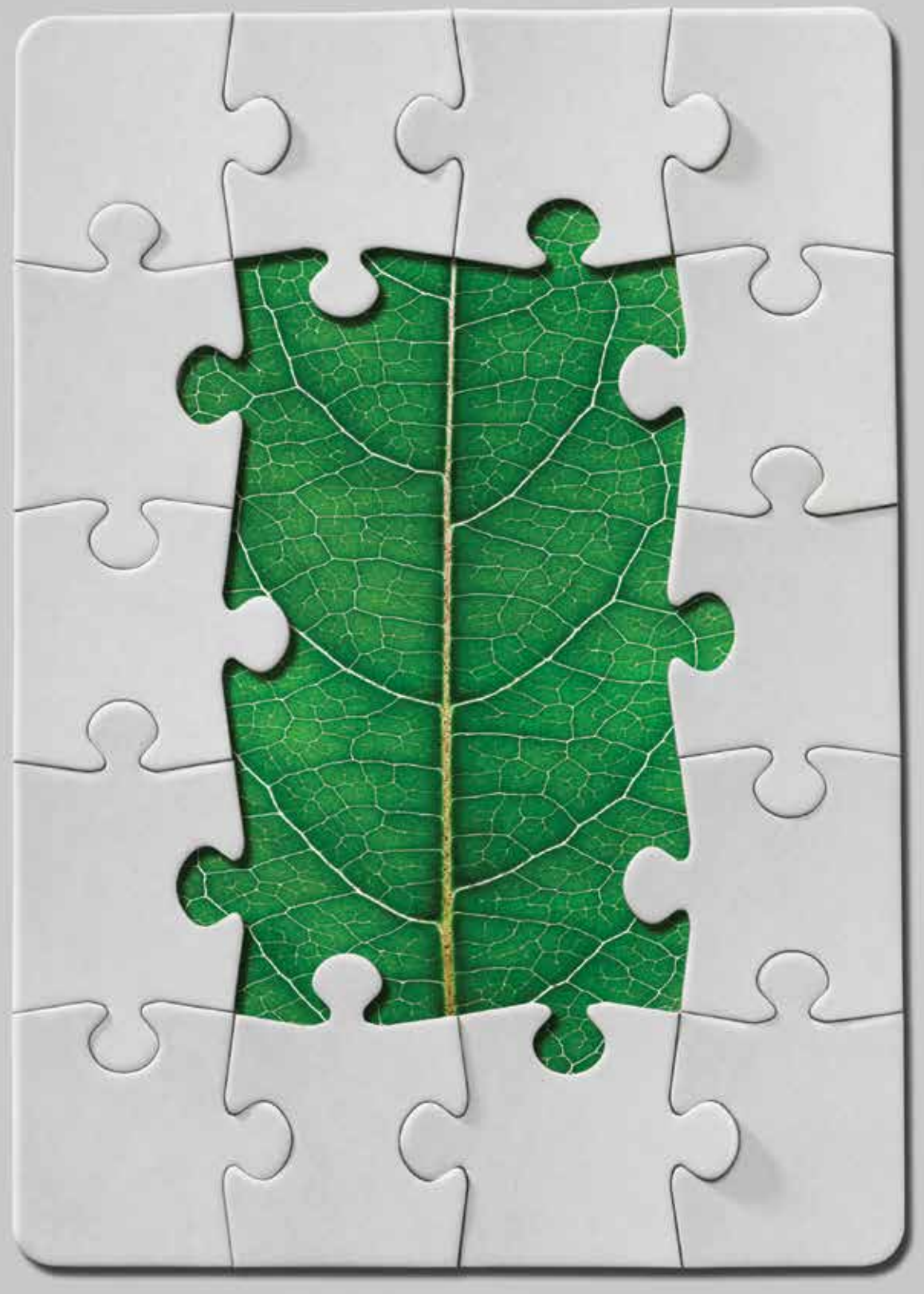

THOUGHTS ON THE FUTURE OF

ENVIRONMENTAL REGULATION

The US federal agencies responsible for enforcing environmental regulations are fragmented and weakening. What would a more integrated approach look like?

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In the current US political climate, environmental policy, once an area of bipartisan cooperation, has become a partisan battleground. In recent years, despite some progress in a few policy areas, the regulatory agencies have been steadily weakened.

Four federal agencies are primarily responsible for protecting the public from chemical and environmental threats: the Environmental Protection Agency (EPA), the Food and Drug Administration (FDA), the Consumer Product Safety Commission (CPSC), and the Occupational Safety and Health Administration (OSHA). CPSC and OSHA are so lacking in resources and legal authority that they have trouble carrying out their missions. FDA's resources also are inadequate, and its legal authority in some broad areas, such as cosmetics and nutritional supplements, provides little protection to the American consumer.

