

INECE Capacity Building Program to Strengthen Governance of Water Resources

Facilitators' Outline

Module 1: Writing an Enforceable Requirement

Discussion: Is this an enforceable requirement?

Facilitator Guidelines for Discussion:

Time requirements: Short discussion (5 minutes)

This slide presents a very basic requirement: "No facility shall discharge too much pollution into the rivers," which is designed to generate discussion on the missing "who," "what," "when," "where," and "how much" elements of an effective requirement. The facilitator may want to acknowledge that this is an overly simplistic example.

Discussion points:

- The term "no one" is very vague and does not clearly define the regulated community.
- The term "excessive" is very vague. A specific quantity or rate should be specified.
- The type of regulated "facility" should be defined
- The type of "discharge" should be clarified
- The term "pollution" is too vague – the law should define discharge limits for specific pollutants.
- The term "the rivers" is too general – the law should clearly define the regulated water body. Situations in which the river floods or is flowing much slower than average may also be considered in the discussion.

If necessary, the facilitator can ask 'hypothetical' questions of what enforcement actions could be taken under this regulation to highlight the elements that are too vague. Facilitator could use "counterfactual" questions to bring out shortcomings in the law in situations where the participants do not come up with these elements on their own.

Leading questions could include:

- What if you have a landfill that is leaching chemicals into a small creek? Would this law be enforceable against that? -- this goes to whether the landfill is a facility, is passive leaching a discharge, is a small creek a river?
- What if a tire rolls off into the creek? -- this is a funny way to get them to draw out the vagueness of "pollution"

Discussion: Types of Standards

Facilitator Guidelines for Discussion:

Time requirements: Short discussion (5-10 minutes)

Format: Flip chart brainstorming among participants to generate different examples of the types of application.

Other Materials: Could tie this discussion to the Case Study, if desired, tying each type of standard to each actor in the case study (or just one).

Examples to Guide the Discussion:

Ambient Standards:

- Mercury levels in the River shall not exceed 50ppm.
- BOD levels must be sufficiently low to ensure adequate fish stocks in wetlands areas.
- "The ... saturation of dissolved oxygen shall not be less than the value specified in respect of that classification in column 2" - UK
- "Water quality standards should, wherever attainable, provide water quality for the protection and propagation of fish, shellfish, and wildlife and for recreation in and on the water." - US
- "Existing in-stream water uses and the level necessary to support and protect existing uses shall be maintained and protected." - US

Technology Standards:

- Require farms to have a comprehensive process of runoff control systems including diversion ditches, control ditches, containment/treatment areas, runoff holding ponds, treatment with chemicals to remove contaminants
- Require holding ponds for wastewater be lined with plastic and require installation of quality pipes and cement ditches
- Require all inactive farms be planted with vegetation to reduce soil erosion into the river.
- "(1) Every industry, establishment or holder of a waste discharge permit shall install anti-pollution equipment for the treatment of effluent and waste discharge emanating from the industry. (2) An installation made under regulation (1) shall be based on the best practicable means, environmentally sound practice or any guidelines as the Director may determine." - Uganda
- "there shall be constructed along the channel conveying the water from the pulp separator or screen to the body of water or watercourse several pits of such size as to reduce the velocity of the water to enable any solid matter in it to settle, and the sediment collected in such pits shall be removed daily..." - Kenya

Performance Standards:

- Require effluent be monitored at discharge points and not exceed a certain value
- Require that contaminant levels observed at discharge points be reduced by a certain percentage.
- "The council shall determine such other standards for the waste discharge which, in its opinion, will ensure that such receiving waters will be fit for such water use" - Australia, Queensland
- "...the effluent shall contain no matter poisonous or otherwise likely to be injurious directly or indirectly to public health, to livestock or to crops or to orchards or gardens irrigated with such water..." - Kenya
- "these provisions shall ensure that, for each farm or livestock unit, the amount of livestock manure applied to the land each year, including by the animals themselves, shall not exceed a specified amount per hectare" - UK

Practice Standards:

- "Aerial spraying will be conducted at a distance not less than - (1) 300 meters from water sources referred to in regulation 3, and 200 meters from streams specified in the addendums, unless the Minister approves spraying from a distance less... but never less than 50 meters from the above-mentioned water sources; (2) 50 meters from every other stream." - Israel

- “No part of the slurry storage tank or any effluent tank, channels or reception pit shall be situated within 10 meters of any inland or coastal waters which slurry could enter if it were to escape.” - UK
- “No person shall dilute, or cause or permit to be diluted, any effluent, whether raw or treated at any time or point after it is produced...” - Malaysia

NOTE: While there are clear examples of each of these kinds of standards, the lines between them are not always clear.

