Private Enforcement of Environmental Regulations in Latin America and the Caribbean

An Effective Instrument for Environmental Management?

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Washington, D.C.
June 1996 — No. ENV-101

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ABSTRACT

While the role of nongovernmental organizations in environmental policy is growing rapidly, our analytical understanding of the causes and consequences of this emerging role has not kept pace. And yet our ability to define an appropriate relationship between these private sector organizations and the public sector depends on this knowledge. The purpose of this research is to explore one facet of the participation of nongovernmental organizations in environmental policy — private enforcement— and to develop a practical set of recommendations on whether and how to incorporate private enforcement in Bank projects and programs. The study analyzes the potential role of private environmental enforcement in enhancing environmental quality and identifies possible ways and means for potential Bank involvement in this area. The economic models in this paper show how the varying remedies, limitations, and reimbursement procedures can affect both the level and patterns of private enforcement activity as well as the environmental and economic consequences.

INTRODUCTION

THE ISSUE

Implementing a successful sustainable development strategy requires that careful attention be paid to the environmental consequences of economic activities. Ignoring or treating these environmental impacts as inconsequential can undermine human and ecosystem health as well as the resource base on which all economic development ultimately depends.

The degree to which environmental quality can be improved by public policy depends not only on the wisdom inherent in policy design, but also on the effectiveness of policy enforcement. Policies which initially seem to offer promise may, in the glare of hindsight, prove unsuitable if enforcement is difficult or lax.

The economics literature on enforcement has focused on a number of topics, including the role of enforcement considerations in policy instrument choice (Harford, 1978; Viscusi and Zeckhauser, 1979; Lee, 1984; Martin, 1984), the effectiveness of current enforcement techniques (Russell, Harrington and Vaughan, 1986; Harrington, 1988; Russell, 1990), and suggestions for improving the enforcement process (Russell, Harrington and Vaughan, 1986; Harrington, 1988; Russell, 1990). A theme that emerges from this literature is that a considerable amount of noncompliance exists everywhere. Furthermore, judicial limits on public enforcement powers and limited budgets (Russell, Harrington and Vaughan, 1986; Harrington, 1988; Russell, 1990) suggest that traditional enforcement agencies are not likely to mount a completely adequate response to the environmental degradation resulting from noncompliance.

INSTITUTIONAL CONTEXT

The countries of Latin America and the Caribbean fit this general image. The common problems related to monitoring, compliance and enforcement are insufficient social value attached by the public, understaffing of the institutions responsible for enforcing, shortcomings in judicial enforcement with only a small number of judges and attorneys qualified in the field of environmental law, and a lack of program funding. Setting up reliable databases, control and monitoring is extremely expensive. Moreover, the cost of maintaining a database can be much larger than the cost of starting one. Some countries have put institutions in place but have not succeeded yet in giving them the power to operate effectively. Other countries still lack an institutional infrastructure. An IDB study on the institutional and legal aspects of the environment in its borrowing countries (Brañes 1991), concludes that lack of compliance with environmental legislation is due to shortages of human, material and financial resources for appropriate environmental management.

But noncompliance with regulations is also caused by an inefficiency of the regulations themselves. Existing regulatory schemes are not always cost-effective compared to other possible approaches. Regulations often set environmental requirements (ambient standards, performance standards and/or technology standards), which need to be monitored and enforced.[1] Moreover, the standards themselves

[1]Each approach has advantages and disadvantages in terms of monitoring and enforcement. In the case of performance standards where compliance is normally measured by sampling, monitoring can be difficult and expensive, depending on the kind of instruments required. Technology standards, on the other hand, can inhibit technological innovation and pollution prevention. Therefore, the use of specific standards in certain sectors or cases requires an extensive economic analysis to make sure the require-

should be set in accordance with local circumstances and requirements. Copying international standards may be counterproductive because it may be impossible to enforce them. A resulting lack of official response to violations would harm in general the credibility of environmental laws and governmental agencies.

Yet, there is some evidence that monitoring and enforcement are being given increasing consideration within Latin America and the Caribbean. In February 1994, the Colombian government launched a pollution control and monitoring program that, for the first time, will allow the government to supervise the generation, treatment, and management of industrial liquid waste. The system will be supported by a computerized data base to store information about the discharges, permits, and licenses of industrial sources.

On a similarly encouraging note, the Government of Mexico has, since 1988, taken steps to improve its monitoring and enforcement record, including passage of the General Ecology Law (1988) and the establishment (1992) of the Office of the Attorney General for Protection of the Environment, currently under the Secretariat of Environment, Natural Resources and Fisheries. These actions have apparently been reflected in an increase in the level of enforcement effort.

Furthermore, the NAFTA emphasis on enforcement has put great pressure on the government to further increase enforcement (Gresham and Bloomfield, 1995). NAFTA, in particular the Supplemental Agreement on Environmental Cooperation, emphasizes the importance of both government enforcement actions as well as private enforcement. In Article 5, the NAFTA Supplemental Agreement on Environmental Co-operation lists several actions governments should undertake to effectively enforce their environmental laws and regulations. Such actions include appointing and training inspectors, monitoring compliance, seeking assurances of voluntary compliance, publicly releasing non-compliance information, promoting environmental audits, requiring record keeping and reporting, providing or encouraging mediation and arbitration services and using licenses, permits or authorizations. It also states that each Party shall ensure that judicial, quasi-judicial or administrative enforcement proceedings are available to sanction or remedy violations of its environmental laws and regulations (Article 5). Such sanctions and remedies shall take into consideration the nature and gravity of the violation, any economic benefit derived form the violation, and the economic condition of the violator. Furthermore, it shall include compliance agreements, fines, imprisonment, injunctions, the closure of facilities, and the cost of containing or cleaning up pollution.

In addition to its provisions on public enforcement, the NAFTA Supplemental Agreement contains innovative provisions on private enforcement. Article 6 contains the obligation of each party (U.S., Canada and Mexico) to ensure that interested persons have access to enforcement proceedings, and that they may:

- sue another person for damages;
- seek sanctions or remedies such as monetary penalties, emergency closures or orders to mitigate the consequences of violations of environmental laws and regulations;
- request the competent authorities to take appropriate action to enforce the environmental laws and regulations in order to protect the environment or to avoid environmental harm;
- seek injunctions where a person suffers, or may suffer, loss, damages or injury as a result of a violation of environmental laws and regulations of from tortious conduct.

These provisions are of great importance to this paper's topic and will undoubtedly lead to an increased awareness, and the emergence of private enforcement in Mexico and other countries of the

ments are cost-effective.

region, certainly if other countries join NAFTA.

OVERVIEW

Although private enforcement is becoming a widely used method of enforcing environmental laws and regulations, economists know little about how such actions fit into the fabric of environmental policy in a developing country. What determines the amount of private enforcement activity? What are the consequences of these actions? Where do they fit in the overall scheme of environmental policy? Furthermore, the extent to which the evolution of the role of private enforcement can be benignly influenced by international lending agencies is also largely uncharted territory. The remainder of this paper will begin the process of filling that void.

Following a short analysis of how the private enforcement process works and the roles played by three key categories of participants, and a discussion of why nonprofit organizations (especially nonprofit environmental organizations) exist, a simple economic model is used to examine the interplay of factors which influence the magnitude and direction of their private enforcement activity. By characterizing the incentives of the three principal participants in this process, the analysis shows how the varying remedies, limitations, and reimbursement procedures can effect both the level and types of private enforcement activities undertaken. Combining this framework with the admittedly limited empirical evidence allows some tentative conclusions to be drawn about the potential effectiveness of private enforcement in a developing country context and the extent to which that effectiveness could be enhanced by targeted international assistance.

DESCRIBING THE PRIVATE ENFORCEMENT PROCESS

FOUR MAIN WAYS OF PRIVATE ENFORCEMENT

Private enforcement can complement, or even substitute for, public enforcement. In principle private groups could perform many of the functions performed by public enforcement agencies, thereby circumventing some of the public resource and staff constraints. Under the typical regime, private groups can use private enforcement actions to pursue better environmental quality in four main ways:

- by suing polluters to recover monetary damages inflicted on them by the pollution (for the purpose of this paper called "civil liability actions");
- by lodging a complaint by the enforcer with a designated public authority (called "complaint actions");
- by bringing a legal action against a public authority entrusted with responsibility for implementing the laws to force compliance with legislative or constitutional requirements (called "oversight actions"); and
- by bringing actions against polluters for the purpose of bringing them into compliance with the law (called "direct citizen suits").

These latter two categories of enforcement action may include seeking an injunction, that is, requiring a party to refrain from doing or continuing to do a particular act or activity. Injunctive remedies are preventive measures which guard against future injuries rather than affording a remedy for past injuries.

In this report[2] we focus on complaint, oversight and direct citizen suit actions since civil liability actions are not primarily concerned with achieving compliance with environmental regulations (although they may be triggered by and/or based on a violation of environmental regulations).

PUBLIC vs. PRIVATE ENFORCEMENT

Public environmental enforcement, the alternative to private enforcement, may involve administrative proceedings, or either civil or criminal judicial action. Administrative actions may result in the imposition of an administrative penalty, the creation of a compliance order, or both. Successful negotiation between the control authority and the violator typically produces a consent decree, which creates compliance schedules and/or provides for the collection of penalties. Penalties may be imposed to assure that violators receive no economic benefit by failing to comply with environmental standards.

Public enforcers typically proceeds through the courts or through administrative proceeding. Criminal penalties are commonly imposed through the court. Criminal judicial action generally involves higher financial penalties and/or jail sen-

[2] While emphasis in this report is on the uses and potential uses of private enforcement in Latin America and the Caribbean, it is worth noting that private enforcement mechanisms are currently being actively used in both the United States and Europe to enforce environmental standards. In the U. S. some fourteen statutes authorize citizen suits and some thousands of claims have been initiated (Naysnerski and Tietenberg 1992). According to Sand (1991, 272) in Europe the number of public and private environmental complaints filed rose from about 10 in 1982 to 460 in 1989. More than half of these have been filed by private individuals or organizations.

tences for those willfully polluting. The burden of proof is typically higher for securing a criminal conviction than for imposing civil remedies. Moreover, criminal actions generally require an element of guilt, that is, a knowing and willful violation of the law. This element of guilt is not required for administrative actions, and is less stringent for civil actions).

Public Enforcers

Although many efforts at privatization ultimately turn a public responsibility (such as fire protection) completely over to the private sector, enforcement does not lend itself to that strategy. Public enforcers generally retain a prominent role even in countries with strong private enforcement regimes. When authorizing private enforcement, most legislatures have been cautious not to afford too much power to the private enforcers.

Public enforcers generally maintain control over the process in several ways. Under the complaint form of private enforcement the public authority may be designated as the recipient of any complaint with full powers to investigate and dispose of the complaint, as is the case in El Salvador (Navarrete Lopez, 1994).

