affected by the lack of specialists, funding, as well as modern laboratory equipment. These problems are expected to be address by cross-check analysis and frequent consultations with enterprises on the quality of monitoring data.

Unclear impact of the scheme

The likelihood of a limited impact of the scheme on the enterprise behaviour was largely debated during the design phase. It particularly applies to heavy industry when residents of the selected region are not the consumers of products originating from polluting enterprises. Impacts on the light industry, food processing and services, may be low as well: firstly, consumers pay more attention to the safety of the products not to the safety of production and, secondly, jobs created by local enterprises may be an important factor for not putting pressures on them. Even if the public was very active, the enterprises may have difficulties to react because of finance difficulties. The enterprises may also try to use political and other forms of pressure to change their rating and be moved to a higher performance category without necessary improvements in performance. All these concerns will require further monitoring and analysis and, possibly, introducing adjustments in the scheme.

METHODOLOGY FOR DESIGNING AND IMPLEMENTING THE SCHEME

The design and implementation of an environmental performance rating and disclosure programme goes through several stages that are described in this chapter. Before embarking into this process, it is important to review the overall framework (including national and local policy goals, as well as economic, social, and political conditions) in order to identify the objectives for the programme and factors that will determine its effectiveness and efficiency, including institutional capacity.

The best is to involve stakeholders from the very start, for example, by creating a working group composed of all relevant parties. This group can decide on the design of the programme, most importantly to be responsible for the development of rating criteria, but also for data collection and verification, analysis of data and draft ratings, as well as site audits.

Definition of the programme's environmental scope

With clear goals and understanding of the overall environment, stakeholder interest and their capacity, the environmental media or pollutants to be covered in the PRIDE programme should be defined. Correctly defining the scope will be crucial for the programme's smooth implementation and impact. The scope of existing schemes varies. For instance, Indonesia, the Philippines and Vietnam only targeted water pollution; China's Zhenjiang and other 13 municipalities in the Jiangsu Province decided to address water, air, solid wastes and noise problems; and India's scheme deals with air and water pollution, and hazardous wastes.

Selection of industries to be involved in the scheme

The selection of polluting installations subject to the scheme also varies from country to country. As already mentioned, the choice will be based on specific criteria and can be limited to a geographic unit and/or a sector. Usually, the scheme would cover the major polluters with the possibility for expansion. In the beginning, the participation in the scheme can be made voluntary and it can change into mandatory over time.

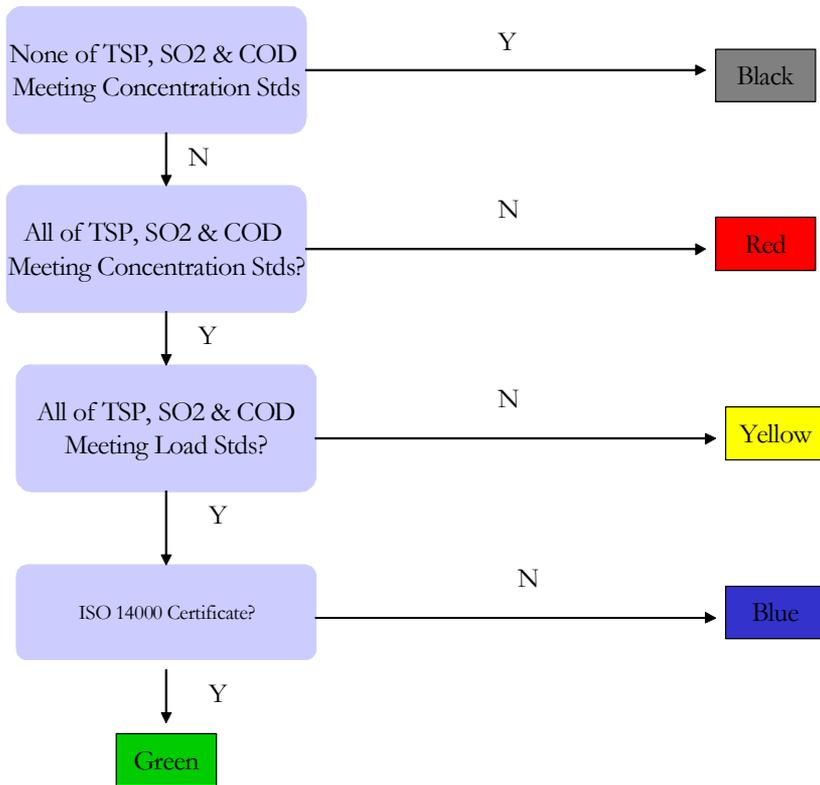
Defining criteria and the algorithm of rating

