Richard Lazarus on Scalia's Environmental Legacy

Volume 33, Number 3 • May/June 2016

The Environmental FORUM®

Advancing Environmental Protection Through Analysis • Opinion • Debate

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The Environmental Law Institute's Policy Journal for the Environmental Profession

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Collaborative Federalism

Not your father's reinvention initiative, E-Enterprise for the Environment was developed by a joint state-federal workgroup to move beyond the cooperative model that has characterized environmental protection into a system of shared responsibility among co-regulators

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Periodically we hear claims that a particular agency reform will produce "a new era in environmental protection." While many worthwhile initiatives have changed relationships between and among the states, tribes, territories, and the federal government in important ways during the 45 years since the founding of the U.S. Environmental Protection Agency, skepticism about such claims is understandable. As successful as they may have been, none has truly delivered on that core objective.

Now comes the initiative known as E-Enterprise for the Environment — unique because it has arisen out of a joint state-EPA effort to modernize the business of environmental protection, an effort whose many antecedents are now coming together to be truly transformative. Imagine what happens when you combine a history of successful cooperation in exchanging environmental information, a zeal for continuously streamlining processes, the ability to leverage the latest technologies, and enduring institutional structures for collaborative leadership, and you can begin to sense the enormous potential for E-Enterprise. What is currently "unusual" will become the "usual" as, for example, regulated facilities are enabled to make a single, annual online filing of all of their air emissions across numerous existing programs under federal and state laws, just as you can now use one software package to file both state and federal tax returns. This example only begins to demonstrate the benefits of what might be termed "collaborative federalism," an approach intended to ensure better environmental outcomes in the long term and a more effective environmental regulatory system.

E-Enterprise embodies a cultural shift in how environmental co-regulators work together and deliver environmental protection services. Many of the nation's key environmental laws were written with the expectation that state, tribal, and territorial governments would want to become delegated or authorized by EPA to implement all or portions of those laws within their own jurisdictions, with oversight by and support from the federal agency. That vision has become reality: today, state governments taken as a whole are implementing some 96 percent of the major federal programs for which they could be delegated or authorized, and they also conduct the vast majority of the data collection and the enforcement of those federal laws.

During the 1970s and 1980s, delegated state programs became the ground game which informed the development and maturation of the then-new national system of environmental protection, even as states relied on EPA as a source of information and guidance on how to implement the new federal laws. States developed substantial expertise in implementing and enforcing environmental laws, and experience with what was effective and ineffective in their areas of responsibility. At the same time, EPA advanced its expertise in environmental science, in the drafting of regulations and guidance documents, and also gained experience as the direct implementer of programs in many areas.

As states accepted delegation and gained experience in implementation, relative roles began to shift. While

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initial EPA assistance and guidance was appreciated and readily accepted in many states, as programs matured some state regulators perceived EPA attitudes as overbearing. States perceived that while EPA fulfilled its obligation under the Administrative Procedure Act to seek input from the states, it used rules, implementation guidance documents, and grant purse strings to enforce a particular vision of how things should work, even if that vision differed from states' ideas of how to run delegated programs equally or more effectively.

The eventual result was a movement for greater state engagement and "cooperative federalism," in which EPA began to be more open to states' views in establishing and implementing environmental programs. For example, in 2004, state environmental commissioners, working through ECOS, partnered with EPA on the development of the State Review Framework to advance consistency in EPA's oversight and evaluation of state enforcement programs for delegated or authorized laws.

Also consequential, though less noted at the time, was the creation in 1998 of the National Environmental Information Exchange Network to enable EPA, states, tribes, and territories (collectively, "the co-regulators") to streamline the electronic reporting and sharing of environmental data. An important driver for the network was a shared belief that improved data flows would provide more usable information and enable better decisions. Joint governance was provided by the Exchange Network Leadership Council, which was composed of roughly equal numbers of state agency heads and EPA officials as well as tribal government participants, and which worked through the complexities of a nationally integrated electronic system for data sharing. Together, the participants found trust and mutual respect, and over time the ENLC transitioned from a policy body to one consisting primarily of personnel focused on technical collaboration.

During the Obama administration's first term, the ECOS officers undertook a concerted effort to improve the working relationship between the states and EPA, and provide states with opportunities for "early and meaningful engagement" in key EPA efforts that would substantially affect them. In mid-2012, ECOS and EPA formed a state-EPA workgroup to develop a potential joint initiative to explore two intersecting opportunities: using information technology for more than just electronic reporting, and making processes more efficient by applying continuous process improvement approaches. A joint white paper led to an effort involving dozens of state and EPA personnel to develop a blueprint, governance structure, business case, and communications approach to support a new initiative that became known as E-Enterprise for the Environment.