In any setting authorizing citizen suits, the private enforcement process can be controlled by requiring private enforcers to supply the public enforcer and the alleged violator with a notice of intent to bring an enforcement action. Furthermore, public enforcers can be given priority over private enforcers, if that is the intent, by allowing any public enforcement action to preempt private actions.

The public enforcer must also adjust its enforcement strategy to take private enforcer activity into account. This may means shifts in both the intensity of enforcement and the allocation of the enforcement budget.

Private Enforcers

The private enforcer initiates the process. To play this role the private enforcer must have: (1) some means of identifying breaches of duty and (2) access to a process for filing an enforcement action. Typically the private enforcer is an individual or organization that has a special interest in environmental improvement and in preventing environmental degradation. That is not necessarily the case, however. Depending on how the process is constructed, private enforcers could be economic competitors with an interest in increasing their market share at the expense of the target or a labor union attempting to use the threat of an enforcement action as a bargaining chip in labor negotiations. They could also be individuals (for example, fired former employees) with a grudge against the subject of the complaint. Private enforcers are not perfect surrogates for public enforcers.

Private enforcement actions differ from more conventional liability actions in that in private enforcement, the initiator of the action is not primarily seeking compensation for pollution-related damages (except in cases of civil liability actions). Rather the private enforcer is seeking to bring a noncomplying polluter into compliance or to force a public official to carry out her legal responsibilities. In Latin America and the Caribbean, the complaint is frequently triggered by a perceived violation of a procedural requirement or of a fundamental right to a clean environment which is not necessarily related to specific legal discharge standards. In the U.S. and European contexts the action is more likely to be exclusively focused on a violation of a specific discharge standard.

COMMON LAW vs. CIVIL LAW

To be effective private enforcement activities must conform to the legal traditions of the region. Those legal traditions vary considerably. The English-speaking IDB member countries of the Caribbean

NUISANCE AND NEGLIGENCE ACTIONS IN BARBADOS

As in most of the English-speaking Caribbean, private environmental enforcement is virtually nonexistent in Barbados. This is mostly the result of the legal culture and existing laws and regulations. The tort of private nuisance and negligence are the main mechanisms in the control of air, noise and water pollution. However, the bringing of such private suits has some special problems, especially with regard to standing requirements and the expensive nature of litigation.

The Arch Hall Case is a useful case study where nuisance and negligence complaints were partly possible because of media attention and heightened local environmental sensitivity. In 1993, a buildup of refuse at the Mangrove Pond Landfill in St. Thomas was causing bad odors, affecting approximately 500 people. The pile of refuse reached 20 feet above road level although the residents at Arch Hall had been promised that it would not reach higher than four feet. The authorities allocated BDS$1 million for tractors, a landfill compactor and spotlights. They also promised to close the landfill within 17 months as soon as underground drains to dispose of stagnant water were built. However, the critical problem was not addressed. At one point, the pile of refuse reached the height of 30 feet. Health problems such as skin irritations and respiratory problems became noticeable.

Residents thereupon instituted court proceedings against the Sanitation Service Authority under claim of nuisance occasioned by noxious and/or offensive smells, vapors, fumes, gases, smoke and/or dust emitting from the site, which have caused, damage or injury to the residents. An action was also framed in negligence against the Sanitation Service Authority for not properly dealing with the problem. As a result, an injunction was granted by the High Courts closing the landfill. The Sanitation Service Authority was also forced to close and cap the landfill, and spray deodorizing agents in an effort to eliminate the noxious smells. Furthermore, the governmental authority agreed to allocate BDS$1.3 million to assist in solving the problems associated with the landfill. A house to house survey was organized so as to discover the likely extent of the compensation. The mound has been flattened and the fires extinguished.

Box 1

(Bahamas, Barbados, Guyana, Jamaica, and Trinidad and Tobago) follow the Anglo-American common law tradition. In common law, the legal systems are based on law created through legal precedent, notwithstanding the existence of statutory law and rules. The common law is not the result of legislative enactment. Rather its authority is derived solely through judicial decisions (Environmental Law Handbook, 1993). However, most common law countries, including the U.S., have legislated extensively with regard to the environmental area and a substantial part of the law is based on statutory provisions (including the citizen suit provisions in U.S. statutes), but with a strong common law influence. Legal precedent is very relevant in the English-speaking countries of the Caribbean. But in those countries citizen suits are not a common feature of the system (Box 1).

The other LAC countries follow the civil law system as derived from the Roman-Germanic tradition. In a civil law tradition, the legal system is based on an extensive system of laws and regulations. The courts apply the laws and regulations to specific cases presented to them and therefore play a less significant role in interpreting and making law. However, some complaint procedures resulting in a court decision provide the judiciary substantial authority and limit the discretionary powers of the executive branch.

The right of citizens to participate directly in the enforcement of environmental laws and regulations varies from one country to another. Unlike the United States, most of the civil law countries of the region do not have citizen suit provisions in specific environmental laws. In most countries, citizen

suits, if they exist, are generally derived from the constitution or the civil codes. For instance, civil codes provide citizens with the general right to bring legal action against any person for the failure to comply with the law (not specifically environmental laws). In other countries, citizens' rights are limited to complaint actions.

COMPONENTS OF THE PROCESS

The typical (private) enforcement process involves four separate functions: (1) discovering an actionable incident; (2) bringing a claim; (3) validating the claim; and (4) imposing appropriate remedies. A complete private enforcement regime must specify the procedural requirements for each of these functions as well as authorize their performance by a designated party.

In some countries, such as the United States, private enforcers are empowered to bring citizen suits directly before the courts to force reluctant polluters to comply with their environmental permits. In Mexico, citizens have an extraordinary right to bring an Amparo action against a government or judicial authority that has violated an individual's guaranteed constitutional right. These oversight actions may be brought against public officials to question their decisions or to require them to act in accordance with their legal responsibilities, such as with procedural requirements regarding environmental impact assessment processes. In citizen suits and oversight actions, a considerable amount of authority may be delegated to private enforcers.

More limited versions of private enforcement are possible, however, in settings where delegating considerable authority to private enforcers is politically unpalatable. In Mexico, citizens have the right to issue a complaint before the Environmental Attorney General's Office under the Ecology Law (Box 2). El Salvador's National System of Environmental Complaints offers similar opportunities to its citizens (Navarrete Lopez, 194). Similar systems exist in Asia.[3]

In the most limited regimes, the objective of the process is mainly to generate public awareness of the noncompliance as a means of bringing public pressure to comply on the violator. Work at the World Bank suggests that merely supplying the public with better information about violations may be a surprisingly effective means of encouraging compliance, especially when more conventional approaches are not available.[4]

Discovering the Basis for Complaint

Since the private enforcement action involves seeking the correction of some breach of duty either by a polluter or a public official, uncovering the breach is the necessary first step.

With respect to complaints against public officials, the necessary information will only be available to private enforcers if the relevant decision processes are sufficiently transparent. For example, private enforcers may wish to assure that environmental impact assessments filed by developers in preparation for project construction comply with procedural requirements and are truthful. Effective oversight of that process requires timely access to

[3] In India, for example, an "environmental audit" procedure has been developed for the 500 megawatt Dahanu Thermal Power project. The authorities in charge of the project distribute summaries of the results of environmental monitoring to the local community. Community groups can then check emissions against legal standards and seek redress through the courts as necessary. World Bank, 1992, 90).

[4] Evidence that public pressure arising from the provision of better information can be an effective force for environmental improvement is available from Indonesia and the US (Pargal, et. al, 1995) as well as from Bangladesh (Huq and Wheeler, 1992). More specific evidence is likely to emerge soon since the World Bank is currently funding a research project under the leadership of David Wheeler, Benoît Laplante and Raymond Hartman to measure the effectiveness of various informal and informational regulatory strategies. The project is entitled "The Economics of Industrial Pollution Control in Developing Countries."

the assessments. In practice timely access may be the exception rather than the rule (Box 3).

With respect to complaints against polluters, at least some degree of monitoring is a prerequisite for a claim to be initiated. In most cases this monitoring is done by the regulated entity itself. Transparency is assured when the results submitted to the public enforcer in the form of mandated periodic reports are also accessible to the public. When publicly available, they can be used by private enforcers as the basis for raising noncompliance claims.

An alternative approach places the responsibility for monitoring on private enforcers. The U.S. system of "riverkeepers" provides an example of how this might work. Typically hired by associations of citizens who live along the river, these riverkeepers constantly oversee, usually with the help of a large number of volunteers, a network of monitoring stations. These associations are funded by voluntary dues from the members.

Bringing a Complaint

Once the private enforcer has raised a complaint, that complaint must be brought to some organization with the power to verify that a breach of duty has occurred. Procedural requirements for this function include deciding what categories of potential private enforcers are allowed to lodge complaints. Unless anyone is allowed to be a private enforcer, gateway rules (typically called "standing requirements" since they identify who has "standing" to bring an action) must be established.

Validating the Claim

Once a complaint has been brought forth by an authorized private enforcer, a process must be established to verify and validate the claim. Lodging a complaint does not assure its validity. The organization which receives the complaint may be the control authority, a court, or perhaps a special commission set up for the specific purpose of dealing with these claims. Its function is to determine whether the claim is valid by establishing whether the private enforcer has met the required burden of proof. Defining the nature of this burden of proof is an important component of initiating the private enforcement process.

POPULAR COMPLAINTS IN MEXICO

In Mexico, there are three ways in which citizens can participate in environmental enforcement: (1) collaborating with the administrative authorities; (2) serving as auxiliaries to administrative and judicial authorities as recognized and certified experts in a particular field; and/or (3) serving as "private attorney generals," supervising and enforcing environmental laws. Citizens have three possible instruments of private environmental enforcement: (i) the right to submit a complaint before the Environmental Attorney General's Office ("complaint action"); (ii) the right to bring an Amparo action against a government authority that has violated an individual's guaranteed constitutional right ("oversight action"); (iii) the ability to sue private parties for negligence and/or nuisance ("civil liability action"). Of these, the complaint action is a relatively effective instrument of private enforcement. In order to submit a complaint, citizens must locate the source of the harm and demonstrate that the (in)action harmed the environment or caused an ecological imbalance. This means that the complaint is reactionary and cannot be used as a preventive instrument. When a citizen lodges a popular complaint, he is entitled to information on the outcome. The complaint process is facilitated by the right of citizens to consult EIA documents. However, while Mexican government bodies will generally allow consultation of a document, obtaining a copy is more difficult. Not all offices have copy machines and taking a document out of the government office to make copies may be prohibited. In addition, government offices in Mexico may lack an organized document system, or a place to store documents.

Box 2

THE TAMARINDO CASE IN MEXICO

The Tamarindo case in Mexico, in which several popular complaints were lodged, serves as an example of how this mechanism is used as a means of enforcing environmental laws. The Situr Corporation designed a large housing and development project for tourism in the State of Jalisco on the coastal area of Tamarindo which is a delicate and exceedingly complex environmental ecosystem.