EPA is under attack from congressional critics and has already suffered a significant reduction in manpower even though its resources have always been insufficient to implement its legal authorities. EPA's workforce is the smallest it has been since 1989. The agency's budget for fiscal year 2015, adjusted for inflation, is only slightly larger than it was in 1971, the first full year of agency operation—and about 60 percent of the 1972 budget.

The most likely future scenario is continuation of the current trends and further erosion of the capabilities of the federal regulatory agencies. The states may take up some of the slack, but many are becoming more wary of regulation. The private sector may be less opposed to regulation than politicians (because regulation tends to help larger firms); however, its focus is on short-term profits rather than long-term public interest.

But the world is becoming more interconnected, and this internationalization may be

a counter trend. Other nations, especially in Europe, are putting more effort into regulation than they have in the past. This effort may put pressure on the United States to enact more stringent regulations.

Overall, the outlook from a traditional environmentalist position is dismal. Environmental regulation is in decline, and regulatory agencies are being weakened. What would a better approach look like? What have we learned from the experience of the past 50 years?

Using Incentives

The two basic types of incentives for environmental compliance are regulatory and economic. As the regulatory incentives have weakened, more emphasis has been placed on economic incentives. Approaches using cap and trade (such as to control sulfur dioxide emissions from US power plants), emissions fees, and taxation have been increasingly employed in the United States and Europe.

Because economic incentives tend to be more efficient and effective, future compliance increasingly will be based on economic mechanisms. However, economic approaches are not feasible in every situation—for example, controlling highly toxic materials—and most economic incentives require elements of the regulatory approach, such as standard-setting. Under cap-and-trade programs, for example, the government must take the critical step of allocating the initial permits, and it can manipulate permit prices by controlling the number issued.

Approaching Integration

The US approach to environmental regulation has evolved in piecemeal fashion. It is fragmented, duplicative, and lacking any coherent rationale. The medium-oriented agencies (focused on air and water) are dominant, but place-based agencies, such as OSHA and the Mine Safety and Health Administration, are important as well. So are agencies, such as FDA and CPSC, that are focused on various types of products. The laws that dictate the actions of these institutions are, if anything, more fragmented. Each of the agencies focuses on its governing legislation and proceeds largely as if the other institutions do not exist.

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An antidote to this situation is an integrated approach that considers the physical environment as a whole. There are two types of integration—internal and external. Internal integration applies to the relationship among the environmental agencies. External integration applies to the relationship between the environmental agencies and the non-environmental agencies—for example, the relationship between EPA and the Department of Agriculture.

The creation of EPA was itself a major step toward internal integration. However, the government continues to have separate laws devoted to air, land, and water, each implemented by a separate bureaucracy. This organizational and regulatory fracture is inconsistent with what is, in fact, a unified and interconnected physical environment. Most pollutants are naturally transported from one environmental medium to another, almost all pollutants can be disposed

of in any of several different media, and human and environmental exposure to any given pollutant is usually from multiple environmental routes and from more than one medium. The existing regulatory structure mostly ignores these interconnections. The price is paid in dollars, unnecessary environmental damage, and human injury and death.

The cost of failing to consider the environment as a single physical whole is magnified by the helter-skelter organization of regulatory functions. The same pollutant is examined, evaluated, and regulated by multiple organizations. What is an occupational hazard for OSHA is a consumer hazard for CPSC, a food hazard for FDA, and an environmental hazard for EPA. It is not unusual for the same pollutant to be regulated under half a dozen different laws.

A far more efficient and effective organizational structure would be to combine the environmental agencies into a larger, more vigorous Department of Consumer and Environmental Protection. This new agency could be built around three functions—monitoring, oversight, and research and assessment—with perhaps a crosscutting focus on substances and places. England and other European countries have already changed to an integrated approach with a single permit for each facility, which regulates all emissions, and a single office to enforce the permit requirements. The European Union has mandated that, over time, all EU nations should change to this type of approach.

If the push for integration in the United States were motivated only by an urge for neatness, order, and logic, it would be easier to dismiss. Bureaucratic structures are almost never neat. But in the current climate, the choice between internal fragmentation and integration is not between neatness and disorder. It is a choice between a viable structure of environmental regulation and no regulation at all.

