

## SUMMARY OF WORKSHOP 1A: ECONOMIC ASPECTS OF COMPLIANCE AND ENFORCEMENT

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### GOALS

To discuss the reasons why companies violate environmental laws and explore both regulatory and non-regulatory solutions to this problem.

### 1 INTRODUCTION

The facilitators raised four key questions for consideration:

1. What are key factors that lead firms to comply or not to comply with environmental requirements?
2. What are types of regulatory approaches that are enforceable and lead to environmental improvements?
3. What is the appropriate balance between compliance monitoring and enforcement to respond to violations?
4. What are other non-regulatory schemes, such as performance ratings, public disclosure, and emissions trading, that may also encourage changes in behavior or compliance with environmental rules in a more cost-effective manner?

One of the primary reasons that companies violate environmental laws is that they are unwilling to spend the money necessary to comply. Another reason is that many permits may be too complex or overly burdensome, so companies can not comply with every detail. Finally, companies may not see the effects of their actions when pollution is dispersed or the harm is caused far from their facilities. This decreases their concern and knowledge of the importance of their compliance.

Penalties are one mechanism that

may be useful to “balance the books” and increase the cost of non-compliance to motivate enterprises to invest appropriately. However, other mechanisms, including closure of the facility, criminal sanctions, public disclosure, and direct communication with the company may also be effective.

One way proposed to increase enforcement efficiency would be to shift the burden of proof to the industry to show they are in compliance, rather than on the inspectorate to show violations. Another effort for efficiency involved the prioritization of regulations for inspectorates to better focus their efforts on the most important rules.

Efforts are needed to focus permits on outcomes instead of detailed requirements mandating methods to achieve those outcomes. This would both increase compliance with more limited requirements and make compliance more efficient for the regulated community and enforcement more meaningful for the authorities. If the permitted limit is achieved, there would be limited oversight. However, if the emission limit is exceeded, the polluter would have to prove that they had met or exceeded the required management practices. Inspectorates would not have to prove complicated technical violations in court; instead the polluter would have to prove that they met the requirements. Subsequent penalties should take away economic incentives to

violate and make violators rethink their practices and compensate the public for any harm caused.

## 2 DISCUSSION SUMMARY

Mr. Kenneth Ruffing of the Organisation for Economic Co-operation and Development (OECD) opened the workshop by presenting the outcomes of the December 2004 OECD/INECE workshop on the Economic Aspects of Environmental Compliance Assurance held in Paris and distributed the background paper for that workshop. (see [http://www.oecd.org/document/20/0,2340,en\\_2649\\_34339\\_3364565\\_2\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/20/0,2340,en_2649_34339_3364565_2_1_1_1_1,00.html)) The conclusion of the event has led the OECD to continue to work on the topic and gather more views and experiences to develop cost-effective controls and economic motivators for compliance. Compliance promotion systems that have been in place rely on many components to function effectively, including actions at the firm, compliance monitoring by the competent authorities, enforcement actions when violations are found, and the collection of penalties when appropriate. But these systems are only as strong as the weakest link, and if companies continue to fail to comply, efforts count for little. Estimates show that 60% – 80% of facilities in OECD member countries may be out of compliance at any given time, and percentages may be worse among non-member countries.

There must be an increase in the use of economic instruments to reduce the cost of compliance and provide additional economic incentives to comply. More empirical analysis on compliance rates and the causes for non-compliance is needed, as well as the most effective policy approaches. Countries need to better analyze the financing that their programs need and to better understand and utilize mechanisms such as self-implementing approaches to help reduce the costs to the government of increasing compliance. It is incumbent on all to find the most efficient means to improve compliance rates.

### 2.1 Are Penalties an Effective Means of Providing Economic Incentives for Compliance?

Money and profits are the biggest factors that motivate entities to not comply with environmental laws. Investments required for compliance cut into profits and investments in other areas. Penalties can be an effective way to balance these costs and eliminate the financial incentive not to comply by recouping any economic benefits derived from the violation. However, Mr. Peter Lehner commented that many times, penalties are not big enough to truly cover the savings from non-compliance. The State of New York brought several cases against coal-fired power plants for violations of the U.S. Clean Air Act. As a result of one case, a company will install pollution control devices costing over \$1 billion, but these changes should have been done 10 years ago. The \$8 million penalty collected doesn't come close to covering the return on their investment achieved by delaying the required expenditures. The statutory maximum for this type of continuing penalty could have been much higher, even in the hundreds of millions of dollars, but in the current climate, no one would authorize a penalty that truly recaptured the economic benefits the company gained over the years. More effort is needed to educate judges and decision makers on the true value of non-compliance and the costs of damages.