A number of citizen groups, including the Counsel for the Defense of the Pacific Coast (CDCP), opposed the construction of the housing development project, claiming that the submitted EIA was inaccurate and that the proposed project should fall under federal jurisdiction (the EIA was submitted to state officials). The CDCP issued a popular complaint with the federal Office of the Attorney General for Environmental Protection (PROFEPA), requesting the suspension of construction activities and seeking the corporation's compliance with federal law, including the preparation of a federal EIA. In order to officially document the environmental harm, CDCP hired a Public Notary to join them in an airplane ride over the construction site (in Mexico, a signed statement from a Public Notary is needed to present facts in civil and administrative cases).

Following PROFEPA's decision confirming the need for a federal EIA, the corporation submitted one but also allegedly continued construction activities. CDCP claimed the new EIA contained numerous irregularities and submitted two more popular complaints, one against ongoing construction activities and the other against the new EIA. In response, federal authorities requested additional information from the corporation to supplement the EIA. When this information was not provided, the EIA was not approved. This led to the end of the development project, at least for now, because the corporation has initiated an Amparo action against the federal authorities challenging the EIA's denial. This action is still pending in court.

Box 3

Applying the Remedies

Once the basis for an enforcement action has been validated by the appropriate authority, the process enters the remedy phase. In less aggressive private enforcement regimes the penalties may be limited to publishing (or making available to the public) the findings. In more aggressive regimes penalties (civil, administrative or criminal) may be imposed.

The differences among these various types of penalties are based on the process by which they are imposed and the culpability of the offense. Punishment and removal of the economic benefit can be pursued simultaneously, since damage awards may include exemplary or punitive damages (only available in some countries). Because penalties may be triggered by a valid finding of noncompliance, they may be imposed even in the absence of actual environmental harm. Penalties may include fines, clean up costs, compensation to injured parties, punitive damages and prison.

Subjects of the Complaints

Setting up a private enforcement regime requires some definition of what entities are subject to an enforcement action. Can enforcement actions be brought against all polluters? How about public enterprises (i.e. public power companies)? Government agencies (i.e. the military)? Small firms? Start up companies? Are all public officials subject to private enforcement oversight?

Once the authorizing legislation makes clear the potential targets for private enforcement, the behavior of those targets will be affected. Rational firms balance the costs and benefits of compliance and enforcement strategies. The decisions reached by public officials and the resources dedicated will also be affected by private enforcement oversight.

AN ECONOMIC MODEL OF PRIVATE ENFORCEMENT

In order to move beyond a purely descriptive analysis of private enforcement, it is necessary to probe deeper into what motivates private enforcers as well as into the determinants of both the level of and pattern of private enforcement activity. We begin by modifying a traditional economic model which explains the existence of nonprofit groups to fit the private environmental enforcement context. The implications of this modified model are then compared to (an admittedly limited amount of) historical experience and found to be compatible with that evidence.

MODELING PRIVATE ENFORCER ACTIONS

Why do private enforcers initiate private environmental enforcement actions? What motivates their behavior?

Motivation I: Environmental Improvement

The view that underlies the analysis in this project, a view which is compatible with the evidence, suggests that nonprofit groups arise to provide higher levels of public goods which are incompletely supplied by the government. If the government does not supply the efficient amount of public goods, an unsatisfied demand for higher levels of provision exists. Although the theory of public goods is quite clear that it would be unrealistic to expect private, nonprofit organizations to make up all of the deficient supply, they can and do satisfy some of this unsatisfied demand.[5]

One such public good is environmental quality. When the government is unable to produce the efficient amount of environmental quality, nonprofit environmental groups work to bring about higher levels. This would be expected whenever the increased benefits of environmental improvement to the membership exceed the cost of securing it. These groups will seek to improve environmental quality in a variety of ways including private enforcement.

Motivation II: Strategic Objectives

As mentioned above some motivations for private enforcement have nothing to do with environmental improvement. These generally share the characteristic that private enforcement may simply be a convenient means of achieving some entirely unrelated objective. In all of these cases whether environmental improvement occurs or not plays very little role in either the decisions to engage in private enforcement or the decision concerning enforcement targets.

Economic Competitors

Forcing a firm to comply with the terms of its permit and perhaps pay a penalty will increase its costs. Increasing the cost of a competitor through private enforcement provides a relative cost advantage to the private enforcer. Relative cost advantages offer an opportunity to increase market share. In this case the decision to engage in private enforcement and the choice of targets has very little, if anything, to do with environmental improvement.

Input Suppliers. Another category of would-be enforcers involves input suppliers who could use

[5] Enforcement is not the only channel for private efforts to produce more environmental quality. Environmental organizations also attempt to influence legislation directly through lobbying or indirectly through increasing public awareness. Some organizations directly acquire unique ecological assets to preserve and protect them.

the threat of a private enforcement action as a means of securing contract concessions. The most likely use of this avenue would be labor unions. In the United States labor unions have already begun to team up with environmental lawyers to pursue this strategy.[6]

Harassers. A final category of would-be private enforcers is primarily interested in using the private enforcement process as a means of imposing punishment on the defendant. Disgruntled former employees, customers or suppliers may seek revenge for an unrelated perceived harm through this process.

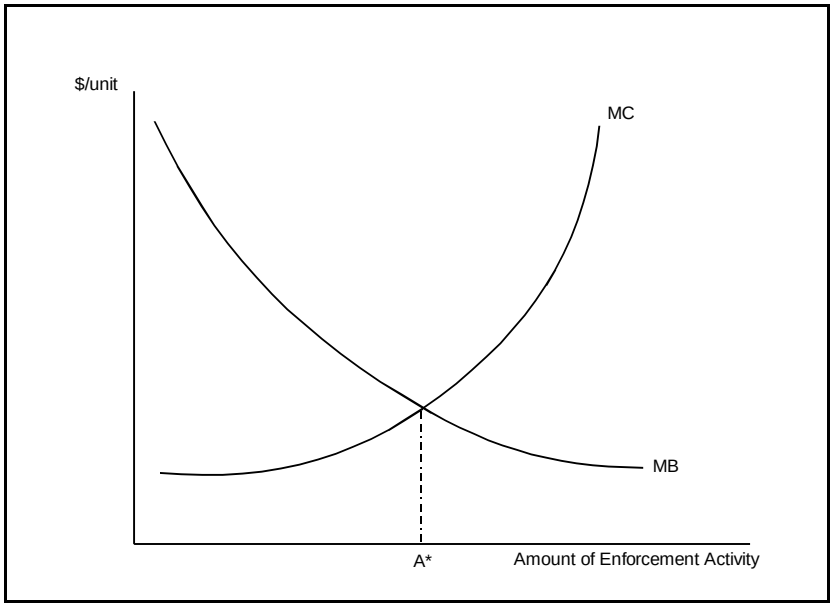

Figure 1

THE OBJECTIVE FUNCTION

One way of characterizing the decisions of private enforcers is to ask what objective function is being maximized. Then the consequences of maximizing that privately optimal objective function can be compared with the desired outcomes from a social point of view.

Imagine that the environmental organization's strategists have made up a list of potential private enforcement targets. Each potential target is characterized by both the expected benefits and the expected costs from pursing a private enforcement action. The resulting array of targets is then sequenced; those potential targets with the highest net benefits would appear earlier in the array. As the organization moves further down its list of targets the marginal net benefit (the expected net benefits from undertaking another action) decreases, since targets with a lower net benefit to the private enforcer would be considered after those offering higher net benefits.

To maximize total expected net benefits, environmental groups will take on additional suits until MC=MB which implies that the marginal expected net benefit associated with the last chosen case would be equal to zero.[7] Pursuing additional targets would be non-optimal because the costs of enforcement action would exceed the benefits.[8]

[6] Consider, for example, the recent coalition formed between labor union groups and environmental lawyers who work in tandem to frustrate developers seeking to build large projects without employing union workers. Union leaders initiate this strategy by approaching developers to try to persuade them to hire union contractors and subcontractors. If the developers refuse, the unions, with the help of environmental groups, review the plans of the project under development and in most cases expose (or threaten to expose) the job's potential environmental violations either to permit licensing boards or to the courts. As a result of these tactics, developers who refuse to grant contracts to unions face costly delays as they fight the environmental suits or remedy environmental violations (Nelson 1994).

[7] With a binding budget constraint the environmental organization may have to terminate litigation activity at a point where the marginal net benefit was greater than zero as long as the reimbursement of expenses was less than complete.

[8] Because private enforcers are typically nonprofit organizations, it is conceivable that they would wish to proceed until total benefits = total costs. This formulation of the objective function would imply more private enforcement activity than the marginal formulation, but

To implement this model it is necessary to be quite specific about the nature of the expected net benefits from litigation. Expected net benefit is the product of three variables: the probability the suit will result in an environmental improvement, the value of the resulting improvement to the members, and the cost to the organization of securing this improvement.

The Private Benefits from an Enforcement Action

The ranking of possible enforcement targets by this objective function will depend on the motivations of private enforcers. For a private enforcer guided by the environmental improvement motive, the increase in environmental quality resulting either directly or indirectly from successful enforcement is the prime benefit to the organization. Members, foundations and other donors respond to concrete evidence of successful action. The value of the improvement that could be expected from targeting any particular public official or private entity would depend on potential or actual harm to the environment.

For the strategic motive the benefits from a private enforcement action are idiosyncratic. For economic competitors the benefits are an potential increase in sales and/or market share. For input suppliers it is the opportunity to receive a more lucrative contract. For harassers it is the opportunity to inflict revenge. For the strategic motive environmental improvement has little to do with the benefits received from private enforcement. Private enforcers motivated by the strategic motive and those motivated by the desire for environmental improvement would rank possible enforcement action targets quite differently.

The Costs of Private Enforcement

The cost of litigation includes all time and money spent by the private enforcer in pursuit of litigation (net of any reimbursement awarded by the court). Discovery, investigation, lawyer fees, court costs, and support staff are all expenses that have to be covered. While the "loser pays" principle, a principle followed widely in Latin America, provides reimbursement for successful actions, not all actions are successful. Some private enforcement actions might not succeed either because ruling goes the other way or because the cases are dropped prior to any ruling. In these cases the costs include not only the private enforcer legal costs, but the legal expenses of the defendant as well.