Several core parameters have to be reflected in the rating scheme, such as emission, compliance, impact, and internal management. The number of parameters that are actually used is quite variable. For example, the criteria used in Zhejiang (China), include the following: concentration based pollution discharge and emission; load based pollution discharge and emission; citizen complaint; pollution accident; internal environmental management procedures; ISO14000; and implementation of cleaner production (Figure 1). In Hohhot (China), rating criteria include only basic parameters (Figure 2), such as TSP, COD, SO₂ and ISO 14 000 certification. A much more extensive set of criteria has been applied in India (Figure 3). However, there are no universal criteria of rating. Generally, worst refers to doing nothing or having serious damages, and best refers to world class performance and result.

A generic approach for performance rating is presented in Annex 1. There are a number of issues that need to be considered while deciding on the algorithm of rating:

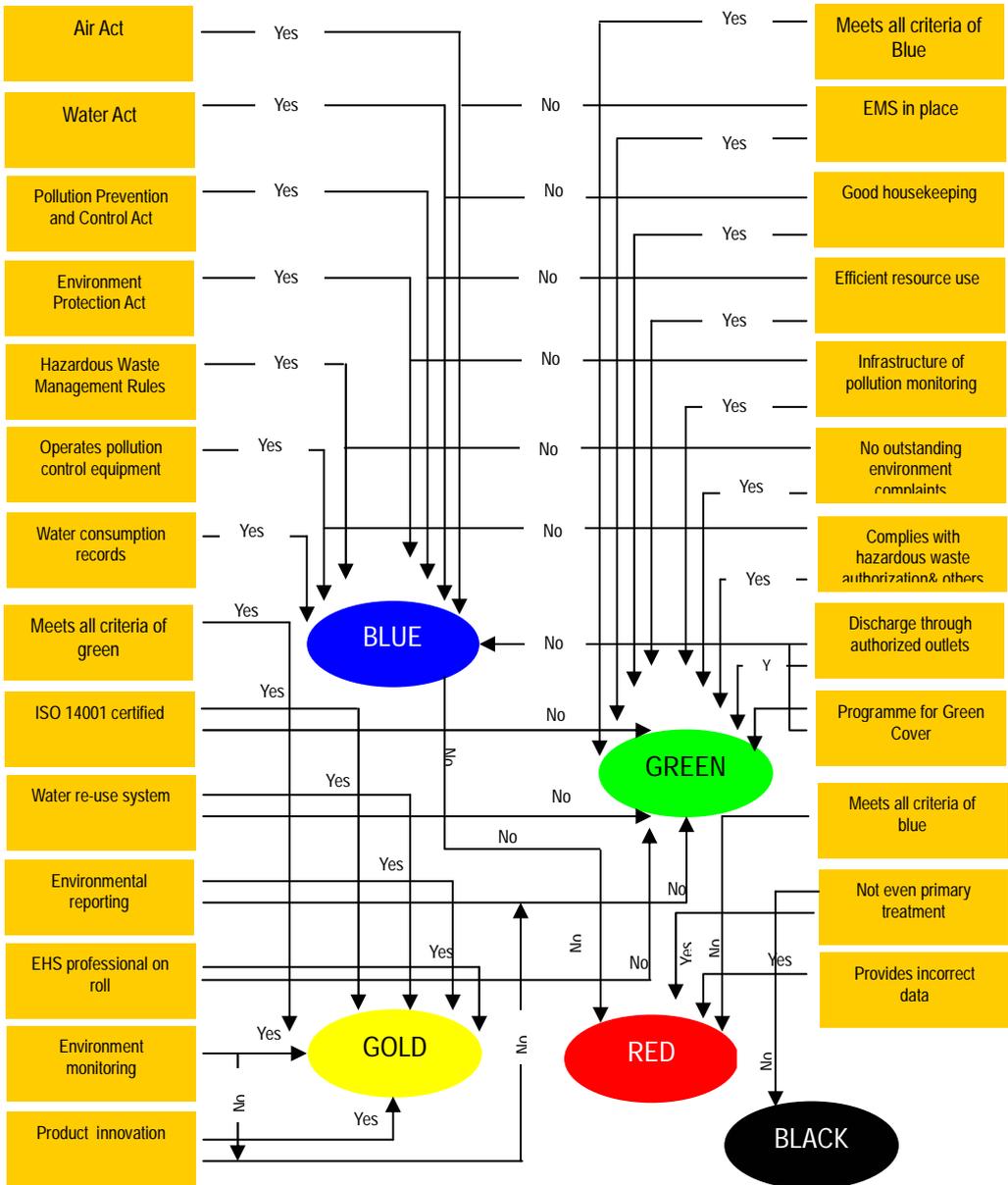
- The rating scheme shall provide clear incentives to continuously improve performance. To this end, enterprises need to see the perspective of moving within at least a five-category interval ranging from the worst to the best;
- The rating shall be objective, based on solid and uniform data analysis and comparison. Weighting shall be avoided as much as possible;
- The rating process should be fair and transparent, and the rating criteria shall be easy to understand.

