



## 50 Years After the First Earth Day, How Good Is U.S. Environmental Protection?

**E**arth Day 1970 was a watershed event in U.S. history. Along with many other countries, the United States acknowledged the need for environmental protection through a huge nationwide “teach-in” that turned schools and universities into platforms for a new kind of education addressing a new kind of issue. Millions of students across the country were inspired by the event, as were legislators in Washington, D.C., and many state capitals and town halls.

The result was a decade of environmental lawmaking unprecedented in scope and ambition, along with the creation of new institutions devoted to environmental protection, federal, state, and local. Those laws, many of them amended and reauthorized, have stood the test of time and are being used to confront new challenges only glimpsed at in 1970, such as climate change and biodiversity collapse, or the problems of persistent toxins and other dangerous chemicals.

The regulated community, as it became

known, largely responded to the new laws and implementing regulations. In most companies, compliance was a given. In many firms, it would emerge, compliance became a ground floor, as industry advanced a number of voluntary initiatives and the term corporate social responsibility gained currency.

The response by the private sector importantly included citizens, who prodded both government and industry to act and who acted themselves as stewards in countless ways large and small.

Along with the system of law, there arose today’s environmental profession, involving lawyers, scientists, engineers, economists, and others in achieving the goals of policymakers, many of these professionals in business and government or as counsel and consultants.

Fifty years on, it is a good time to be questioning whether this system is up to today’s challenges and how well it has done in addressing those problems that were clear to lawmakers in the 1970s.



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*Visiting Scholar*

ENVIRONMENTAL LAW INSTITUTE



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**Barry E. Hill**

*Adjunct Professor*

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*“Decarbonizing the global economy is the greatest challenge ever required of our species. The threat is both urgent in time and unprecedented in scale”*

**Rafe Pomerance**

*Senior Fellow*

WOODS HOLE RESEARCH CENTER



*“The major statutes were passed starting 50 years ago. It’s a tragic irony that these protections are being destroyed the same year that the world marks Earth Day’s 50th”*

**Kathleen Rogers**

*President*

EARTH DAY NETWORK



*“We need to be asking questions about science, metrics, scale, and collaborative management rather than dwelling on binary narratives of economy vs. environment”*

**Lynn Scarlett**

*Chief External Affairs Officer*

THE NATURE CONSERVANCY

## Let's See a Return to 1970's Commitment to Social Action

By Leslie Carothers

As a young lawyer in 1971, I sat in a room full of new hires hearing a tall guy with glasses who looked like Clark Kent welcome us to EPA and the adventure of enforcing new laws to clean up America's environment. We were lucky in our leaders. That was Bill Ruckelshaus, who was followed as EPA administrator by Russell Train. They set aggressive agendas of regulation and enforcement of new legislation to protect public health and natural resources. They took on the steel industry and the auto industry and big city pollution with gusto.

Over on Capitol Hill, led by politicians like Edmund Muskie, Gaylord Nelson, Robert Stafford, and John Chafee, senators from both parties, Congress heeded the Earth Day message from the public and established new requirements for action by states, cities, industry, and farming. Municipal sewage treatment plants needed massive upgrading; companies lacked effective if any air and water pollution controls; motor vehicles were creating smog and soot; and regulation of waste and wetlands was notoriously weak.

By the turn of the century, the quality of our environment was transformed. A powerful program of environmental regulation had been implemented by strengthened state agencies and the federal government. Companies were greatly reducing pollution through compliance, with increased management commitment to cleaning up and smart technical innovation by engineers.

As a government official and also as a lawyer in major manufacturing companies during this period, I will offer a personal perspective on how corporate performance has improved over the years and the prospects for similar progress on today's challenge

to reduce greenhouse gases to combat climate change.

In the 1970s, most U.S. companies with polluting production facilities saw the need for regulation, even as they groused about the timetables and costs. They expected the rules to be enforced, especially against their competitors. Today, constant reinforcement of management systems and operational procedures is essential to maintain legal compliance, but most major companies now also push their operations beyond compliance to reduce waste, energy use, and water consumption and set minimum standards for their supply chains. Some firms are even setting goals to cut greenhouse gas emissions by 80 percent or net zero by 2050, and many corporate executives advocate strong federal regulation and investment in new technology to foster improvement.