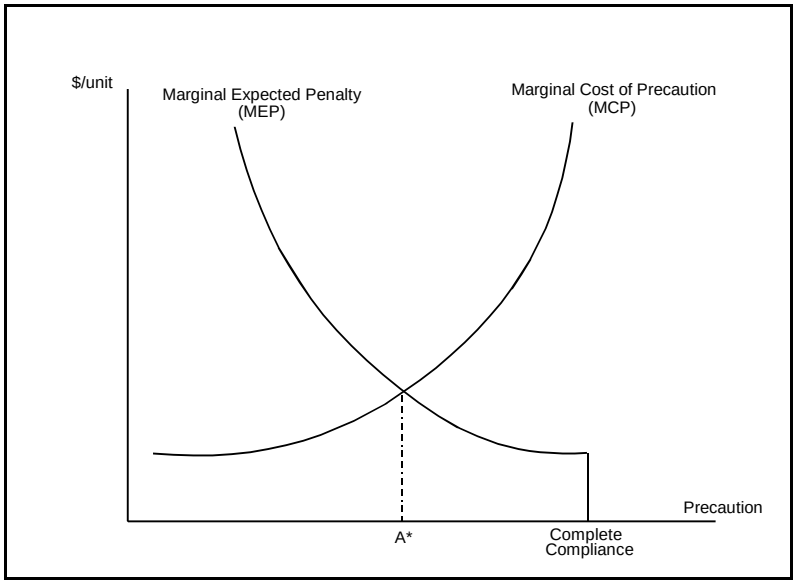

Figure 2

MODELING COMPLIANCE BEHAVIOR: THE REGULATED FIRM

The Benchmark: Only Public Enforcement

In this characterization of the interactions among the public enforcer, private enforcer and the regulated firm, the firm is presumed to be a cost-mini-

would otherwise not materially affect the conclusions in this report.

mizer. One of the choices it faces in minimizing costs is the degree of compliance with environmental regulations it will pursue. Associated with each possible choice are the costs of reaching compliance and the costs associated with any remaining noncompliance (if any).

Higher degrees of compliance raise compliance costs, but they lower noncompliance costs. Cost-minimization for the firm would be achieved at that degree of compliance (0% to 100%) where the sum of the costs of compliance and noncompliance were minimized.

The costs of achieving compliance involve the capital, material and labor costs associated with fulfilling all legal obligations (such as producing a complete environmental impact assessment or reducing pollution sufficiently to achieve existing discharge standards), while the expected costs associated with noncompliance include the likelihood that any noncompliance would be discovered, the likelihood that any discovered noncompliance would be successfully prosecuted, the cost of a legal defense and the noncompliance sanctions imposed by the administrative agency or the court.

The marginal cost of noncompliance is assumed to decline with the degree of compliance. The two sources of this decline are the lower probability of any penalty being imposed and the smaller size of any imposed penalty. At complete compliance the appropriate legal standard would be met so the marginal cost of noncompliance would be zero for all levels of emission reduction at least as great as required by the standard.

The marginal cost of compliance typically increases with the degree of compliance. Greater fulfillment of legal obligations is expensive and the costs typically rise more than proportionately with the amount of precaution taken.

How likely is it that this balancing of the costs of compliance and noncompliance will induce complete compliance? Not likely. According to the sporadic evidence that we have on compliance, even in the OECD countries less than complete compliance is a common outcome (United States Government Accounting Office, 1979; United States Government Accounting Office, 1990). The evidence from Latin America reveals a similar pattern of noncompliance (Margulis 1994).

The Effect of Citizen Suits in Principle and Practice

With the initiation of private enforcement, the expected costs of noncompliance to the firm would increase for all noncomplying firms. Adding the likelihood of a private enforcement action to that of public enforcement implies a higher probability of a successful enforcement action against the firm; this increased likelihood of enforcement increases the expected penalty for noncompliance. Any firms breaching some environmental duty under public enforcement would be expected to take higher levels of precaution when confronted with private enforcement. Firms in compliance with all standards and norms of environmental behavior would not change their behavior in response to private enforcement because their expected penalty would be zero both before and after the onset of private enforcement.

Although increased compliance from the introduction of private enforcement is in principle a testable hypothesis, in practice no systematic time-series compliance data are publicly available. However, interviews conducted a few years ago with officials at EPA and the Conservation Law Foundation, two organizations with first hand knowledge of the U.S. private enforcement process from two different perspectives, reveal a shared belief that private enforcement in the U.S., at least, has indeed led to greater compliance.[9] This view is apparently shared by at least some business executives.[10]

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[9] Stephanie Pollack, Conservation Law Foundation, Boston Massachusetts, February 1, 1990 and Mark Stein, Water Enforcement, Environmental Protection Agency- Region I, Boston, Massachusetts, December 6, 1989. Interviews by Wendy Naysnerski.

[10] See Strelow (1990). Roger Strelow is a Vice President at General Electric.

MODELING PUBLIC ENFORCEMENT CHOICES: THE DEGREE OF ENFORCEMENT INTENSITY

The existence of private enforcers clearly changes the incentives of polluters. How does the existence of private enforcement change the nature of public enforcement? And how is the level and composition of private enforcement affected by public enforcement choices?

Private enforcement does not operate in a vacuum. Since public and private enforcement are partial substitutes, the demand for private enforcement should be related to the level of public enforcement and public enforcement resource allocation decisions should reflect private enforcement activities. Understanding the nature of these relationships is an important part of the process of analyzing the likely consequences of introducing private enforcement.

The Interaction of Public/Private Enforcement

Consider first the effect that the aggressiveness of public enforcement has on the intensity of private enforcement. If government enforcement were complete, all polluters would be in compliance with their legal obligations. Since a successful private enforcement action depends upon proving a breach of some legal obligation, the probability of successful private enforcement activity would be zero. With a zero probability of success the expected net benefits for all cases would be zero. Regardless of the motivation which drives private enforcers, with complete public enforcement no claims would be brought.

Another implication, this one testable in principle, follows immediately. Low levels of public enforcement could be expected to increase the private benefits from private litigation activity. Violations could be expected to be more frequent and more serious in periods of lax enforcement. It follows that the privately optimal level of private enforcement is inversely related to the amount of public enforcement. All other things being equal, we would expect more citizen enforcement activity in countries with diminished government enforcement activity. Similarly, within countries, we would expect more private enforcement activity during periods of reduced public enforcement.[11]

Corruption

The analysis so far ignores the very real possibilities of corruption in public enforcement. How would the existence of corruption among public enforcers affect the conclusions so far? In some countries corruption inhibits efforts to enforce environmental regulations. Low staff salaries and little external oversight of regulatory activities create an environment where bribing officials to look the other way may turn out to be cheaper than making the required investments to prevent environmental harm.

Both the citizen suit and oversight roles for private enforcement make even more of a difference in the degree of compliance in a corrupt enforcement regime than it could in the absence of corruption. Allowing private enforcement oversight of public decisions provides a direct check over corruption, while allowing private enforcers to bring actions against private entities which are inflicting environmental harm provides a (sometimes quite powerful) indirect check.

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[11] The evidence from the U. S. seems to support the time series hypothesis. A slowdown in federal environmental enforcement, especially under the Clean Water Act, did occur in 1981 and 1982. The number of suits filed fell from 184 in 1979 to 118 in 1981 and 47 in 1982. (Miller 1984) Declines in the EPA budget mirror the declines in environmental programs and enforcement during the early 1980's. EPA's total budget, which was $1.4 billion in 1981, fell to $1.16 billion in 1982. A further reduction of approximately 975 million occurred in 1983. These budget decreases caused a resulting fall in the number of EPA staff enforcement attorneys from 200 to 30 during 1983 (Feller 1983). The model developed in this report would lead us to expect an increase in private enforcement activity during this period and that is exactly what happened (Naysnerski and Tietenberg 1992).

Bribing officials is an effective strategy only when the officials have sufficient control over the enforcement process that they can grant the bribing firm immunity from enforcement actions. As long as enforcement is the exclusive domain of the public sector bribes are valuable because of the immunity public enforcers can bring. However, when private enforcers enter the scene, public enforcers can no longer assure immunity from an enforcement action. Bribing becomes a less certain, and hence less attractive, strategy.[12]

The Allocation of Enforcement Resources

Public and private enforcement can be substitutes on the demand side. Enhanced public enforcement can diminish the demand for private enforcement and lax public enforcement can increase it, as discussed above. How about on the supply side? Are public and private enforcement perfect substitutes in terms of their effects on environmental improvement?

Public Polluters

They are not. One area where private enforcement may have the edge is in pursuing public polluters. Despite the fact that public facilities represent a substantial proportion of the pollution problem, enforcement of pollution control laws presents special problems for public enforcers in most countries. The evidence seems very clear that public enforcement of violations by public polluters has been quite ineffective and the problem is not the inadequate availability of remedies, but rather the reluctance of public enforcers to use the available remedies (Gelpe 1989).

Bringing public polluters into compliance represents an ideal application of private enforcement, because private enforcers are less inhibited. They are able to take full advantage of the existing penalty structure to increase compliance by this important class of previously under regulated polluters even when public enforcers are incapable of producing (or unwilling to produce) compliance (Box 4).

The Menu of Remedies

Another supply side difference between public and private enforcers involves remedies. Public and private enforcers do not always draw from the same menu of remedies. In most countries, for example, citizen groups cannot seek criminal penalties. To the extent that criminal penalties are appropriate for some classes of noncomplying behavior, private enforcement by means of citizen suits would be less effective enforcers for those classes. In complaint processes when the only role for the private enforcers is to bring forth a complaint, divergent menus of remedies would not be a significant problem. Since public enforcers dispose of the complaint, they have their full menu of sanctions to work with.

Are criminal penalties ever appropriate? While it would too great a diversion to go into detail here about the optimal role for criminal penalties, for our purposes it suffices to state that they can occasionally be appropriate (Segerson and Tietenberg 1992).

Public and private enforcement can also complement each other. Private enforcement, particularly citizen suits, can take on some of the routine tasks, leaving the more serious problems to the public sector. Focusing public enforcement activity on the most significant problems makes a great deal of sense because of the ease of transferring information and expertise from one case to another. If enforcement were the exclusive responsibility of the public sector, however, focusing on priority areas could open the possibility for polluters operating in non-targeted areas to exploit that decision. Polluters in non-targeted areas would

[12] One response might be that private enforcers can be bribed as well. However, two considerations suggest that will be less of a problem. First, a larger number of enforcers diminishes the attractiveness of bribing both by lowering the certainty that any single bribe will produce immunity and by increasing the number of parties that have to be bribed. Second, the organizations engaging in these activities are likely to have to deal with actively involved constituencies which can exercise internal oversight.

respond to a perceived decline in public scrutiny with reduced compliance. Since private enforcers are not operating on the same set of priorities as public enforcers, the likelihood of private enforcement in a non-targeted area is not diminished. With a continuing threat from private enforcers polluters have a continuing reason for compliance, even when the public sector has its focus elsewhere. The very existence of the private enforcement alternative allows public enforcers more flexibility in targeting their resources, a flexibility which offers the opportunity to use their limited resources more efficiently.

These advantages, however, can be offset to some degree by disadvantages. A public enforcement agency which has a clearly articulated and effective strategy for allocating its resources to enforcement activities could find its priorities completely subverted by private enforcement activity. Responding to complaints and court challenges of its decisions consumes time and resources. Clearly some balance is needed to assure that legitimate, but not excessive, pressure can be applied by private enforcers.