Figure 2. Hohhot Scheme (China)



Source: Hua Wang, the World Bank.

Figure 3. Key performance indicators applied in India³



³ Source: Hua Wang, the World Bank.

Disclosure strategy

Disclosure is an important step that helps to send the message across to the public and generate corresponding social pressure to reduce environmental impacts. All countries applying performance rating have adopted a colour scheme to convey the level of performance. At the same time, there are several principles that need to be considered while developing a disclosure strategy:

- Good understanding of why colours are used in performance rating - to convey a visual, strong and easy to understand message to the public about the performance of the enterprises;
- Clear identification of the audience for disclosure. If it is decided to be an external public disclosure, clear articulation is needed to make the point about the purpose, criteria, expected outputs and benefits;
- The scope and amount of information that is to be disclosed should be determined in advance: whether the disclosure shall be restricted to only final rating results or all the detailed information. This shall be decided on the basis of the goals, objectives and policy targets, as well as consultations with industry;
- The frequency of rating shall be clearly defined: initially the rating could be done more frequently (e.g. every 6 months) and the frequency can decrease over time (e.g. every two years);
- The media that would be used for the disclosure information should be clearly identified in advance. These should include possibly most influential TV and radio broadcasts, newspapers. The use of internet should also be considered;
- Disclosure shall be based on the local capacity and also strive for effectiveness.

Data collection and verification, and information management

Data collection and verification is crucial in the rating and disclosure programmes as it determines their quality and impact. Besides statistical data and data collected through official administrative channels, the programme could rely on questionnaires targeting facility managers and local residents to build a balanced view of the reality. Data collection and verification should cover various sources that need to be identified early in the process.

A well-established information management system shall be in place to support the programme. This system should ensure:

- Record saving;
- Data processing;
- Possibilities for sharing information;
- Presenting data in a graphical form.

Building stakeholder support

Since the “human” factor is crucial to a successful rating and disclosure, all stakeholders shall be clearly identified. Good understanding of who may support the programme or be against it is important as it helps to align as much support as possible and also lower the barriers on the way. NGOs have a key role to play. Sometimes, industrial associations may become important partners. A good strategy of how to promote the programme and form strong alliance with different stakeholders is necessary.