Exercise 1: Writing the Requirement

Facilitator Guidelines:

Time Requirement: 1 hour

Format: Divide participants into groups with roughly 5 people in each group. Each group should write an enforceable requirement for one of the polluters in the case study, using at least one of the types of standards covered in this module. All groups should write a requirement for the same polluter, so that all can come together at the end to compare and contrast the approaches taken. Be sure to leave the last half-hour for the larger discussion.

Other Materials: This exercise is based on the Case Study

Other Guidance for the Exercise:

Environmental requirements must be enforceable to ensure the environmental results they are designed to achieve. To be enforceable, requirements must be clear and not subject to misinterpretation or debate.

If they are clear and complete:

- Enforcement will be easier.
- The regulated community will understand the requirements and will be able to more accurately plan for compliance in their business decisions.
- They also should provide enforcers with enough information to assess compliance.

If a regulation is not well designed:

- You may not achieve the desired environmental results.
- Enforcement will be difficult, lacking essential information.
- Differences in interpretation may cause problems between government and industry.

When writing a requirement, it is very important to ask exactly what kind of information an inspector would need to determine whether a facility was in compliance and whether or not that information is available. It is often important to include a provision in the requirement that requires a company to run certain tests at certain times, keep certain records, and submit these records to the government or make them available to inspectors.

Module 2: Ensuring Compliance with and Enforcement of a Requirement

Exercise 2: Priority Setting

Facilitator Guidelines for Exercise:

Time requirements: 1.5 hours

Other materials: This exercise is based on the Case Study

This exercise requires participant groups to design an environmental compliance and enforcement program for Lindagua. It presents a limited budget and a menu of tools (with costs), forcing groups to balance different approaches and costs in addressing pollution from the four polluters (textile factory, chicken farms, vegetable farms, downtown).

The last 30-45 minutes should be reserved for discussion among the groups as to the reasons for choosing their assortment of tools.

It is important to note that many of the concepts that are raised by this priority setting exercise (inspections, deterrence, economic incentives, etc.) will be addressed more thoroughly in the rest of Module 2.

Discussion: Considerations for Designing an Inspection Program

Facilitator Guidelines for Discussion:

Time requirements: Short discussion (10 minutes)

Format: Flip chart brainstorming among participants to generate other considerations when designing an inspection program.

Examples to Guide the Discussion:

From the INECE Principles of Enforcement:

Policymakers will need to consider many issues when designing an inspection program. For example:

- Selecting Facilities for Inspection. How are facilities chosen for inspection? What proportion of inspections should be "routine," and what proportion should be "for cause?" How can routine inspections be fairly and neutrally distributed across the regulated community?
- Announced Versus Unannounced Inspections. When should inspections be announced versus unannounced? If inspections are announced, the facility's managers can make sure that the information requested and any essential plant personnel will be available when the inspector arrives. Thus, announced inspections can be more efficient. Unannounced inspections, however, are more likely to discover the plant's true operating conditions. They are particularly useful when there is reason to believe the source is in violation and is misrepresenting its self-reported data or likely to destroy evidence if the inspection is announced.
- Frequency of Inspection. How often should a particular facility be inspected? Policymakers will need to balance the cost of inspections with the expected compliance benefit. Sources that are more likely to fall out of compliance may require more frequent inspections.
- Who Should Inspect. Which level of government will provide the most effective inspection force: national, regional, provincial, or local? Would it be

more effective for the government to contract with an independent group to perform inspections?