OVERSIGHT ACTIONS IN CHILE

The *Corporación del Cobre de Chile* case offers an example of a successful oversight action against a state-owned company. The Citizens Committee of Chañaral (*Comité Ciudadano por la Defensa del Medio Ambiente y el Desarrollo de Chañaral*) claimed that the government authority which owned the Mining Company *El Salvador*, the largest company in Chile, was violating its constitutional right on a healthy environment because of an ongoing "arbitrary and illegal" discharge of pollutants by the mine's metallurgic plant in the river Salado, causing severe contamination of the Chañaral Bay and the coast. The Chilean Constitution guarantees every person the right to live in an environment free of contamination and it is the obligation of the State to keep watch of any violation of this right, and citizens can bring a court action against an authority for violation of this right (called an "Article 20 Action"). In this case, the court, as confirmed in appeal by the Supreme Court, ruled that, although the company had an authorization, this did not justify the contamination of the waters and that the discharge was a violation of the Committee's constitutional right. The court ordered the Mining Company to end its discharge in the Pacific Ocean.

Another Article 20 Action was directed against the Mayor of Futrono for the "arbitrary and illegal" installation of a rubbish dump without observing the minimal sanitation standards. This case is an example of well coordinated use of administrative and civil procedures. The claimant simultaneously filed a complaint with the Sanitation Service against the Mayor. The Service ruled in favor of the claimant and imposed an administrative fine and ordered the closure of the dump. Subsequently, the court that ruled on the Article 20 Action, took this administrative decision into account and ruled also in favor of the claimant, i.e. ordered the closure and clean-up of the site.

Box 4

POINTS OF LEVERAGE: INFLUENCING THE LEVEL AND COMPOSITION OF PRIVATE ENFORCEMENT

An implication of the previous analysis is that private enforcers should be sensitive to changes in the costs and benefits of undertaking private enforcement activity. This sensitivity provides an opportunity for governments to shape the process in more socially desirable ways. This section examines some of the means for influencing private enforcement.

FACTORS AFFECTING THE OPENNESS OF THE PROCESS

Standing Rules

Standing rules can either be very restrictive (allowing few private enforcers) or very open (allowing many private enforcers). In Mexico, for example, parties may bring an Amparo proceeding seeking judicial review of an administrative order, but the standing requirements are strict. Private enforcers must demonstrate to the court, not only a legal interest in the wrong being adjudicated, but also personal and direct causation (*agravio personal y directo*) between the allegedly illegal act and the resulting harm. In practice this tends to be a difficult condition to meet and it has eliminated class action proceedings.

The standing requirements in Colombia for initiating an oversight action are easier to meet (Box 5). Also, most U.S. statutes authorize "any person" or "any citizen" to bring a direct citizen suit action as long as they have "any interest which is or may be adversely affected." In general, passing a three-pronged test is required in order to meet the standing requirement: 1) the act or omission complained of must be the cause of the injury; 2) the injury must be of interest to the plaintiff (in case of an organization, it may be to its activities); and 3) the act or omission must be illegal, that is, a violation of the laws and regulations.

Targeting Rules

Rules establishing the private enforcement regime must also define the set of agents subject to private enforcement scrutiny. Many options exist. Perhaps local authorities would want to exempt some or all government functions from this scrutiny. Or they could be exempted from citizen suits, but subjected

STANDING REQUIREMENTS IN COLOMBIA

In Colombia, the standing requirements for bringing a court action involving environmental damage are relatively easy to meet. Firstly, any affected person may bring the *Action of Tutela*, an oversight action established in the Constitution as a mechanism for immediate protection of the fundamental rights, including the right to a healthy environment, which can be brought against any authority that violates this right. Secondly, in case of construction that causes or threatens to cause environmental damages in violation of the law or regulations, any person, without having to show a specific legal interest, can bring a legal action against the responsible person, public or private, on the basis of provisions of the Civil Code ("Popular Actions"). The court can impose an injunction, or order a payment for damages (payable to the public authority in charge of the concerned environment). In addition, the person bringing the claim may be awarded a monetary compensation between 10% and 30% of the total monetary damages. Thus, although the Popular Actions are in principle aimed at achieving benefits for the community at large, this particular payment is an incentive for a person or organization to bring the claim.

Box 5

to oversight or complaint procedures. Exemptions might also be granted to small firms, or a limited duration exemption might be given to start-up firms. Depending on the prevailing constitutional provisions, regional exemptions might even be given.

While governments may have great latitude in granting immunity from private enforcement actions, this latitude should be used sparingly, if at all. Whenever nonuniformities are built into the system, these nonuniformities create a powerful bias in shaping the pattern of private enforcement decisions.

Suppose, for example, firms in Region A were granted immunity from private enforcement, but firms in all other regions were not. Over time we would not only expect some migration of capital to the region which had been granted immunity, but the capital which located there to take advantage of the immunity would likely involve the most environmentally harmful production processes.

FACTORS AFFECTING THE ATTRACTIVENESS OF THE PROCESS TO PRIVATE ENFORCERS

The Availability of Penalty Remedies

Legislation which enables the private enforcement process must specify the range of penalties available to private enforcers. The range of possibilities is enormous. On one end of the spectrum are informational remedies. These would assure that violation information would be made available to the public. On the other end of the spectrum would be criminal penalties involving substantial fines or even jail terms.

In the middle of the spectrum, where most current experience lies, are found injunctive remedies and civil penalties. Injunctive remedies require the source to adopt a (usually stringent) schedule for coming into compliance and can even result in shutting facilities down.[13] Civil financial penalties are frequently levied on top of an injunctive remedy. The theory behind this joint use of remedies is that the compliance schedule is effective in requiring this firm to correct this violation, but it will do little to change the incentives which govern the likelihood of future violations by this firm or others. By taking away any economic advantage firms may gain from noncompliance, civil penalties create the appropriate incentives for continuing compliance. Remedy structures which provide the greatest likelihood of supporting continuing compliance will attract the most private enforcement activity.

The Disposition of Penalties

Penalties can either be earmarked for environmen-tal improvement or put into the general treasury. Traditional economic theory clearly suggests a preference for putting penalties in the general treasury. Earmarking them for a specific purpose such as environmental improvement is seen as unnecessarily restricting the possibilities for spending the money in the most efficient way. If environmental improvement is the most efficient way of spending the money, then general treasury money can be spent for that purpose. But if other projects were to offer much higher rates of return, earmarked revenues (because they are designated for a particular purpose) would miss those opportunities.

Aside from being politically naive about the extent to which spending decisions are actually guided by rates of return, this argument overlooks the fact that earmarking may have significant incentive effects on the private enforcement process. When appropriately structured these earmarked revenues could enhance efficiency not only by their effect on expenditures, but also by creating a superior set of enforcement incentives (Naysnerski and

[13] In Mexico, PROFEPA received 187 complaints from August 1992 to February, 1993. The remedies resulting from these complaints included temporarily shutting down 11 facilities, and ordering partial shut downs for another 80.

Tietenberg, 1992). Specifically, earmarking penalties for environmental improvement provides a stronger incentive for private enforcers to get involved (Box 6).

Financing Private Enforcement

How should the private enforcement process be financed? Because the loser pays rule for allocating legal costs is prevalent in Latin America and the Caribbean, as long as the citizen action is successful the environmental group will be reimbursed for legal costs. Since only successful or partially successful claims are reimbursed, any incentives to initiate nuisance or harassment suits are diminished. Thus "loser pays" reimbursement provides an alternative to standing rules as a means of ruling out suits designed purely to harass the target.

Since reimbursement only occurs for successful suits, and only following the judicial decision (which may take several years with substantial up-front expenditures), the likelihood that a suit will be successful is one major determinant of the expected cost of undertaking any suit. What is the likelihood of success? That depends on the availability of information and the burden of proof private enforcers are required to bear. In the U.S. private enforcement actions tend to have a very high likelihood of success (Naysnerski and Tietenberg 1992); in that setting the probability of reimbursement is high.

RESTRICTIONS ON PRIVATE ENFORCEMENT POWERS

The procedural burden confronting would-be private enforcers offers another opportunity for controlling the private enforcement process. Here again some balancing is required. Very low burdens encourage private enforcement activity, but they also reduce the leverage public enforcers retain over the process. This section will identify some of the issues which arise in attempting to perform this balancing and how they have been resolved in the United States.

Notice Requirement

One possible point of control over the process involves requiring private enforcers to provide both the public enforcer and the potential target of the private enforcement action notice of the intent to file a claim. The purpose of this requirement is not only to allow the government a last chance to perform its enforcement duty, but also to notify the alleged violator, who may then attempt to avoid the enforcement action by coming into compliance. Voluntary compliance eliminates the need for a costly enforcement proceeding.[14]

A Review Period

Public enforcers may exercise control over citizen suits by being given the chance to review and object to any settlement. In the U.S. a 1987 amendment to the Clean Water Act, one of the more frequently used statutes in private enforcement, requires citizens to submit a copy of any proposed consent decree, to which the U.S. is not a party, to the Attorney General and the EPA Administrator. These proposed consent decrees are not final until both the Attorney General and the EPA administrator are given 45 days to review the settlement.[15] If either disagree to the terms of the settlement, they can object to the decree. In most cases if an objection does occur, the Attorney General or EPA will specify necessary changes for the consent decree to become acceptable.

Diligent Prosecution Bar

Another point of leverage over citizen suits would bar private enforcement actions when a public enforcement action has already been initiated. In

[14] In the United States private enforcers are required to supply EPA, the state, and the alleged violator with a notice of intent to sue and are prohibited from initiating action earlier than 60 days following the notice. The only exception involves hazardous waste violations; when a violation involves hazardous substances which represent an imminent hazard, private enforcers can take immediate action.

[15] 33 USC 1319 (g)(6)(b).

the United States although all judicial public enforcement actions bar citizen suits, the conditions under which actions are barred by administrative proceedings varies by statute (Miller 1984).

Even when private enforcers are barred from suit by government judicial or administrative action, citizens may be afforded the opportunity to participate in public enforcement proceedings. In Mexico, for example, citizens can participate in an Amparo proceeding to defend the action of an authority which, if overruled, would adversely affect them.

The Substantive Burden of Proof

Another important point of leverage involves controlling the magnitude of the burden of proof private enforcers might face in their quest to demonstrate a breach of duty. How attractive the private enforcement process avenue is to would-be enforcers depends crucially on the magnitude of the burden of proof they have to bear. Several key elements of this burden can be easily controlled. The first is to assure that adequate information is available. This may require some self-monitoring by pollution sources and written environmental assessment statements as part of the permitting process. The second would require periodic report ing of the results of any self-monitoring to the control authority. The third would require that the reports be constructed in such a way as to make the verification of compliance or noncompliance rather easy simply by reading the reports. Finally, all reports should be available to private enforcers in a reasonable timely fashion and at reasonable cost.

In the U.S., the Clean Water Act has provided the most attractive citizen suit avenue and the reasons for that are rather instructive. Under the Clean Water Act the National Pollutant Discharge Elimination System requires polluters to file with EPA discharge monitoring reports which list discharge levels, and method of discharge. By reducing the costs of monitoring and validation of suspected emission levels, this system of reports has become a very important component of private enforcement for water pollution violations. Citizens have access to the discharge monitoring reports, and the courts have generally accepted the information contained in them as proof of violations.