The United States Environmental Protection Agency has developed a mathematical model to calculate the economic benefit of noncompliance. The standardized method has helped increase the penalties, and ensure some national consistency, but often, in cases with very high economic benefits, the full value is seldom collected in the penalty.

Mr. Neil Davies commented that penalties may also be based on the environmental damages resulting from non-compliance. However, the value of the damage is usually very difficult to determine, and may be quite high if all factors

are considered. Mr. Daniel Geisbacher added that we can count dead fish, or other concrete effects, but not broad damages to the environment or intangible effects. Mr. Peter Lehner described some of the tools used in the United States, particularly to evaluate the loss of wetlands. However, measurable effects such as number of fish killed, while easier to calculate, only account for a fraction of the harm, and do not measure the value of the aesthetics and other intangibles. In other cases, we can calculate the number of deaths resulting from a given amount of air pollution, but ascribing the worth of a human life is extremely controversial.

## 2.2 Penalties as Deterrence

Mr. Neil Davies said that deterrence comes from the marginal cost of compliance compared with the risk of detection and the amount of a penalty. Damages to the environment are often caused by accidents or unforeseen events. As such, the collection of damages does not usually result in true deterrence. Mr. Ken Ruffing added that if the penalties themselves do not rise to the true benefit of non-compliance, going beyond that amount may be moot, and ineffective.

Mr. Peter Lehner stated that penalties are generally used to respond to culpability, and may determine which is more appropriate: the collection of damages caused or the economic benefit derived. Another aspect of the penalty should be punitive to help deter future violations.

In developing countries, penalties may not be feasible as a mechanism to change behavior. Dr. Warapong Tungitti-plakorn explained that in Thailand, the Pollution Control Department has not been able to get any company to pay any amount of penalty. The government is trying to develop a penalty policy for judicially acceptable calculations, but have no administrative mechanism outside the court system to assess and collect a penalty. They have had some success in negotiating non-penalty solutions directly with companies, but have not taken any cases to court.

## 2.3 Other Types of Effective Sanctions

In the United Kingdom, Mr. Martin Murray said that, although they have the authority to close a facility, the authority is seldom if ever used. There is a fear that the company could sue the government for lost profits while they were closed. However, the statute does not allow much discretion, and if the company does not voluntarily comply, the statute mandates that they cease operation. This is seen as too extreme a response for most violations.

Mr. Mihail Dimovski explained that several industries in Eastern Europe were closed because of the risks they presented, particularly at chlorine plants. The inspectorate has the authority to cut the power to the facility, in effect forcing its closure. Both the inspectorate and the company found that it was much more expensive to close the facility than any penalty, greatly accelerating the response. Closure can be much more punitive and powerful than other means of enforcement.

Mr. Krzysztof Michalak cited examples where the government actively advertised the closure of enterprises to promote the authority of the ministry and the consequences of non-compliance. However, Mr. Peter Lehner said that in his experience, the ministry would never announce that they forced the closure of a company for environmental reasons, as it reinforces the argument that environmental protection is incompatible with job creation.

## 2.4 Do Different Types of Companies Respond Differently to Compliance?

Mr. Peter Lehner said that he has seen several differences in companies based on their ownership and size. Privately held companies can more effectively plan for longer terms and project future benefits compared to present costs. Public companies are often less concerned about future benefits and are forced to place more importance on short-term benefits. For this reason, more closely-held companies are generally more compliant as they

are willing to make the expenditures necessary for longer term needs. Another factor is how local the ownership of the company is. Local companies tend to have a larger stake in the community and are more concerned with environmental issues. As companies become larger and more diversified, they may tend to comply less.

Mr. Kenneth Ruffing cited some contradictions that came from a study of firms that didn't focus on compliance, but on predictions of whether environmental management systems (EMS) are in place or not. They examined factors that may make firms change processes to prevent pollution and subsequent compliance problems, instead of end-of-pipe treatment. These studies have found that widely-held, global corporations are more likely to have better EMSs due to reporting requirements and corporate social responsibility. This seems to conflict with New York's experience on compliance of different size firms.

Mr. Peter Lehner responded that big companies may be more likely to have an EMS, but are also very carefully scrutinizing and guarding their environmental budget. He admitted that he may have overstated differences between large and small companies, because many small companies are not complying due to costs. The contrast may be more appropriate for mid-size firms with a strong connection to a community compared with multinational conglomerates.

