



Critically Evaluating America's Pollution Control System

by Terry Davies

Early in 1994, researchers at RFF's Center for Risk Management commenced what arguably is the most comprehensive evaluation of the U.S. pollution control system ever conducted. Our findings, which are reported in the newly published RFF book *Pollution Control in the United States: Evaluating the System*, point to a system that for all its accomplishments is deeply and fundamentally flawed. The need for a major overhaul, not simply more tinkering, is imperative.

This ambitious project, which has involved the efforts of numerous RFF staffers, was initiated at the suggestion of the Andrew W. Mellon Foundation and funded by Mellon and the Smith Richardson Foundation.

The 336-page book that is the result examines the major mandates and functions of the Environmental Protection Agency. Drawing extensively on an array of government reports and similar data, it provides both a description of the system and an assessment of its flaws.

The book examines and evaluates the system using these criteria: whether the system has reduced pollution levels; whether it has targeted the most important problems; whether it has accomplished its goals efficiently; whether it has been responsive to a variety of social values; how it compares with the systems of other developed nations; and how well it can deal with future problems. The study focuses largely, although not entirely, on federal environmental efforts.

Strengths and Weaknesses

The present system has done much to improve environmental quality. Laws and regulations have reduced air pollution from automobiles and large point sources. Creative policies such as emissions trading have been developed, along with such

techniques for opening up the system as citizen suits, regulatory negotiations (convening the key parties to negotiate a draft rule), and the Toxics Release Inventory (which makes public the amount of toxics produced by individual facilities). Many advances have been made in the science and engineering of pollution control.

Nevertheless, our study shows that the system is by nature fragmented. As a result, resolving certain types of problems is sometimes not simply difficult, but

difficult, and greatly reduces the effectiveness of pollution control.

Beyond even these shortcomings, our evaluation reveals more critical flaws. The present system is focused for the most part at the wrong targets, is very inefficient, and is excessively intrusive.

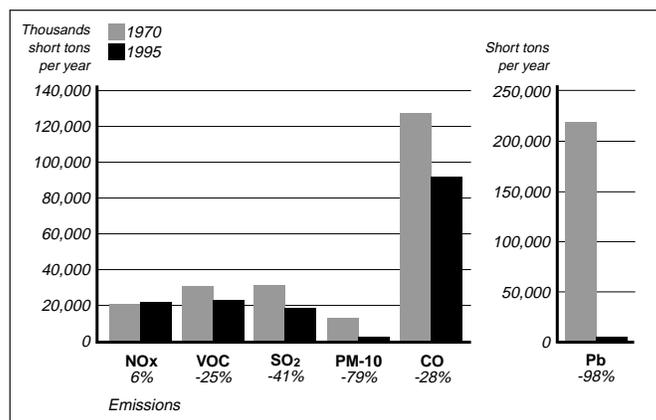
The Wrong Priorities. Any gains in the effectiveness of policies and programs are hollow if the wrong problems are targeted. If one looks at what are the most serious health or environmental risks, one will find

little or no relationship to our current environmental regulatory priorities. Comparing EPA and societal expenditures with health and ecological risk rankings, we found a basic mismatch. Two top-ranking health risks that are at the top of many experts' lists—radon and indoor air pollution—receive minimal funding, while the highest expenditures on ecological risks—oil spills and hazardous waste sites—go to problems that do not even make it to most experts' lists of the major risks.

In water pollution, nonpoint sources pose the major problem, yet the current system still focuses

on point sources. Indoor air pollution is the major health threat for most people, but the system focuses on outdoor air pollution. These are two of the most egregious examples, but by no means the only ones. Risk cannot be the only guide in setting priorities; other factors, such as cost, administrative feasibility, and fairness considerations, must be put into play. The basic goal of the system, however, is to reduce risk.

Inefficiencies. The inefficiency of the current control system goes beyond focusing on the wrong targets. The system discourages preventing pollution and focuses instead on end-of-pipe treatment. Prevention is often preferable, both environmentally and economically. The system



National Air Pollution Emissions Trends, 1970–1995.
Source: U.S. EPA. *National Air Pollutant Emissions Trends, 1900–1995.* Office of Air Quality Planning and Standards Research, 1996.

impossible. For instance, a recent report notes that the air deposition of mercury in the Everglades is twenty-five to fifty times greater than mercury discharges by water polluters. Yet the current regulatory system cannot deal with this situation effectively, because our water pollution laws ignore altogether the possibility that some pollutants end up in water bodies via the air.