- Legal Authority. What legal authority do inspectors have to enter facilities? What procedures will be taken if the facility refuses to allow the inspection?
- Role of the Inspector. Should the inspector determine whether a violation has occurred or should the inspector simply gather information? The inspection may fail to meet the needs of enforcement if the inspector's role is not clear.
- Comprehensiveness of the Inspection. What data should inspectors gather? Should inspections focus on data needed under a particular regulation, permit, or license, or should inspectors try to gather data relevant to several environmental regulations, permits, or licenses? The advantage of focused inspections is that it is easier to train inspectors for these inspections. The disadvantage is that more focused inspections may fail to detect noncompliance in areas not specifically covered by those inspections.
- Inspection of Related Activities. To what extent should inspectors also gather data on company activities that may affect environmental quality, such as preparedness for chemical emergencies, pollution prevention activities, and waste minimization programs?
- Objectivity of the Inspector. Care is needed to ensure that inspectors do not become so familiar with and sympathetic to certain facilities and facility managers that their objectivity is compromised. Some enforcement programs periodically rotate inspectors to avoid this possibility.
- Closing Conference. Should the inspection include a closing conference? A closing conference provides an opportunity for the inspector to make company managers aware of any violations and what the consequences of continuing noncompliance would be. In some cases, the inspector may suggest ways to correct the violation. A closing conference helps educate the regulated community. However, information conveyed by the inspector could undermine subsequent legal taken against the facility. For example, facility managers could claim the information conveyed by the inspector contributed to noncompliance if the information was in any way misleading or not sufficiently comprehensive. Program lawyers may prefer that inspectors draw no conclusions and convey no information about compliance.
- Documenting the Violation. How should the information gathered by the inspector be documented? The information's value to the program may depend on such factors as clarity, completeness, and utility as evidence in a court of law.
- Inspector Training. How can inspectors be adequately trained to gather accurate information and (if relevant) provide technical assistance? What training is needed to ensure the health and safety of inspectors?
- Data Quality. How can the quality of data be assured? Ways to help ensure data quality include initial reporting procedures, processes for review and confirmation of the data, and schedules and procedures for auditing the program's reporting and recordkeeping system. Guidance should also be developed to ensure the quality of the laboratory analysis supporting the inspection.
- Consistency of Sampling and Analytical Procedures. Use of consistent methods and procedures for sampling and analysis is important to ensure data quality, fairness of enforcement, and the value of the results for legal proceedings. Both inspectors and analytical laboratories will require guidance on appropriate procedures.

Exercise 3: Penalty Calculation

Facilitator Guidelines:

Time Requirement: 1.25 hour

Format: Divide participants into groups with roughly 5 people in each group. Each group should work through the penalty calculation exercise. Be sure to leave the last half-hour for the larger discussion.

Other Materials: This exercise is based on the Case Study

This exercise will:

- Introduce participants to the various factors that may be taken into account when calculating a penalty.
- Allow participants to calculate a penalty for a hypothetical scenario.
- Introduce the idea of having a penalty policy and stress the importance of consistency when applying the policy.

A penalty is an assessment of money, the amount of which is influenced by one or more variables such as duration and seriousness of the violation. What I'd like to look at now is: How do we determine the penalty amounts?

Having a policy is especially important in determining penalty amounts, since it makes it more likely that penalties will be assessed consistently and fairly.

There are many different ways to decide the amount of a penalty. Penalties may be determined by evaluating different qualitative factors. Penalties may be calculated using a worksheet. Sometimes penalties may be set in accordance with a specific schedule.

In this exercise, we will talk about one way of determining the amount of penalties, through calculation using a penalty worksheet. However, as noted above, this is just one example of how penalties can be applied. Many countries may have different ways of applying penalties. On the handout, there is a worksheet to calculate a monetary penalty. There are many factors that can be considered in setting a penalty. Some of these factors are listed on the worksheet.

I'd like to explain one of the factors mentioned on the second page: "Money the facility saved by not complying with the requirements" can be from "Costs avoided" and "Costs postponed" Costs postponed are capital costs, such as the cost of installing a new technology. This cost would have to be paid whenever the facility comes into compliance, so by not complying the facility has merely postponed the cost. Costs avoided are costs the facility will never have to pay, even if they come into compliance tomorrow. An example of avoided costs is the cost of operating a technology. Once the technology is installed, the facility will have to pay the operating costs of the future, but they will never have to pay the operating costs they avoided in the past (unless, of course, the penalty specifically includes these avoided costs).

Report_Out:

First, ask for participants to state the total penalty amount they calculated so that the group can get a feeling for the range of penalties that were calculated.

RECORD THESE NUMBERS ON A BLANK FLIP CHART

Look at the high and low numbers and ask the participants who calculated these numbers to briefly give you details about how they calculated their penalty. Go through each factor involved in calculating the penalty and ask the participants for their responses. Some of these factors are objective and some are subjective so there may be a range of responses.