Reliance on publicly available reports resulting from self-monitoring is crucial to the private enforcement process because private investigators may not have the same investigatory powers as the

THE CASE OF FUNDEPUBLICO IN COLOMBIA

FUNDEPUBLICO (*Fundación para la Defensa del Interés Público*), established in 1989, is a nongovernmental organization in Colombia, and its objective is to defend the public rights of society through judicial actions. Following the publication of a book on Popular Actions in 1989 by its President German Sarmiento, FUNDEPUBLICO first focused on Popular Actions, but later also on *Tutela Actions* (see Box on Standing Rules in Colombia).

The first Popular Action of FUNDEPUBLICO was brought against the state-owned chemical company *Alcalis de Colombia*. According to the local environmental authority, the company was the principal source of industrial contamination of the Bogota river, it discharged pollutants in violation of the environmental norms and standards. The action resulted in an judicial order to discontinue any such discharges, and an agreement was reached on the eventual closing of the polluting plant. Other Popular Actions initiated by FUNDEPUBLICO are against a chemical industry for contamination of Cartagena Bay and against a large logging company for illegal logging in the indigenous reserve of Chagerado in the Department of Antioquia.

The interest of FUNDEPUBLICO in using Popular Actions stems also from the possibility these actions entail of obtaining part of the monetary compensations, which vary between 10% and 30% of the monetary damages imposed by the court. Recently, FUNDEPUBLICO established an Environmental Legal Fund to finance the judicial procedures and other actions aimed at defending the environment. The Fund is partly paid through the monetary compensations FUNDEPUBLICO receives from the Popular Actions.

Box 6

government. Under many legal systems, including the U.S., private parties will normally be denied entrance to the property of the polluter, making it difficult to prove many kinds of violations in the absence of self-monitoring reports.

THE CONSEQUENCES OF PRIVATE ENFORCEMENT ACTIVITY

The effectiveness of private enforcement depends not only on the behavior of private enforcers but also on how the targets of the suits respond. According to our model of compliance behavior their response depends on several characteristics of the private enforcement process.

AVAILABILITY AND DISPOSITION OF REMEDIES AND COMPLIANCE BEHAVIOR

Availability

The amount of precaution exercised by polluters can be expected to be affected by the available remedies as well as the existence of private enforcement activity. Since the penalty structure is one point of leverage in controlling the private enforcement process, some understanding of its influence can provide the basis for deciding how penalties should be applied.

A firm confronted by noncompliance sanctions which include both penalties and injunctions faces higher costs of noncompliance than a firm faced with only an injunction. Not only would an enforcement action require noncomplying firms to come into compliance with the standard as soon as possible (the traditional costs associated with an injunction), but paying the imposed penalties would add to the financial burden (higher penalties, of course, would have no effect on precaution for *complying* firms).

A second, less obvious reason why greater compliance would be expected from statutes authorizing penalties for citizen discovered breaches involves the greater incentives for citizen groups to undertake these actions, a point covered above. This greater likelihood of an enforcement action justifies more expenditures on precaution. Firms facing penalties are more likely to be in compliance than firms facing only compliance orders because of the greater likelihood of private enforcement when penalties are authorized.[16]

Disposition

Our characterization of the private enforcement process also implies that the amount and type of private enforcement activity should be affected not only by whether a penalty remedy is available, but also by the disposition of the penalty. When penalties go to the general treasury, the marginal benefit received on behalf of the environmental group is limited to increased compliance. However, penalties earmarked for environmental improvement assure a larger improvement in environmental quality in the specific area covered by the action than achieved by general revenue penalties. By bringing an enforcement action the environmental group reveals an interest in the environment, an interest which is threatened by noncompliance. If the citizen group did not care about this particular environmental problem, they presumably would not have brought the action. Therefore, penalties earmarked for improvements in environmental quality would provide yet another increase in benefits to the environmental groups. The expected benefits from private enforcement would be higher for those potential targets offering the possibility of

[16] Once again the evidence in the United States seems to support this expectation. Naysnerski and Tietenberg (1991) report that of 1414 statute citations in the 1205 actions in their data base, 1373 were brought under statutes allowing penalties. (A single action may involve claims citing more than one statute.) Only 50% of the environmental statutes in the database authorized penalties, but those 50% were responsible for over 97% of the citations, a statistically significant difference.

earmarked penalties than for those where earmarked penalties were not possible.

The availability of earmarked penalties could be expected to change not only the level of enforcement activity, but it would also change the targeting priorities for private enforcers. All other things being equal enforcement actions offering the possibility of earmarked penalties have higher net benefits and could therefore be expected to appear higher in the priority list of potential targets. Once the private enforcer reordered its priorities to reflect this difference, one would expect a rise in the percent of enforcement actions with targeted penalties.[17]

The "Loser Pays" Rule For Allocating Legal Costs

In most Latin American countries, parties which win private enforcement actions will normally have their legal fees reimbursed by the loser. Having legal costs reimbursed has two separate effects on the cost-minimizing degree of compliance. On the one hand it raises the expected penalty for violations. Not only does the targeted polluter have to bear the costs of coming into compliance and to pay any imposed penalties, it also has to pay court costs (including attorney fees) of the other side. This additional cost of noncompliance should trigger an increase in the cost-minimizing degree of compliance. In addition, as we suggested above, the likelihood of any polluter being subject to private enforcement is higher when attorney fees are reimbursed, since the privately optimal amount of litigation activity for citizen groups increases when their fees are reimbursed. Increased private enforcement would raise the costs of noncompliance as well, since the likelihood of being the subject of an enforcement action would have increased.

Compared to a system where each side pays its own legal costs (as in the United States), "loser pays" reimbursement has two main effects. First, it encourages actions which have a high probability of success, while it discourages actions which have a low probability of success. Second, it increases the risk to potential enforcers of undertaking private enforcement activities since the economic difference between winning and losing is increased and can be substantial (Hughes and Snyder, 1995).

The hourly rate at which attorney's are reimbursed can affect the incentives. Apparently in the United States environmental groups have been allowed to charge sufficiently high rates that private enforcement has become a very profitable activity, not merely a quest for better environmental quality (Greve, 1990).

The Consequences of Altering the Burden of Proof

By reducing the costs of discovering and validating an enforcement claim, assuring the public availability of reports has become a very important component of private enforcement of water pollution violations in the U.S. Here, private enforcers have access to the discharge monitoring reports, and the courts have generally accepted the information contained in them as proof of violations. By allowing citizens to use these reports as the basis for their claims, monitoring reports significantly reduce the cost of private enforcement litigation.

Promoting the generation of this information and allowing public access to it is by no means universal. In Mexico, it is reported that one of the principal factors limiting citizen participation in the enforcement of environmental laws, is the lack of transparency of and access to environmental information (see also Box 3).

ARE PRIVATE ENFORCEMENT CHOICES SOCIALLY OPTIMAL?

The overarching question of course is not why and how private enforcement is taking (or could take)

[17] In the United States earmarking occurred as early as 1982 but didn't become widespread until the mid to late 1980's. Once earmarking became possible, earmarked penalties tend to dominate general penalty remedies. (Naysnerski and Tietenberg 1992) Over the period from 1983 to 1986, 80% of the cases involving penalties dedicated the money to an environmental fund rather than the U.S. Treasury.

place, but rather how well it serves social objectives. More effective enforcement does not always lead to greater efficiency. Does private enforcement promote either greater efficiency or greater cost-effectiveness?[18] Or are the outcomes efficient or cost-effective only under particular circumstances? Can we create a more efficient or cost-effective overall enforcement mechanism which combines public and private actions? In this section we shall examine the degree to which private enforcement, as currently structured, is compatible with efficient pollution control and, subsequently, with cost effective pollution control. We shall also examine the ways in which this role could be improved.

Having specified the process of selecting targets for private enforcers it is now possible to assess the degree to which the choices that result from this process are socially optimal. First we must be clear about what is meant by "socially optimal."

Efficient Compliance

Economists use the concept of economic efficiency to define social optimality. For the purposes of this study efficiency can be defined as the allocation of enforcement resources such that the excess of benefits over costs (or net benefits) are maximized.

At first glance it might appear that private enforcers make efficient choices because they too are maximizing net benefits. Unfortunately that superficial conclusion is not right. Socially optimal decisions take different net benefits into account. Close inspection of the implications of this characterization reveals that private enforcers make rather different choices than public enforcers. Not only do they use different priorities in choosing which actions to pursue, but in general they may not allocate an efficient level of resources to enforcement.

[18] This report follows the standard convention that efficiency involves maximizing net benefits, while cost-effectiveness involves meeting a predefined environmental standard (which may or may not be efficient) at minimum cost.

The basis for this conclusion is most obvious for private enforcers motivated by strategic considerations. For that group neither environmental improvement nor the costs of compliance play any role in their decisions. Since their objective function is completely different than that used to characterize the social optimum, only by coincidence would their enforcement decisions be socially optimal. The strategic motive, however, is more the exception than the rule. And presumably it can be controlled, at least to some extent, by appropriate standing rules, by procedures for allocating legal cost, and/or by adjustments in the burden of proof.

How about private enforcers motivated by a desire to improve environmental quality? While this group is pursuing the socially desirable objective (improvement in environmental quality), it is not clear that improvements in environmental quality are ranked and valued by private enforcers in a socially optimal way. Two important differences could cause the two to be quite different: (1) the public good nature of environmental improvement and (2) the specific focus of the environmental group.

Because environmental improvement is a public good, private groups would be expected to undervalue it. Undervaluation can occur for two reasons. First, the "free rider" effect means that the benefits of environmental improvement can be received even by those who do not contribute. This expectation that others may take the enforcement action diminishes the incentives of all private enforcement groups. Second the value of the public good represents the sum of its values to the entire population. To the extent that the environmental organization represents the interests of only a subset of the entire population, those interests will necessarily be smaller than those of the population as a whole. The implication of these two sources of undervaluation is that, all other things being equal, private enforcers would undertake too little enforcement activity.

Whereas the public good nature of environmental improvement tends to suggest too little enforcement, the specific environmental focus of the private enforcer may introduce a bias in how

private enforcers choose their targets. Most environmental groups which engage in the private enforcement process focus on a particular area of environmental protection (preservation of habitat, water pollution, protection of rivers, air pollution, etc.). When the opportunity arises to engage in private enforcement activities, it is natural that private enforcers would target those activities which, when brought into compliance, would yield the greatest impact on the areas of interest to their members whether or not the violations in that area were contributing the most damage. A specialized focus can create a bias such that private enforcement resources may be targeted on less important problems.[19]

So far we have discussed why divergences between the private and social perceptions of benefits from enforcement activity can cause private enforcement to be less than completely efficient. A similar problem exists with costs.