Other enabling conditions

When a programme management team or committee is formed, each party’s responsibilities must be clearly defined. Implementation mechanisms have to ensure the credibility of rating results and the programme’s continuity. Institutional capacity should be reviewed and, where necessary, training provided.

In some situations, NGOs are better placed to play the leading role, with government authorities providing information and other kinds of support. In many cases, there are quite different roles defined for NGOs and governmental organizations, where the two have to work closely with each to successfully carry out the programme.

For instance, NGOs are expected to play an increasingly important role in carrying on the rating and disclosure programme in China as governments have limited resources and expertise to do so. However, the government is still expected to be a strong partner in ensuring the continuity of the programme.

Depending on the country specific conditions, legal, political and financial issues have to be considered seriously in implementing and carrying on such a program. While the programme does not cost much (some previous programmes required between USD 50 000 and 100 000), strong legal and policy foundation is crucial for the continuity; political support from leaders is desired; and so is financial support.

BIBLIOGRAPHY

- Afsah, S., B. Laplante, and Wheeler D. (1997). Regulation in the Information Age: Indonesian Public Information Program for Environmental Management. Research Paper. Washington, DC: World Bank, Development Research Institute.
- Afsah S., A. Blackman, and Ratunda D. (2000). How Do Public Disclosure Pollution Control Programs Work? Evidence from Indonesia. Discussion Paper 00-44. Washington, DC: Resources for the Future.
- Bell, R.G., and Russell C.S. (2003). Ill Considered Experiments: The Environmental Consensus and the Developing World. *Harvard International Review*. Winter.
- Cohen, M. (1998). Monitoring and Enforcement of Environmental Policy. Mimeo. Owen Graduate School of Management, Vanderbilt University.
- Dasgupta, S., B. Laplante, and N. Mamingi (2001). Pollution and Capital Markets in Developing Countries. *Journal of Environmental Economics and Management* 42: 310-35.
- Foulon, J., P. Lanoie, and B. Laplante (2002). Incentives for Pollution Control: Regulation or Information? *Journal of Environmental Economics and Management* 44: 169-87.
- Hamilton, J. (1995). Pollution as News: Media and Stock Market Reaction to the Toxics Release Inventory Data. *Journal of Environmental Economics and Management* 28: 98-113
- Khanna, M., W. Rose, H. Quimio, and D. Bojilova (1998). Toxic Release Information: A Policy Tool for Environmental Protection. *Journal of Environmental Economics and Management* 36: 243-66.

- Konar S., and M. Cohen (1997). Information as Regulation: The Effect of Community Right to Know Laws on Toxic Emissions. *Journal of Environmental Economics and Management* 32: 109-24.
- Lanoie, P., B. Laplante, and M. Roy (1998). Can Capital Markets Create Incentives for Pollution Control? *Ecological Economics* 26: 31-41
- López J.G, Sterner T., Afsah S. (2004). Public Disclosure of Industrial Pollution: The PROPER Approach for Indonesia? Discussion Paper 04-34, October 2004. Washington, DC: Resources for the Future.
- OECD (2003) *Guiding Principles for Reform of Environmental Enforcement Authorities in Transition Economies of Eastern Europe, Caucasus, and Central Asia*.
<http://www.oecd.org/dataoecd/36/51/26756552.pdf>
- OECD (2004) *Assuring Environmental Compliance: A Toolkit for Building Better Environmental Inspectorates in Eastern Europe, Caucasus, and Central Asia*.
<http://www.oecd.org/dataoecd/61/62/34499651.pdf>
- OECD (2004). *Economic Aspects of Environmental Compliance and Enforcement*.
<http://www.oecd.org/dataoecd/15/16/37719119.pdf>
- OECD (2005) *Resource Compendium of PRTR Release Estimation Techniques Part 3: Summary of Techniques for Off-site Transfers*. PRTR Series No.8, 2005, [ENV/JM/MONO\(2005\)9](#)
- OECD (2005) *Uses of Pollutant Release and Transfer Register Data and Tools for their Presentation*. PRTR Series No. 7, 2005, [ENV/JM/MONO\(2005\)3](#)
- Sterner, T. 2003. *Policy Instruments for Environmental and Natural Resource Management*. Washington, DC: RFF Press.
- Tietenberg, T.H. (1998). Disclosure Strategies for Pollution Control. *Environmental and Resource Economics*, 11: 587-602