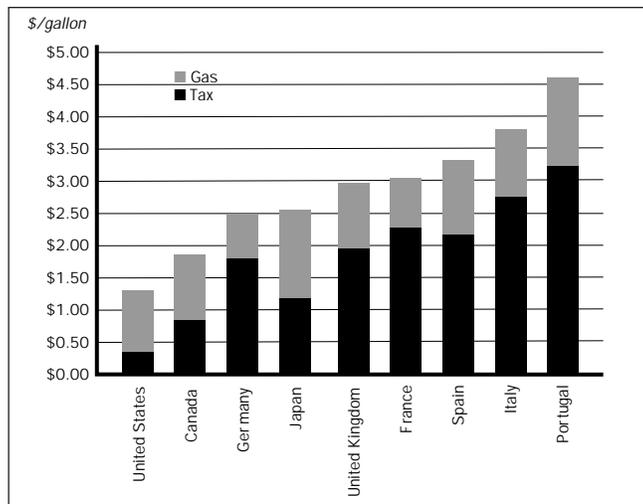
The most important shortcomings of the system are due to Congress, not EPA or the states. It is Congress that has proliferated environmental statutes, failed to think through how they ought to interrelate, failed to set priorities, and perpetuated the myth of freedom from risk. The fragmentation that results increases the costs of compliance, encourages cross-media trans-

also is excessively prescriptive, telling sources how to control pollution instead of setting a goal and allowing flexibility in how to meet it. There is ample evidence that the prescriptive approach adds large sums to the cost of control, money that comes from taxpayers' pocketbooks and that is not buying anything.

The costs of controlling pollution are borne largely by the private sector. Direct EPA expenditures are a small portion of the cost. More efficient EPA regulations, however, could reduce costs paid by all parties as well as reducing the intrusiveness of the control system.

Intrusiveness. The intrusiveness of the present system not only works against some of its own goals, but also generates bitter public resistance. It tells people what to do rather than providing incentives for them to take necessary action. Its recordkeeping requirements and other bureaucratic aspects can be onerous and often are duplicative or otherwise unnecessary.

Developing alternatives to these shortcomings is a major challenge to any reform effort. One major set of remedies that has been proposed is increased use of "market mechanisms," using pollution taxes, marketable permits, and deposit-refund schemes as ways to reduce and control costs. The United States has pioneered some of these mechanisms, such as the trading of emissions rights, and Resources for the Future can legitimately claim to be one of the intellectual parents of market mechanisms. However, many other countries make greater use of taxes as a way of curbing fuel use than does the United States.

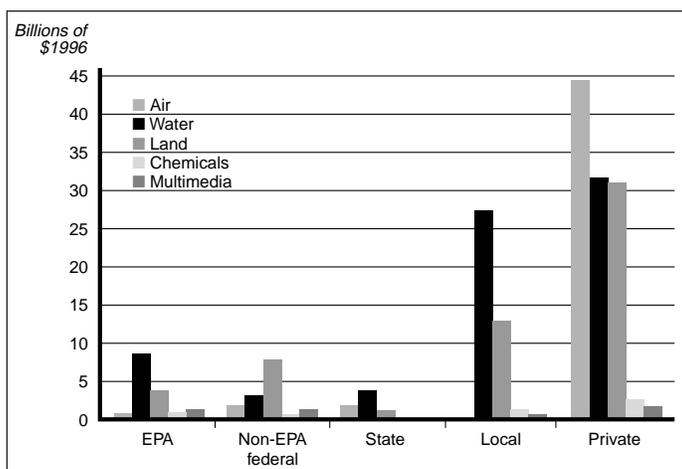


Unleaded Gasoline Prices and Tax Component, Selected Countries, 1994.

Source: RFF calculations based on OECD Environmental Data: Compendium 1995, p. 230.

How the System Might Be Changed

While making recommendations for change falls beyond the scope of our evaluation project, one can infer the characteristics of a reformed pollution control system from our findings. It would have to be results-oriented, perhaps with EPA's regulatory and assistance efforts focused on



Total Costs by Medium and Funding Source.

Source: U.S. EPA, *Environmental Investments: The Cost of a Clean Environment*, 1990; Table 8-12A, p. 8-51.

Note: Present implementation cost of regulations, annualized at 7%.

places and economic sectors. It would be integrated throughout, rather than being divided into separate air-water-land categories. It would be efficient, taking costs into account. And it would be more participatory and less coercive. Aside from its fragmentation, the current system's other great failure is its lack of adequate scientific, monitoring, and social science information. A performance-based system will need information for measuring performance.

Possibilities for changing the present system are good, but those changes will probably not take place as fast as is necessary. Many of the national environmental organizations have come to be the arch-conservatives on the matter of

reform, opposing nearly all significant changes. Such a position will damage their effectiveness in the long run. Industry tends to focus more on the bottom line, and thus will need outside incentives to motivate compliance. But industry is far from unified regarding environmental policy: even similar large companies disagree about such basic issues as

whether to encourage decentralization to the states. The picture of the principal stakeholders in the pollution control system, then, is nearly as complicated as the system itself.

As one who was involved in environmental matters before there was an EPA and when few outside of scientific circles had heard of ecology, I remain optimistic concerning reform of the nation's pollution control system. But there is clearly still a long way to go.

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