These joint planning efforts coincided with significant budget challenges for both EPA and the states. Cuts in federal staffing and budgets, including unpaid furloughs in 2013, echoed state budget cuts that had already affected many environmental agencies. A common reality of fiscal constraints led both parties not only to recognize the need to leverage their existing collective resources, expertise, and experiences to achieve their long-term responsibilities, but also to see that only through new, deeper partnerships could the nation's environmental goals be achieved. The parties had to accept each other as co-regulators, and to acknowledge that their individual success depended upon their collective success. They needed each other more than ever before; they needed to join forces in an unprecedented collaborative approach.

In September 2013, ECOS and EPA leadership signed the Charter for State and EPA E-Enterprise Leadership Council, formally launching E-Enterprise under a joint governance body that is co-chaired by a state environmental commissioner and the EPA deputy administrator, the authors of this article. Modeled on the success of the ENLC, the E-Enterprise Leadership Council consists of 10 commissioner-level and other high-ranking state officials and 10 high-level EPA program officials, including career staff and political appointees. Tribal governments having delegated programs have also been participants in EELC meetings and work groups. While the EELC and its Executive Committee focus on policy and strategic issues, a Management Board and an Interoperability and Operations Team focus on the day-to-day tasks and implementation of individual projects, including the ongoing operation of the Exchange Network. This organizational structure ensures that the co-regulators are fully engaged in and committed to this work at both the political and career levels, and that a solid governance foundation exists to support this transformative cultural change into the future.

The E-Enterprise mission of modernizing the business of environmental protection focuses on three goals: improving environmental protection through better program performance; enhancing services to regulated entities, the public, and agency partners; and operating as a transformative model for joint governance. The value of this effort comes in the form of streamlined processes, trusted information, and enhanced productivity, all guided by principles that reflect the combined learnings of the past 45 years. The joint governance bodies described above work together to explore funding mechanisms and inform the independent resource

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Sidebar

Data and Social Media Can Drive Improvement

Reinventing environmental protection isn't solely a governmental enterprise. Business, too, is constantly improving its environmental performance on its own. An example comes from the remarkable progress in air pollution monitoring and, at the same time, the synergistic rise of social media.

Availability of microsensors for air quality research has increased dramatically over the past several years, as small, low-cost devices have been brought to market. Microsensors for temperature and humidity have been available for many years. Today, we can also detect regulated gases, including carbon dioxide, ozone, sulfur dioxide, carbon monoxide, nitrogen oxides, ammonia, and some organics, as well as particulate matter. The challenge for these emerging technologies is to maintain high data quality, while keeping the costs low and maintaining the small size.

The primary benefit of applying microsensors to air quality measurements is that the devices can be substantially less expensive than traditional monitors, which can cost as much as $20,000, for a single pollutant. For less than half that money, a complete system of microsensors to detect a multitude or regulated substances can now be purchased. Because of their ability to be powered by solar panels or batteries, sensor systems may also be deployed in remote areas or complex terrains that cannot accommodate traditional instruments.

Another benefit of microsensors is that high-spatial-resolution monitoring networks can be more readily deployed. This may provide electric power companies and other entities interested in air quality helpful alternatives for ambient, fenceline, indoor, or personal exposure monitoring. For example, microsensors could be used as inexpensive screening tools for air quality evaluations, or to help site new permanent traditional air quality monitors.

The ease of use of these devices can result in their widespread application by the general public, municipalities, or private institutions as well as air quality experts. However, because of the multitude of these sensors on the market and the lack of information available on their performance, there is some concern among researchers and air agencies in their ability to inform citizens sufficiently on the benefits, limitations, and interpretation of data coming from these devices that are not part of routine agency monitoring. There is an urgent need to fill that gap so that availability of these devices is seen as a welcoming step toward informing citizens, not the opposite.

Anda Ray

A variety of air quality applications of microsensors are currently being evaluated. Researchers are testing them for performance characteristics compared to traditional monitoring devices, and deploying them in the real world to determine the scientific questions these devices can help answer.

One common desired application for microsensors is to create low-cost air quality monitoring networks for regions in the developing world that cannot afford more complex devices. Microsensors are also being used frequently for educational and citizen science opportunities.