The greatest weakness in company performance then and now is the response to regulation of products and not factories. Adverse impacts or total bans on company products more directly hurt the bottom line. The history of regulating lead additives in gasoline, chemicals destroying the ozone layer, and endless reviews of chlorinated solvent risks has shown that manufacturers of problematic chemical products will often fight hard to prevent or delay their regulation. Cheating on vehicle emission standards by several prominent auto manufacturers is evidence that when rules require changes considered detrimental to product performance, some companies even break the law to defeat them.

Today the resistance of companies in the fossil fuel industry is the biggest obstacle to strong national action to reduce greenhouse gases. The industry takes justified pride in the economic and social progress supported by the energy products it provides. Huge investments in facilities and employees make it daunting to confront the scale and speed of change needed to shift to low and no carbon energy sources.

Companies based in Europe are

the ones most engaged in serious and transparent scenario planning. Many U.S. petroleum companies have aggressively lobbied against more stringent auto efficiency standards, now being scrapped by EPA despite general support from automakers, to keep selling even more gasoline. Meanwhile, the production and use of fossil fuels still generate the lion's share of non-carbon U.S. air pollution as well.

To be sure, some U.S. companies now support market mechanisms, notably a carbon tax. A well-constructed and firmly enforced national tax regime would be the best way to address electric utility and industrial greenhouse gas emissions. But a tax that starts too low and is not increased on an aggressive schedule will not do the job. Today's federal agencies could face significant industry pressures for a weak standard and insufficient oversight programs.

By contrast to the 1970s, today's leadership on the climate crisis is definitely not coming from Washington. The leaders are states, cities, companies, and non-profit institutions, many of them targets of federal enforcement 50 years ago! California and northeastern states have emission trading programs; cities and companies are setting stretch goals to increase renewable fuel use; universities and think tanks, including ELI and C2ES, are publishing detailed legal and policy options for public debate; and citizen campaigns are growing stronger, led by young Americans calling for urgency, equity, and action now.

This mobilization is heartening and sooner or later may compel Congress and the Executive to get back to work on the regulatory and research programs needed. A few more leaders like we had 50 years ago would make a big difference.

Former ELI president and board chair Leslie Carothers is a visiting scholar at ELI. She was EHS vice president at United Technologies, deputy administrator for Region 1 at EPA, and head of the Connecticut Department of Environmental Protection.

## Our System of Protections Is Failing Us

By David J. Hayes

**E**arth Day 1970 energized America to construct the system of environmental protection that is in place today. Fifty years later is a propitious time to issue a report card on how well the system is doing.

For a midterm grade, doled out at about the half-way point (let's say, 2000), I give the system a *B*. For my final grade, I can only give an *Incomplete*, with a stern warning that our environmental system is trending toward failure.

Some grade inflators will quibble with the midterm's *B* grade. After all, by 2000, the Clean Air Act, Clean Water Act, National Environmental Policy Act, Superfund, Resource Conservation and Recovery Act, and pesticide and chemical regulatory laws were all up and running. These laws appeared to cover the waterfront; their headliners (the air and water acts) embraced a federalism approach that delegated significant authority to the states; enforcers (mostly federal, with some state help) were on the job, and feared; and major companies (and their counselors) stressed their environmental credentials and were loath to diss the EPA.

So why the *B*? For one thing, by 2000, EPA was coasting, and a bit smug. The agency gave lip service to environmental justice concerns, but place-based issues have never been the nationally focused EPA's strength. Plus adequate protections for some pernicious pollutants, like deadly small particulates, were not in place.

What really dragged the overall grade for 2000 down, however, was the mixed environmental record between 1970 and 2000 in the natural

resources and energy arena. Pretty much everyone in EPA's orbit was oblivious to the environmental importance of these sectors. (Me, too, prior to 1997, when I became Interior Secretary Bruce Babbitt's counselor and, later, deputy secretary.)