Mr. Daniel Geisbacher agreed that there are differences between large and small companies. Larger companies care more about reputation, as that may impact their stock price. Smaller companies tend to operate with smaller margins, are closer to bankruptcy, and may not be able to afford compliance.

## 2.5 Other Incentives for Compliance

However, there are other factors that may give larger companies a greater incentive to comply. Mr. Antero Honkasalo said that the problem with small and medium-sized enterprises is that they primarily lack the knowledge and resources to com-

ply. In addition, the inspectors may not have the expertise necessary to verify compliance. In Finland, there are more than 400 municipalities, some with only a few thousand inhabitants, so the local inspectors may not be able to determine compliance at the more complex facilities.

The compliance situation may also differ depending on the social norms in different countries. For example, in Nordic countries, there are generally high levels of compliance due to great respect for law generally. In these situations, the concentration should not be on the penalty, but on prevention. Penalties are a reactive response after the fact, rather than proactively ensuring compliance before violations occur.

Through an OECD country assessment in Chile, Mr. Kenneth Ruffing observed that the government worked with one particular sector to provide technical assistance through the trade association. This effort ensured that all enterprises knew what the rules are, they knew that they all need to comply, and they received technical assistance and recognition for voluntary participation. Working through the trade group ensured very good participation and increased compliance. The regulated sector saw it not as an effort to set the regulatory bar higher, but raise everyone to the bar in the same time-frame.

Mr. Neil Davies described a similar approach in the United Kingdom. Trade associations signed up for agreements with the environment agency, not individual companies. If an individual enterprise then complied with the agreement, they received a rebate on their energy levy as an economic motivation.

## 2.6 Clear, Enforceable Permits Required

The group also acknowledged the need for permits and regulations that focus on the outcome, not necessarily the way the outcome is reached. A flexible framework for compliance allows the operator to find the most efficient way to reach an emission limit, so they are more likely to

comply. Ms. Maryna Yanush suggested that this can also make the inspectorate more efficient by freeing the inspectors to look at the outcome and result, rather than the minutia of detailed rules.

Mr. G.H.J. Ranter stated that regulators should look for middle ground so inspectors can inspect in efficient ways, but businesses can follow rules with no discussion or questions. In Holland, they are making efforts to reduce the number of rules, prioritize between more and less important rules, and focus on the most important. Regulators should focus on the goal behind the rule, not the detailed procedures needed to achieve the goal.

Mr. Peter Lehner explained that in the United States, permits must be specific so violations will be specific and complaints will stand up in court. Violations of general objectives are very difficult to enforce; the law may say that companies must not pollute the air, but it is hard to establish a violation without specific criteria. Judges tend to favor private interests, so we must be very clear about why costs are required. Courts are designed to protect private rights, not the public right to a healthy environment, so detailed permits are required to shift the burden of proof to the polluter.

## 2.7 Other Non-Regulatory Structures

There may be room for greater flexibility if the effluent or emission is meeting the overall objectives. Mr. Kenneth Ruffing asked whether the problems with penalties and strict compliance measures advocate for other economic tools and market sources. Emission trading schemes put the burden on companies to establish their emission volumes/types so they can participate in the market. Enforcement is on the validity of their measures, but authorities

would not need as much monitoring if polluters could choose cost-effective ways of reaching outcomes so they can trade emission credits after controls are implemented. The key is to get the limit right, which applies to either a trading system or a permit-based regulatory system.

Many countries have established taxes or fees on waste or effluent to motivate pollution prevention. Mr. Ruffing stated that a large number of OECD countries have environmentally related taxes, fees, or charges. However, there are so many exemptions that the system is not effective. Studies have shown that between 1300 and 1400 exemptions to pollution taxes or fees exist in the 30 OECD countries.

While these tools may be effective to address emission or effluent problems, there are many environmental requirements designed to eliminate releases or accidents. Mr. Peter Lehner cited the situation with storage tank leak prevention systems where any discharge is prohibited. Neither pollution trading schemes or waste taxes would work to regulate those systems, so traditional mechanisms are still effective.

## 3 CONCLUSION

The group agreed that compliance decisions are motivated by economic and financial factors in most circumstances. Economic efficiencies must be sought that promote compliance and eliminate any incentives to violate environmental laws. The full range of tools must be used to eliminate economic disincentives to compliance, including penalties to address violations and new regulatory approaches to reach environmental goals in the most efficient manner possible.