This low cost, portability, and ease of use is merging with the ever-growing connectivity of devices to the internet and sophistication of social media for information sharing. This capability provides non-experts an opportunity to participate in assessments of air quality. The collection of environmental data through crowd-sourcing and the creation of public competitions to find creative ways to use or apply data (known as contest-sourcing) are gaining in importance.

As participation in citizen science programs increases, and more sensors are deployed to measure air and water quality, the public will have the opportunity to be directly involved with more environmental data than ever before.

The Electric Power Research Institute is engaged in a study to understand how social media can be used effectively by EPRI and utilities to collect and communicate environmental data and also determine if the data can be translated into useful environmental actions.

The goal of EPRI's research is to provide insights and technologies that enable more cost-effective ways to protect and enhance the environment for a sustainable future. These new devices and novel approaches to using them have the potential to disrupt traditional data-sourcing and scientific analysis. In the process, they will further expand the range of environmental initiatives performed by the private sector.

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investment decisions of the partners. Drawing on the co-regulators' collective knowledge and expertise, and combining and sharing resources wherever possible, the team members reduce costs for all parties, building services and tools once and then allowing all the co-regulators to use them. An added bonus is that we are also finding that jointly developed products and programs are of better quality and more effective than what any group could develop on its own.

E-Enterprise respects current delegations and operating agreements. It does not change the legal obligations of any party and uses existing mechanisms to implement improvement opportunities that would change those agreements. The co-regulators form teams to streamline and modernize processes and then bring information and other technologies to bear as appropriate to further increase efficiencies. Those technologies could include advanced monitoring tools and data collection and analysis techniques as means of enabling new approaches to environmental management.

Whatever the topic, the co-regulators use a business-case approach to embrace new management strategies, set priorities, and carry out E-Enterprise activities that specifically consider the user's perspective. Building on the Exchange Network's technical success, new IT-based systems are built from the outset to be seamless, secure, and to improve two-way business transactions between the regulated community and the co-regulators and among the co-regulators. In particular, the co-regulators want their disparate computer and other systems to work smoothly together for the benefit of all parties, including automating access to data by businesses, governments, and the public.

The principles and philosophy of E-Enterprise are now starting to play out in a wide range of projects and initiatives, some selected by the EELC and provided with limited funding for scoping and development purposes, and others that rely on existing funding mechanisms and are considered "aligned" projects. From its earliest days, the joint vision for E-Enterprise included the development of a two-way regulatory portal (a website) for the exchange of information between regulated parties and the public on the one hand and the co-regulators on the other. The E-Enterprise for the Environment Portal is being developed using an "agile" software development approach through which bite-sized pieces are built, tested, rolled out, and made available for public use as they are ready. This way the functionality and usefulness of the system increases with time, there is continuous learning, and pieces that do not work well can be fixed along the way. Among other things, the E-Enterprise Portal is expected to enable the environmental manager at a regulated facility to see a list and access copies of all the federal and state environmental permits held by the facility, to see a calendar that includes a running to-do list of permit renewals and other compliance-related activities, and to receive customized notifications identifying proposed rule changes that could be applicable to the facility. The E-Enterprise Portal's architecture has been developed jointly by EPA, state, and tribal experts to enable its interoperability with any co-regulator's websites or portals that may provide similar functionalities.

The broad vision of E-Enterprise is being further tested on five "scoping projects," selected by the EELC in 2014 from a list of more than 80 state and EPA proposals. All five were developed through joint scoping teams and subjected to a business-case analysis, and many included efforts to develop current and future process flow maps to identify where processes add value and where they can be streamlined to remove unnecessary or unproductive time or effort. Project teams have also done outreach to learn the perspectives and needs of the affected regulated community or other users. For example, based on input received from municipal officials, one of the projects, the Local Government Portal, will link to the E-Enterprise Portal, and make it easier for local government leaders to access important environmental compliance information for publicly owned facilities such as wastewater plants, including applicable regulations and sources of financial and technical assistance.

Another project is enabling inspectors using handheld devices to instantly determine whether a pesticide container is properly labeled; users and the public will also be able to access label information electronically. This capability will save inspectors countless hours of paperwork and improve the ability to quickly detect improper and unsafe uses. A third scoping project is establishing an electronically based framework for continuously monitoring, reporting, and presenting data about ambient water quality to help address impaired waters on a watershed basis. By incorporating recent advances in measurement technologies into existing databases, this project should reduce transaction costs for governments at all levels, and enable more cost-effective tailoring of control requirements and better assessments of the relative contributions of point and non-point sources to impairments.