We know now that the federal resource agencies, led by the Interior Department, the Agriculture Department, and the National Oceanic and Atmospheric Administration, are big-time environmental players with responsibilities over public lands, working landscapes, major water supplies, wildlife, fisheries, and cultural resources. But through much of the 1970s and 1980s, resource agencies run by Interior Secretary James Watt and his ilk were piling up low environmental grades.

Energy regulatory law — historically, an environmental backwater — also exerted downward grading pressure. By 2000, the Federal Energy Regulatory Commission had begun to open interstate electricity markets. But economics, and not the environment, ruled. Energy regulators, taking their cues from state-sanctioned monopoly utilities, protected incumbent fossil fuel suppliers over clean energy insurgents.

As we contemplate a final grade, however, a midterm *B* looks mighty good. We're going downhill, fast.

Our efforts to combat climate change, for example, are in deep trouble. After an Obama-era burst of ground-breaking, EPA-led climate regulatory activity, the Trump administration has reversed course and is seeking to deconstruct EPA's emissions restrictions on the coal, oil and gas, and automobile sectors. Meanwhile, resource agencies' fledgling efforts to measure and sequester carbon on public and working landscapes have largely dried up, as have their scientific efforts to help communities cope with new climate realities.

The energy regulatory system also is standing in the way of climate progress. A remarkable state-led

swing toward clean energy and net-zero carbon goals — spot-on, systemic answers to the climate emergency — is being stymied by an outmoded system of energy laws and institutions (including FERC and state public utilities commissions) that lean against competition, climate concerns (including a recognition of carbon's true costs), and toward fossil fuel incumbents and the status quo.

But the bleak climate picture is made worse by the current administration's simultaneous attacks on long-standing environmental norms and laws. Vigorous enforcement of environmental laws has evaporated; Clean Water Act jurisdiction is being radically cut back; large swaths of sensitive lands and offshore waters are being sacrificed, needlessly, for oil and gas drilling; and so much more.

So, at a time when we should be celebrating our 50th Earth Day, our nation's overall environmental record merits only an *Incomplete*, and borders on failure. Our system of environmental law must move beyond an end-of-pipe, industrial-pollution mindset and embrace the type of systemic change needed to address climate change and foster sustainability in the 21st century — in our energy and transportation systems, and on our landscapes. But first, we must support leaders who reaffirm our environmental values, and are willing to break some eggs to transition to a clean energy economy. Otherwise, we are headed toward an environmental crack-up.

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## We Still Need State Environmental Justice Initiatives

By Barry E. Hill

The environmental movement and the civil rights movement were powerful in the 1960s. These public upwellings sought comprehensive laws to control the behaviors of the respective regulated communities. Earth Day 1970 brought exposure to these ongoing concerns.

In that regard, on January 1, 1970, President Nixon signed the National Environmental Policy Act, launching the Environmental Law Decade. Eleven months later, the Environmental Protection Agency was established to consolidate the research, monitoring, standard-setting, and enforcement activities needed to ensure the protection of human health and the environment.

Moreover, Congress enacted the majority of the nation's environmental laws during this period, concerned primarily with pollutants in the air, surface water, and groundwater and solid waste disposal. Finally, in its wisdom, Congress introduced citizen enforcement suits as part of every major environmental law. In response, legal advocacy groups such as the Natural Resources Defense Council, the Sierra Club Legal Defense Fund (now Earthjustice), and the Environmental Defense Fund began to file lawsuits to force EPA to efficiently and effectively enforce the new laws.

This period could be characterized as the decade of Legislative Environmentalism at its zenith, since most of the major environmental laws were either enacted or significantly amended between 1970 and 1980, with subsequent amendments enacted in the decades since.

The environmental and civil rights movements gave birth, in many respects, to the environmental justice movement, since the environmental

laws and their implementing regulations did not work well for all communities. As independent studies beginning in the early 1980s up until today have consistently concluded, minority and/or low-income neighborhoods are disproportionately exposed to environmental risks when compared to other communities.