Efficiency requires balancing the value of the environmental improvement with the costs of achieving that improvement. The relevant cost in this case includes the cost *to the polluter* of coming into compliance and the costs of the enforcement process. Compliance cost plays no role in the private enforcer's balancing of costs and benefits. The relevant private cost to the private enforcer is the cost of bringing the enforcement action, which is unrelated to the cost of compliance. When compliance costs are lower than the costs of bringing an enforcement action, private enforcers may not be aggressive enough. When compliance costs are larger than enforcement costs, private enforcers may be too aggressive.[20]

In general this analysis suggests that private enforcement actions are not likely to result in an efficient allocation of control resources. But that conclusion should be tempered in two specific ways. First, adding private enforcement may not result in complete efficiency, but it frequently can lead to a more (if not completely) efficient allocation of control resources. It is a less than perfect, but sometimes very useful, means of improving on the current situation. Second, efficiency is a very demanding criterion, (few policy measures can satisfy this criterion) especially in an enforcement context. How does private enforcement stack up when measured against the somewhat weaker (but much more realistic) criterion of cost-effectiveness?

Cost-effective Compliance with Discharge Standards

One common use of private enforcement promotes compliance with a set of discharge standards. Under what conditions would this use be cost-effective? A cost-effective allocation of the responsibility for achieving a given aggregate emission reduction target is achieved when the marginal costs of emission reduction are equalized across all discharge points for that pollutant.[21] While the discharge standards imposed by the regulatory authority may or may not be cost-effective, normally they are not. Complete compliance with any set of standards which did not result in equal marginal costs would not be cost-effective. High marginal cost firms would be controlling relatively too much and low marginal cost firms relatively too little.

Would enhanced enforcement activity normally result in cost-effectiveness? Restoring cost-effectiveness would necessarily require encouraging some firms (the ones with low marginal costs) to take on more than their legal responsibility while encouraging the others to take on less. While it

[19] Of course if the combination of public and private enforcement resources are sufficient to produce complete compliance this bias is of no consequence. In practice complete compliance is rarely achieved in any setting.

[20] Because enforcement is not a costless process, complete compliance may well not be efficient. The marginal costs of mounting an enforcement effort capable of achieving complete compliance may not be justified by the marginal benefits from the resulting increase in environmental quality.

[21] The original proof of this proposition can be found in Baumol and Oates (1971, 42-54).

certainly would be possible to use enforcement policy to encourage firms to take on less than their legal responsibility, it is not possible to use strict enforcement to get them to take on more. Since the expected penalty falls to zero once the regulated standard has been achieved, greater enforcement would not induce any firm to do more than it is legally required to do.[22] By itself enforcement policy cannot achieve cost-effectiveness.

Discharge Standards in Practice

Private enforcement can create a movement towards cost-effectiveness providing that the discharge standards themselves are cost-effective. Is that likely?

Many discharge standards are based on specific pollution control technologies identified by the control authorities. Technology-based standards place an emphasis on the type of equipment used rather than on the amount of emissions reduction to be achieved. Russell and Powell (1995) suggest that technology-based standards are probably appropriate for those Latin American and Caribbean countries with a relatively undeveloped regulatory infrastructure. Furthermore, some countries find it easiest to copy those standards from other (usually more industrialized) countries. However appropriate these standards might be for the country that first defined them, they frequently are not appropriate for the countries who import them.

Due to the fact that many current standards do not provide for cost-effective pollution control, it is not possible to guarantee that private enforcement, in particular direct citizen suits, can lead to greater cost-effectiveness in pollution control. Although noncomplying firms would perceive a higher threat of enforcement and would be likely to increase their degree of compliance, the improved environmental quality would generally not be obtained at minimum cost.

Unfortunately, the problem is even more serious than that. According to our model the firms most likely to be in less than complete compliance are those facing the highest marginal cost of emission reduction. In other words, private enforcement aimed at producing compliance with discharge standards are in all probability targeting further environmental improvement on the firms for which further improvements are the most expensive. Whenever the discharge standards are not cost-effective, private enforcement may secure environmental improvements from precisely the wrong firms.

When the standards are dramatically cost-ineffective, maintaining some discretion over enforcement represents one way for assuring that firms are not forced to comply with unreasonable goals. A complaint process affords that kind of discretion, whereas a citizen suit process does not.

BLENDING INSTRUMENT CHOICE AND ENFORCEMENT

The fact that private enforcement targets the most expensive sources of environmental improvement is not a fatal flaw. In the first place, direct citizen suit provisions are relatively rare in Latin America. Second, the more common form of private enforcement, allowing citizens to file complaints, should provide the agency receiving the complaint with sufficient discretionary authority to not act on complaints when forcing complaints would not be cost-effective.

[22] Note that even though it may be possible to use selective enforcement to equate the marginal costs, the resulting equilibrium would not be cost-effective. Easing up on enforcement against the firms with the higher marginal costs could encourage them to choose a lower degree of compliance, an action that could reduce their marginal costs until they were equal to the lower marginal costs of the other firms. But this would not achieve the target aggregate emission reduction; too little reduction would have been achieved. Since only allocations which achieve the desired target at minimum cost are cost-effective, failure to achieve the desired target means that the resulting allocation would not be cost-effective. Selective enforcement would minimize the cost of meeting a weaker standard.

Russell and Powell (1995) have argued that the types of instruments used should be tailored to the degree of modernization of the country. And they identify all types of situations within Latin America and the Caribbean from highly traditional societies to very modern societies with well developed markets. Due to their lack of infrastructure, the more traditional societies should probably stick with the complaint and oversight forms of private enforcement.

The most modern societies, however, face a larger opportunity. For them combining direct citizen suits with appropriately designed policy instruments could produce a better outcome in terms of both costs and environmental quality. It is well-known that appropriately designed emissions trading systems can in principle produce cost-effective outcomes (Baumol and Oates, 1971; Hahn and Hester, 1989; and Tietenberg, 1990). An initial allocation of control responsibility which is cost-ineffective can be rectified by trading emissions reduction credits. Once these trades have been consummated the allocation of control responsibility should be cost-effective or at least more cost-effective.

An immediate implication becomes apparent when the effects of direct citizen suits are contrasted depending upon whether the emissions standards being enforced are complemented by emissions trading or not. The ability of private enforcement to enhance cost-effectiveness is higher, probably substantially higher, when emissions trading can be used to comply with the standards being enforced. Furthermore, the existence of private enforcement should encourage high marginal cost firms to trade, making for a more active market.

In modern societies citizen suits and emissions trading reinforce each other in socially desirable ways. Without emissions trading citizen suits could be targeted inappropriately at those areas where the problem of cost-ineffective standards is most acute. On the other hand, where emissions trading has taken hold the need for any form of private enforcement would be diminished (due to higher normal compliance rates) and enforcement actions would be more likely to be targeted at intentional violators.

CONCLUSIONS AND LESSONS

CONCLUSIONS

Determinants of Private Enforcement Activity

If government enforcement were complete, all polluters would be in compliance, all public decisions would be in compliance with established norms and private enforcement would have no role to play. But public enforcement has been neither complete nor consistent. Lax public enforcement creates a niche for private environmental enforcement.

Both the intensity and focus of private enforcement activity are influenced by the menu of remedies made available to private enforcers. One influential component of this menu is the structure of authorized penalties. Although injunctive remedies are clearly a possibility, civil penalties offer citizen organizations the potential for greater deterrence of noncomplying behavior. Earmarking the revenue for environmental improvement not only increases the benefit to the citizen group undertaking litigation activity and, hence, the attractiveness of private enforcement as a means of improving environmental quality, it is also a more attractive alternative to the regulated entities.

The loser pays principle of reimbursing legal costs can also have a potent effect on the level and focus of private enforcement activity. With legal costs reimbursed for successful actions, the costs of private enforcement activities (after reimbursement) are lowered for private enforcers. As long as private enforcement actions have a high probability of success, citizen organizations would be encouraged to participate far more often in the enforcement process than would otherwise be possible if participants had to pay their own legal costs. Since reimbursement for inappropriate actions is not allowed, citizen groups can be encouraged to undertake private enforcement actions only for appropriate cases.

The effectiveness of private enforcement actions is greatly affected by the magnitude of the burden of proof private enforcers are forced to bear. When proof of violation is relatively easy to establish not only because of the public availability of key reports but also the ease of determining whether a violation has occurred from the information in those reports, private enforcers can be an effective force. Lacking the government's power or resources to conduct on-site inspections private enforcers are heavily dependent on the availability of the information supplied by those subject to the regulations.

Standing and targeting rules can play a gatekeeping role. Standing rules can be used to limit the private enforcement process to those would-be enforcers who are most likely to use an environmental improvement criterion for filing noncompliance claims. Targeting rules can be used to limit the domain of those public and private entities subject to scrutiny by private enforcers.

Consequences of Private Enforcement Activity

Adding private enforcement to public enforcement increases the expected penalty to the noncomplying firm by increasing the likelihood that the firm will face an enforcement action either directly in the form of a citizen suit, or indirectly in the form of a government enforcement action in response to a complaint. This can be expected to increase the degree of compliance by the firm.

The degree of precaution taken by enterprises subject to environmental regulations depends, in part, on the menu of remedies made available to private enforcers. Noncomplying firms facing both an injunction and penalties would be likely to take more precaution than firms facing only an injunction, simply because they face higher expected penalties. In addition firms facing both an injunction and penalties would also be likely to take more precaution than those facing only an injunction.

Compliance incentives are also affected by the likelihood that private enforcers can bring successful actions. An unsuccessful defendant not only has to pay its own legal costs but also the reasonable legal fees for the private enforcer; it raises the cost of noncompliance. Furthermore, when legal costs are reimbursed citizen groups are able to undertake more enforcement activity because their litigation resources could be stretched further. These factors increase the noncompliance costs of the firm and therefore can be expected to lead to more precaution and better environmental quality. As long as the reimbursement rates are not excessive, reimbursement of legal costs according to the loser pays principle should promote a healthy amount of private enforcement activity.

In this report we have identified two specific problems with the private enforcement process: (1) private enforcer priorities in choosing which claims to pursue will not necessarily coincide with social priorities and (2) private enforcer actions may not support the socially desirable intensity of control.

Private enforcers respond to private incentives. We have identified many ways in which these private incentives may deviate from social incentives. For example private firms will prefer to pursue claims that offer penalties rather than those that don't. Yet which claims offer penalties may be an artifact of legislative history (as was the case in the United States) than optimal policy design. Thus when private enforcement incentives are not uniform across the various areas of environmental protection (air, water, hazardous wastes, etc.) the private enforcement process can become quite biased toward the favored areas. This has in fact been the experience in the United States.

Furthermore, even to the extent that the private enforcement process encourages a movement toward complete compliance, complete compliance is not necessarily cost-effective if the effluent standards are not themselves cost-effective. Whenever the emission or effluent standards are not themselves cost-effective, private enforcement, in particular direct citizen suits, will not necessarily promote greater cost-effectiveness in environmental policy.

In more traditional societies due to the low likelihood that any standards imposed on firms are likely to be cost-effective, relying on a complaint process coupled with private oversight is likely to be superior to a process relying on citizen suits. As societies modernize, however, direct citizen suits coupled with strategies for reducing the cost-ineffectiveness of discharge standards (such as emissions trading) become a much more attractive avenue.