- A. SERIOUSNESS OF THE VIOLATION: A payment may be calculated based on the seriousness of the violation. As the penalty matrix shows, this is determined using a number of factors.
1. Amount of Deviation from Requirement: The extent of deviation from the requirement is clearly high, since the facility has never been in compliance or kept any records.
 2. Potential for Harm: The potential for harm could be debated. Although lack of recordkeeping by itself does not cause any harm (i.e., has a low potential for harm), some participants could argue that the lack of records prevents inspectors from determining whether the facility was operating its control technology. Thus, lack of records could cover up another violation that might have a medium or high potential for harm. The linkage would be something to think about when developing a penalty policy.
 3. Days of Noncompliance: Even though the violation was detected only 2 weeks ago, with a recordkeeping requirement, the company should be able to prove that they have been in compliance. Without this proof, the government can assume the facility has been out of compliance since the requirement became effective (i.e., for 2 years).
 4. Adjustment for Duration: This is a calculated number based on days of noncompliance and seriousness of the violation.
- B. MONEY SAVED BY NOT COMPLYING: An additional consideration may relate to the amount of money saved by noncompliance. This can be from costs avoided or costs postponed.
1. Costs Avoided: (Operating costs) There should be little disagreement on this if people understand the exercise and this factor. The facility avoided costs of \$X per month for an estimated total of Y months— $Y \times \$X = \Z . This factor requires an assessment of how long the facility has been out of compliance. Assumptions may have to be made on this issue.
 2. Costs Postponed: (Capital costs) The facility has postponed the cost associated with _____. This cost is estimated by the Environmental Department to be \$A.

- C. ADJUSTMENT FACTORS: Finally, there are various factors that can be used to further adjust the penalty.
1. Degree of Cooperation: A subjective factor—participants will probably rate this high (“the facility manager has been extremely cooperative”).
 2. Compliance History: A subjective factor—will probably be given a low rating (“has never taken any steps toward compliance”).
 3. Ability to Pay: A subjective factor—will probably be rated low by participants. If we impose such a high penalty that the facility cannot afford to pay, they may go out of business. We must balance their ability to pay with the need to receive compensation for environmental harm and the value of the penalty as a deterrent.
 4. Supplemental Projects: A subjective factor—participants may give some points for the internal recycling program.

WRAP UP

This worksheet shows just one of many ways to determine penalties. The worksheet includes several penalty adjustment factors that may be considered when calculating a penalty. When calculating a penalty, you may take some of these factors into account, none of these factors into account, or all of these factors into account. Using a list of factors can still produce very different results. Some governments choose to have penalty policies to ensure consistency and fairness. Penalty policies need to be applied consistently to ensure fairness and credibility.

Are these valid factors to consider when determining a penalty? Should they be negotiable by the government and the company? These are things to think about when you are developing a penalty policy as part of your enforcement program. Sometimes governments allow companies to come in and demonstrate that they have a history of compliance, that they have been doing supplemental projects, or that they do or don't have a certain ability to pay. One of the things that may be negotiable is over what period of time the penalty payment can be made. But the government does not have to listen to these arguments, and penalties do not have to be negotiable. These are things you need to think about as you design a penalty policy for your enforcement program.

To ensure consistency in the application of the penalty policy, the individual who is initially determining the penalty amount is often required to prepare a report justifying his or her decision. The recommended penalty would then go through several levels of review before it is approved.

Other Guidance for the Exercise:

When working through the penalty calculation, facilitators may wish to consider discussing other issues not covered in the worksheet, including deferred investment costs/benefit from avoided expenditures.

Module 3: Performance Indicators for Environmental Compliance and Enforcement Programs

Exercise 4: Applying the Logic Model

Facilitator Guidelines for Exercise:

Time requirements: 1.5 hours

Format: Divide participants again into their Exercise 2 groups. Be sure to leave the last half-hour for the discussion.

Other materials: This exercise is based on the Case Study

This exercise requires participant groups to design a set of environmental compliance and enforcement indicators using the logic model that would enable assessment of the effectiveness of the environmental compliance and enforcement program each group designed in Exercise 2.

An Introduction to Environmental Compliance and Enforcement Indicators

Environmental compliance and enforcement indicators are instruments that measure results achieved by environmental compliance and enforcement programs. This information helps decision-makers to **improve the effectiveness and efficiency** of those programs.

By identifying, designing, and using performance indicators, senior officials can better **evaluate** and **communicate** how effectively environmental compliance and enforcement programs respond to priority environmental problems.

Indicators can improve:

- Program Operations
- Ability to Set Goals and Adjust Strategies
- Decision-Making for Resource Allocation
- Identification and Correction of Performance Issues
- Ability to Motivate Employees
- Accountability
- Communications with the Public
- Efficiency and Effectiveness of Programs

The exercise asks participants to develop indicators using a **logic model**. **Logic Models** can be useful tools for identifying and organizing performance indicators. The basic logic model (as presented in the exercise) progresses through four indicator types. The first two – **input & output** – describe an agency's resources and activities. The second two – **intermediate outcome & final outcome** – describe the impacts of those efforts.

Further information on environmental compliance and enforcement indicators is available from <http://inece.org/indicators/>, including *The Performance Measurement Guidance for Compliance and Enforcement Practitioners*.