Thus, although all those laws and regulations are well-intentioned and comprehensive, they all fail to include a fundamental pillar: a self-executing constitutional right to clean air, clean land, and clean water for all individuals, in the form of an environmental rights amendment.

Already there exists in several state constitutions, placed in the bill of rights section, a mandate that each person, regardless of race, color, national origin, or income, has an inalienable right to clean air, clean land, and clean water that is enforceable by state courts. These "green amendments" provide a mechanism to imbed environmental justice for all as a substantive obligation of government, not merely an aspirational goal.

This era of Environmental Constitutionalism, which coincided with the Environmental Law Decade, has produced environmental rights amendments in a number of states. Such amendments now exist in Illinois (1970); Pennsylvania (1971); Montana (1972); Massachusetts (1972); Hawaii (1978); and Rhode Island (1987). They serve as models for Environmental Constitutionalism across the United States.

Let's briefly examine the state of New York as a "laboratory of democracy," to use Justice Brandeis's famous term. New York has an impending vote on a self-executing environmental rights amendment that states, "Each person shall have a right to clean air and water, and a healthful environment." Article I, Section 19, will be in the bill of rights section, together with the right to freedom of worship; the right to freedom of speech and press; as well as the right to equal protection of the laws. The

ERA will be put before the voters via a 2021 referendum.

Already this year, New York has added a new Article 48 to its Environmental Conservation Law. The new article declares that it is now state policy that "all people, regardless of race, color, religion, national origin or income, have a right to fair treatment and meaningful involvement in the development, implementation and enforcement of laws, regulations and policies that affect the quality of the environment."

Moreover, it is now state policy that "no group of people, including a racial, ethnic, or socioeconomic group of people, should be disproportionately exposed to pollution or bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, or commercial operations, or the execution of federal, state, local, and tribal programs and policies."

Finally, the law declares that it is now state policy that "no group of people, including a racial, ethnic, or socioeconomic group, should suffer from inequitable allocation of public resources or financial assistance for environmental protection and stewardship, including environmental remediation, pollution prevention, open space acquisition and/or other protection and stewardship activities."

In sum, read together, environmental justice policy will be embedded into New York's ERA, and already is so in much state law.

If environmental justice is to be secured for all communities, there must be a concerted effort to amend state constitutions to include the environmental rights of individual citizens and to enact strong environmental justice legislation. Otherwise, overburdened communities will continue to be exposed disproportionately to environmental harms and risks.

Barry E. Hill, adjunct professor at Vermont Law School, headed EPA's Office of Environmental Justice from 1998 to 2007.

## Will We Be Celebrating Earth Day in 2070?

By Rafe Pomerance

The 50th anniversary of Earth Day requires us to look back and examine what has — and has not — been accomplished. But as we evaluate the past, an existential question arises about the future: will there be a 100th anniversary of Earth Day, or will the planet be so hot that chaos, suffering, and extinction are sufficiently extreme that Earth Day 100 becomes pointless?

The brilliance of the first Earth Day is apparent even today. That moment in history saw the environmental question as planetary. The label Earth Day has only grown in significance. We now know that *Homo sapiens* is taking the planet's climate system into a period of accelerating warming, a world that our species has never known.

We must use the 50th anniversary of Earth Day to build a response that reflects the risks of a rapidly warming planet.

Two critical characteristics of the crisis are apparent: that it is multigenerational in nature and that the scale of the response is unprecedented. The impacts of climate change will last for centuries. Decarbonizing the global economy is the greatest challenge ever required of our species. The threat is both urgent in time and unprecedented in scale. To respond, we need a politics of the third millennium.

Fifty years ago it was short-term, obvious threats that dominated. Air and water pollution and the conservation of wild places generated headlines. Today, Australians are running for their lives to escape the worst wildfires in memory, with record drought

and heat. The sea level is rising, starting to flood coastal cities, hurricanes are intensifying, coral reefs are dying across the planet, the Arctic is unravelling.