In countries where raising revenue for environmental purposes is difficult private enforcement provides an additional opportunity for raising that revenue. Imposing financial penalties on noncomplying firms (under either a complaint process or citizen suits) and earmarking those penalties for environmental improvement can raise a considerable amount of revenue.

Sustainability of Private Enforcement Actions

By their very nature completely successful private enforcers undermine the very reason for their existence. Once complete compliance has been obtained no more opportunities for claims exist regardless of the underlying incentives. Yet no private enforcement process currently in existence is currently facing that prospect. The level of noncompliance is simply too great.

How then are private enforcers likely to sustain their contributions to the enforcement process? The achievement of a sustainable process requires a

self-sustaining source of revenue in order to cover the costs of bringing claims. The loser pays principle of allocating legal costs, which is already a part of the legal system in Latin America, provides a perfectly reasonable vehicle for covering these costs. The reimbursement from each previous successful action provides a fund to be used in pursuing the next action. As long as the claims brought are meritorious, the fund keeps being replenished.

It would be possible to carry this even further by authorizing that penalties be paid directly to private enforcers rather than dedicated to environmental improvement. In this case private enforcement would be a profitable activity and bounty hunters could be expected to join. While this high level of incentive might well be merited in specific circumstances, its dangers should be recognized. Bounty hunters certainly accelerate the movement toward complete compliance. Whenever complete compliance may not be socially desirable, this acceleration may prove to introduce significant problems. Since the U.S. experience indicates that the reimbursement of attorney's fees may be sufficient to produce sustainability of the process, it may not be necessary to introduce bounty hunter provisions.

Desirability of Private Enforcement

As the above analysis makes clear, private enforcement is inherently neither desirable nor undesirable. Its desirability depends on the circumstances. Because countries contemplating the use of private enforcement can control those circumstances (thereby assuring that private enforcement would improve upon the existing system), private enforcement offers an attractive opportunity to complement other environmental policies. Not only can it become an important source of revenue (drawn from earmarked penalties) from environmental improvement, but it also can create private incentives which promote sustainable development.

LESSONS

Private enforcement of environmental law is not a common component of environmental policies around the world. Should it be? What lessons can be gleaned from this analysis and the evidence derived from existing programs around the world?

Lessons for Latin American and Caribbean Countries

Governments are not universally able to assure compliance with environmental laws. Latin American and Caribbean countries are no exception. In many countries apparently tough environmental laws may be accompanied by little or no enforcement. The appearance of concern over the environment diverges sharply from the reality of indifferent enforcement. Recognizing the ineffective (and in some cases counterproductive) role of their governments, environmentally aware citizens have become discouraged and pessimistic about the future. Improving environmental policy seems a rather hopeless venture in the face of an uncooperative, corrupt or merely underfunded government. Effective enforcement is the foundation upon which successful environmental policy is built.

Private enforcement provides two specific sources of hope. If the government monopoly on enforcement can be challenged, private enforcers could complement public enforcers, producing greater compliance and, quite possibly, a more responsible public sector. Since the value of private enforcement is greatest when public enforcement is not very effective, the significant challenge to regulatory policy posed by ineffective public enforcement can be turned into an opportunity. Furthermore, through the "loser pays" principle the financial burden of enforcement could be transferred to those who create the need for it. Limited public resources need not be a barrier to effective enforcement.

Private enforcement does not flourish in all environments, however. If it is to fulfill this promise, certain preconditions must be satisfied. The most important of these involve establishing a reliable means for potential private enforcers to acquire the information they need to serve as a basis for their claim in a reasonable timely manner and at a reasonable cost. Furthermore, they must face a reasonable burden of proof when they bring claims

forward.

Proof of violation must be easy to establish. Fuzzy standards and inadequate monitoring would raise the private burden of proof sufficient to preclude an effective private enforcement process. Self-monitoring reports should be required at least from the largest polluters and the information must be made available to private enforcers. Furthermore, the penalties for falsification of the reports must be sufficiently severe as to encourage veracity.

A well-defined private enforcement process can allow the public sector greater flexibility in targeting its limited enforcement resources. This flexibility would offer the opportunity to use public enforcement resources more efficiently, without creating new incentives for noncompliance in the process. Without private enforcement the government would be forced to spread its limited resources much more thinly over the vast territory regulated by environmental policy.

Private enforcement actions offer a distinctly superior form of enforcement whenever public enforcement agencies seem reluctant to enforce pollution violations committed by public facilities. Private enforcers have no such lack of will to pursue public polluters and therefore would presumably be able to produce compliance faster for them.

Limiting private enforcement to complaint and oversight actions probably make the most sense for the most traditional societies. Adding direct citizen suits to the private enforcement arsenal would represent an unambiguous move toward cost-effectiveness only if the underlying emission standards are cost-effective. Citizen suits should probably not be introduced when the emission standards being enforced distribute the control responsibility in a very cost-ineffective way. When some individual firms face unrealistically stringent standards, a citizen suit process would in all probability target further environmental improvement on precisely those firms.

While it is unrealistic to expect a bureaucracy to establish cost-effective emission standards because of the prohibitively high information burden that presupposes, it is not unrealistic to expect that outcome from a suitably designed emissions trading system. Blending private enforcement with emissions trading in the most modern societies, which have the infrastructure to support this combination, would not only encourage compliance with the standards, but it would provide an additional inducement for high marginal cost firms to trade, making for a more active market.

The experience in the United States points up one other remediable way in which the process can be much less efficient than it should be. U.S. environmental policy has been crafted in a piecemeal fashion over time, usually motivated by some highly publicized environmental crisis. This piecemeal approach to environmental policy has created some striking nonuniformities in approach. Relatively similar pollution problems may be treated rather differently, depending upon the governing statute and the latest year that statute was amended.

The private enforcement process in the United States reflects this nonuniformity and to a certain extent has been undermined by it. The amount of mandated monitoring and publicly available information varies considerably among the various statutes, creating very different burdens of proof for the plaintiffs. Some statutes authorize penalty remedies; others don’t. Some allow earmarked penalties; others don’t. Some governmental units authorize attorney reimbursement; others don't.

This difference in how private enforcement actions are treated by the various statutes has created an uneven playing field which undermines the degree to which private enforcement priorities mirror the public interest. Private litigation priorities are established on the basis of private costs and benefits, not social costs and benefits. Nonuniformity of treatment of private enforcement means that bringing claims under some statutes is much more attractive than bringing claims under other statutes. Serious pollution problems under a statute which

treats private enforcement less favorably may be ignored in favor of suits under statues with more generous penalty of reimbursement provisions, creating a bias in favor of permissive statutes. This bias drives a wedge between the interests of public and private enforcers; actions which offer the highest net benefits to the private enforcer are not necessarily the actions which offer the highest net benefits to society as a whole.

Recognizing the problem points immediately to a solution. To harmonize public and private enforcement priorities it will be necessary to develop more uniform rules on the applicability of private enforcement procedures. Only with more uniform treatment will public and private enforcement priorities be determined by the seriousness of the problems rather than the generosity of the statute. Since the analysis in this paper suggests that private enforcement is indeed quite sensitive to these differences, removing these biases would appear to be an important next step.

Lessons for the Inter-American Development Bank

It does appear that private enforcement offers some unique advantages. It provides a means for oversight of public functions; it leverages the limited funds for public enforcement; and it usually provides a superior means of controlling environmental harm caused by public agencies.

How can the IDB play the most effective role in facilitating an effective use of environmental enforcement? What instruments are available and how should they be targeted?

One of the desirable aspects of private enforcement is that it is self-sustaining once initiated as long as private enforcers are reimbursed for bringing forward successful claims. No continuous infusion of public funds (whether international or local) is necessary.

Given the self-sustaining nature of the process, the main role for the IDB is to facilitate its initiation in a manner which is likely to produce efficient and effective outcomes. In short, some pump-priming investment may be necessary at the beginning to get the process off the ground.

Investments in Human Capital. If private enforcement is to play a significant role, the key participants must become familiar with its advantages and disadvantages. Much may be gained by providing funds to sponsor conferences on private enforcement in target countries. The speakers should be drawn from a mix of international and local experts on various aspects of private enforcement. The participants (both speakers and the audience) would include representatives of large industries, environmental groups who have (or who with the proper motivation could become) private enforcers, those entrusted with the public enforcement responsibility, academics who might provide objective evaluations of the process as a basis for future refinements and legislators who might have jurisdiction over any enabling legislation.

It is also possible that funds might be necessary in some countries to encourage the emergence of a core of environmental lawyers trained in private enforcement. Private enforcement requires a high level of technical and legal expertise, and much can still be done in Latin America and the Caribbean. The complaint process, the most common form, does not require too much expertise (indeed depending on the circumstances complaints may be submitted by ordinary citizens), since the enforcement function is actually performed by the government. One possibility to encourage this emergence would be to establish fellowships for those interested in studying environmental law or in serving internships in law firms specializing in private enforcement in countries with successful private enforcement programs.

Investments in Infrastructure. Investments in infrastructure might take two main routes. The direct route involves investments to support the private enforcement process itself. The indirect route would involve investments to facilitate the transition to more efficient environmental policy, thereby creating an environment where the worst excesses of private enforcement would be circum-

vented.

With respect to direct support three key needs are: (1) the existence of an effective system of information flows to facilitate the identification and substantiation of complaints; (2) assuring the transparency of that information to private enforcers with standing; and (3) a reliable means of filing an enforcement action which includes a reasonable burden of proof. With some exceptions private enforcers may not be able to fulfill both the monitoring and enforcement functions without government assistance in assuring the availability of information. They will depend not only on the existence of an effective self-reporting system, buttressed by appropriate sanctions for falsification, but also on the openness of that process to private enforcers. Creating such a process could probably be facilitated by international funding.

Public funding might also be used to provide access to capital for monitoring and reporting equipment for potential polluters, as well as capital for the public provision of information for more diffuse or cumulative impacts of pollutants. This would be consistent with the Bank's traditional role in supporting the provision of a public goods such as information. Otherwise, the full cost of the transition to a private enforcement scheme is borne by the private sector.

Obviously, the Bank could also support public authorities to strengthen their capacity to compile and assess information, such as on standards, permits, licenses and EIAs. As noted in this paper, public authorities are often not able to provide the public the requested information, due to lack of capacity. The recording and distribution of information could be increased with international funding.

The indirect route would recognize that inappropriate and cost-ineffective discharge standards are one of the barriers to the effective implementation of a private enforcement process. It would therefore provide funds for a clearinghouse for information on discharge and/or ambient standards for a variety of pollution situations. The clearinghouse would be a repository for all standard setting documents generated both in the region and outside the region. Such an organization would reduce information costs associated with standards development and, because it would be customized for the region, would facilitate the development of regionally appropriate standards.

Indirect support could also be applied to the need for developing such complementary environmental policy instruments as tradable permits systems (perhaps by facilitating the development of model statutes or a handbook dealing with design issues tailored to the Latin American and Caribbean context) for the most modern countries.

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