Wang, H., J. Bi, D. Wheeler, J. Wang, D. Cao, G. Lu, and Y. Wang. (2002). Environmental Performance Rating and Disclosure. Policy Research Working Paper 2889. Washington, DC: World Bank.

World Bank. (1994). Indonesia: Environment and Development, A World Bank Country Study, Washington, DC. Available at <http://www.worldbank.org/html/extdr/offrep/eap/inenvdev.htm>.

World Bank (2000). *Greening Industry: New Roles for Communities, Markets and Governments*. World Bank Policy Research Report. New York: Oxford University Press.

ANNEX 2. POSSIBLE WORKING PROCEDURE FOR PERFORMANCE RATING

1. Select major pollutants to be covered by the environmental performance rating and disclosure programme, based upon data available in the region (water pollutants may include TSS, COD, metals, oil; air pollutants may include TSP, SO₂, etc.);
2. Calculate the actual discharge amounts of all pollutants respectively in a year (if there are more than one discharge outlet, summation should be made over all outlets for each pollutant):

A = total discharge amount of one pollutant

= annual average of pollutant discharge concentration * total waste water (or waste gas) discharge in the year

3. Calculate the pollution discharge permission for each pollutant in the year:

B = total pollution discharge permission for a pollutant

= concentration-based standard * total waste water (or waste gas) discharge in the year

(If a pollution discharge permit is enforced, B is equal to total permission)

4. Calculate the ratio of actual pollutant discharge to pollution discharge permission for each pollutant considered:

$$R = A/B$$

5. Rate the environmental performance into five colours for each polluter:

Following the environmental performance rating diagram, using the ratio of actual pollutant discharge to permission (R) calculated above, combining with other indicators of environmental performance, which include disposal rate of hazardous wastes, rate of solid waste treatment, environmental accidents, citizen complaints, environmental management requirements, and ISO14000 certificate, the environmental performance of a company is rated as:

GREEN, if, 1) none of the actual pollutant discharges exceed 20% of the total permissions (i.e., $R \leq 0.2$ for all pollutants considered); 2) hazardous wastes are safely disposed at a rate of 100%; 3) more than 80% of solid wastes are well treated; 4) no environmental accidents; 5) no citizen complaints; 6) all local environmental management requirements are met; and 7) ISO14000 certificated.

BLUE, if, 1) none of the actual pollutant discharges exceed permission (i.e., $R \leq 1$ for all pollutants); 2) hazardous wastes are safely disposed at a rate of 100%; 3) no serious environmental accidents; 4) no multiple citizen complaints; and 5) all local environmental management requirements are met; but, not all requirements for "GREEN" are met.

RED, if, 1) One or more pollutant discharges exceed permission by 100% (i.e., R is greater than 2. For underdeveloped areas, 200%; i.e., R is greater than 3), but

none of the pollutant discharges exceed permission by 500% (i.e., R is less than or equal to 6; for underdeveloped areas, 1000%; i.e., R is less than or equal to 11); or, 2) there are very serious, but not extremely serious, environmental accidents.

BLACK, if, 1) One or more pollutant discharges exceed permission by 500% (i.e., R is greater than 6; for underdeveloped areas, 1000%; i.e., R is greater than 11); or, 2) there are extremely serious environmental accidents.

YELLOW, if the performance can not be classified as Green, Blue, Red or Black.