A fourth scoping project involves consolidating four existing online air emissions reporting systems into a single system. This project reduces reporting burdens and makes compliance easier by eliminating the time and expense associated with making duplicative entries into multiple systems, while at the same time reducing from four to one the number of data collection systems that EPA must support for these purposes. The fifth scoping project will enable more widespread use of portable electronic devices to assist personnel in conducting field inspections. Acquisition and subsequent

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customization of a commercial, off-the-shelf software platform will support development of inspection checklists and reports appropriate to each regulated facility or location. What could have been a product to be used solely on EPA-led inspections will instead be available for potential use in the much larger universe of inspections conducted by all of the co-regulators nationwide every year.

As significant as these initial scoping projects are, the long-term value of E-Enterprise extends far beyond them. Ultimately, the success of E-Enterprise will turn on our ability to make its operating principles a routine part of the daily work of the co-regulators.

To advance this vision, EPA included specific language in each of its National Program Manager's guidance documents outlining the expectations for E-Enterprise considerations in the work of each program office. In addition, the agency's FY 2014-2018 Strategic Plan includes a cross-agency strategy for Launching a New Era of State, Tribal, Local, and International Partnerships. The accompanying annual Partnerships Action Plan directs EPA regional offices to work with their respective states to identify business-process improvement projects of state-level or regional interest, including projects that may be nationally scalable. States will be able to propose temporary workload tradeoffs so they can devote federally funded staff time and resources to these efforts.

E-Enterprise will come fully into its own when parties use its principles and governance mechanisms to take on even controversial processes, such as making water quality impairment decisions under the Clean Water Act's Total Maximum Daily Load program. States, EPA regional offices, and an increasing number of tribes participate in the TMDL process. The dialogue around listing brings communities and regions together, and the national data on impairments, listings, and delistings provide a point of reference for determining how closely we are fulfilling the fishable and swimmable goals of the CWA. As we find ways to use and share data more effectively, promote joint, transparent decisionmaking, and streamline the business processes for doing so, the entire national environmental protection enterprise will benefit.

E-Enterprise is an effort to make the "unusual" into the "usual." During the reauthorization of the Hazardous and Solid Waste Amendments in the 98th Congress in 1983-84, a lobbyist urged the Senate Environment and Public Works Committee to require that hazardous waste manifests be filed and processed using a computer-based system. The proposal was viewed at the time as being so unusual and potentially costly that it was not seriously considered by the committee, but Congress ultimately mandated a similar approach in 2012, and the e-Manifest system now being developed by EPA using an agile development process is an effort aligned with E-Enterprise. Looking back, it is fascinating to contemplate what would have happened if Congress had mandated a computer-based hazardous waste manifest system in 1984. Our collective job today, in the context of E-Enterprise, is to embrace new ideas, to dream no small dreams, and to seek to do "business as unusual."

The joint-governance nature of E-Enterprise should cause the public to have more confidence in how their governments operate and how agencies are working together and sharing resources. We have evolved to a more sophisticated and effective relationship in which the individual co-regulators recognize that by themselves they do not have all the answers, but together they have far more than they would on their own. Contrary to various theories that hold that political power in our federalist system should be either more heavily weighted toward the states, tribes, and territories or toward the federal government, there is actually a very productive middle ground in which co-regulators can work collaboratively and share power, resources, and capabilities to achieve the best outcomes. Like a marriage, it takes a lot of work to keep the relationship strong, but everyone is much happier as a result.

When William Ruckelshaus became the first administrator of EPA, he articulated three core values for the agency: Follow the law, follow the science, and be transparent. Those core values have subsequently been embraced by all of the co-regulators. Now a fourth shared core value has emerged: Be collaborative. In this ever-more complex, interconnected, and technologically interdependent world, the protection of the environment and public health requires collaboration among the environmental co-regulators as never before. In the last three years, E-Enterprise has taught the co-regulators that we are stronger and better by working together and by trusting and respecting each other and the different but complementary roles that we all have to play. Policy differences will always exist among federalist actors, but working together to find the best, most efficient and most effective ways to deliver environmental protection is in everyone's interest. Through E-Enterprise we are hard at work modernizing and streamlining the business of environmental protection, and those efforts are bringing us healthier communities, and a healthier economy and environment.

Collaborative federalism is taking hold. The E-Enterprise Era has arrived. **TEF**

The views expressed in this article are those of the authors and do not necessarily represent those of the E-Enterprise Leadership Council or the members thereof.

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