The opponents of environmental regulation have discovered from experience that the most effective way to undermine regulation is not to mount a head-on attack against the regulatory laws. Rather, it is to deprive the regulatory agencies of the people and money necessary to do their jobs. The fragmentation of environmental functions allows this to be done surreptitiously and away from the glare of cameras and the attention of even the most diligent reporters. The budgets of CPSC and the Mine Safety and Health Administration are now so small that they no longer appear in the published budget of the US government. If current trends continue, EPA and FDA also may disappear. Survival mandates a consolidated Department of Consumer and Environmental Protection.

External integration is also important but even more problematic. The federal government has developed mechanisms allowing each agency some leverage over its sister agencies. For example, each agency is given a chance to review testimony or legislation proposed by another agency. However, these are cumbersome mechanisms. One

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possible solution would be for major agencies to create an office of external integration. The mission of the office would be similar to the mission of a diplomatic embassy. It would be responsible for reporting to its own agency the actions and positions of other agencies, and it would try to influence the actions of other agencies to conform to the views of its agency.

The long-term solutions to these problems are in the realm of culture and training as well as legislation. However, short-term structural steps can help. The scientists who collect and analyze the information should be accessible to the regulators. Those who collect information should be able to interact easily and regularly with those who use the information. The danger of having scientific information contaminated by political considerations is real, and there should be safeguards to prevent it. But the danger of having the regulatory decisions made without the benefit of good science is at least as real.

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Supplying Information

Any environmental regulatory system depends heavily on information supplied by the regulated entity. But within the government, the biggest information problem is incorporating such data into the regulatory process. First, the data must be available and readily accessible to decisionmakers. Second, the decisionmakers must understand the data. Third, the data must be relevant to the decision and framed in a way that allows them to be incorporated in the decisionmaking process. None of these steps is easy.

The current regulatory systems are inadequate in that they do not require regulated entities to provide more information. The private sector has a wealth of relevant information—especially about new materials and products—that could be useful to the regulatory agencies. If the government is to protect the public, it should have the authority to get this information. It must also prove its ability to use and protect the information as well as to police the reliability of the information.

For example, cosmetic manufacturers are not—but should be—required to provide FDA with the results of toxicity testing of their products and FDA should be authorized to respond appropriately to the test results.

Adjusting to Internationalization

The world has become increasingly interconnected both politically and economically. Although it has always been interconnected environmentally, now global environmental problems are being recognized. Regulation in many other countries—especially in the European Union—is now more rigorous than in the United States. This will have a significant impact on internationally traded products but will not much affect US facility-related problems, such as emissions and waste disposal.

What may be the biggest problem in this context—imports of products and materials—is like external integration: not fully recognized as a problem and without adequate mechanisms to address it. A large and growing percentage of the goods Americans consume comes from other countries. The old method of inspectors on the docks

opening random crates is no longer able to determine the safety of imported products. New mechanisms are needed, perhaps based on inspections in the country of origin by certified international organizations.

Facing New Challenges

New entries on the environmental agenda are arising from three sources: the growth of existing pressures on an ecosystem, new scientific knowledge about the environment, and new technologies.

These new challenges will have some of the same characteristics as current problems. They will likely be global in scope, they will not fall neatly into any single medium category, and they will cut across the jurisdictions of multiple agencies, both environmental and non-environmental.

The extraordinary growth in the economies of most nations has brought many benefits, but a higher standard of living also may bring more pollution, a greater use of resources, and more congestion. Some of the future challenges will result from solutions of the past being overwhelmed by economic expansion. The effects of exhaust controls on automobiles, for example, may be outweighed by the many more automobiles on the road. Many crosscurrents are at work, however. Economic expansion will also likely lower the birth rate and facilitate application of environmentally beneficial technologies, for example.

The pace of economic growth has been matched by the geometric increase in scientific knowledge. The better we understand the environment, the better we are able to reduce the damage we do to it. However, with understanding come worry and an obligation to prevent further damage. Science does not cause the problem but identifies it, defines it, and makes it eligible for the policy agenda. Environmental problems—from climate change to stratospheric ozone to endocrine disruptors—do not become policy issues until science can adequately define them.

The technologies of the future will have a staggering impact on the environment and on our lives. Nanotechnology will enable us to make almost any kind of material to our specifications and will change the way we manufacture and use materials. It will change not only how we impact the environment but also how we think about it. Synthetic biology will do the same for living organisms. Each of these technologies poses major challenges for environmental regulation, but regulators have hardly begun to think about them.

The world of the next decades will be very different from the present one. There will be many ups and downs on the journey ahead. All we know for certain is that the scenery will be constantly changing. ●

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FURTHER READING

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