After the first Earth Day, the transition from the local to global perspective reached a critical moment. Ozone depletion and global warming had both been slowly making their way into the media. But two events changed perspectives. First was the observation of the ozone hole over Antarctica in 1986 followed by a NASA mission to pinpoint the causes. Second was the congressional testimony by scientist James Hansen in 1988 in which he stated that the global temperature record is outside of natural variability and thus the predicted warming is now observable.

In the years following the first Earth Day, the United States undertook a massive and very successful cleanup. The nation built first-rate institutions at the federal, state, and local levels. The Congress on a bipartisan basis passed impressive statutes. For the most part the executive branch appointed capable administrators to implement them.

Most of these accomplishments have been untouchable until now. The benefits to the American people of cleaner air and water have been huge. The effort has represented a triumph of legislation, institution building, the participation of the courts, the involvement of nongovernmental organizations, and much more.

The Trump administration, however, continues to take down the entire array of elements that led to such improvement in the quality of life for all Americans. Given more time, what will be left of the institutional leadership and scientific expertise we as a nation have built is an open question.

Several factors have made possible these threats to our institutions and laws. Politics is number one. Unlike

in the 1970s, the Republican Party no longer supports environmental protection. There is barely a public whisper from the right on an issue where the GOP once was part of the solution. Corporate campaign money is a big factor. And for moderates there is the fear of a primary, which is part of the reason for political extremism. Incumbents are frozen in fear and the center part of the party is barely alive.

This is a serious problem for maintaining institutions and enforcing the law, much less fostering new congressional action to address global warming and other emerging threats. The lack of a bipartisan basis for dealing with climate change at this point is a fundamental risk to all of humanity. Whereas the United States once led global efforts, today it is an anchor stalling needed progress.

The need for bipartisan approach is central to success, due to the scale and urgency of the challenge. The main example here is the need for a substantial tax on carbon to generate emission reduction across the board. However, a new tax is simply not possible unless supported by both parties.

How can the United States maintain progress at global negotiations unless the executive branch has the authority to meet whatever reduction targets are agreed upon? The partisan gap must be closed so that continued global negotiations in which the United States participates can be truly successful.

We now know we are global actors and we are creating greater and greater risk for generations to come. Earth Day 2020 reminds us we need to be framing our work for the centuries ahead.

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## Fifty Years Later, We Are Again at an Inflection Point

By Kathleen Rogers

When the oldest environmental law in the country is under attack, nothing is safe. We kicked off 2020 with a proposal from the Trump administration that would gut the National Environmental Policy Act, often called “the mother of all environmental laws.” This proposal made clear that, even after decades of success, the strongest environmental laws are not safe from the whims of powerful, reckless individuals and industries.

The new age of deregulation has spelled disaster for many environmental laws and the species and habitats that depend upon them. The Trump administration has actively sought to destroy the environment with its legal attacks. The White House’s actions highlight the tumultuous push and pull of environmental legislation and thus a glaring weakness: With each new administration, regulations can be easily changed, weakened, or reversed. It often seems that for every two steps we take forward, we need only to wait for the next administration to take a step back.

Today, we have the benefit of hindsight to evaluate what works, and what we can improve, in using the legal system to protect our environment. Fifty years ago, when President Nixon signed NEPA, the legislation laid the groundwork for other historic acts to follow, including the establishment of the Environmental Protection Agency and passage of the Clean Air Act, Clean Water Act, and the Endangered Species Act.

But these statutes, as we’ve seen, are only as strong as their enforcers. EPA, once a bastion of environmen-

tal protection, has been flipped upside down, leaving so many historic environmental laws at risk of losing their teeth.

Fortunately, we all have the power to do something when environmental laws come under attack. States, municipalities, and NGOs can respond to changes by filing lawsuits to block anti-environmental actions. With the right combination of public demand, congressional leadership, and bipartisan support, effective environmental laws and their implementing regulations can still be made and maintained.

Environmental law, however, is also dependent on what happens outside the courtroom. Environmental policy is most effective when it seizes a moment that demands action — like the Santa Barbara oil spill in 1969. And when this urgent moment is met by a mobilized base, the results can be remarkable.

How do we know? We saw it happen in 1970 with the first Earth Day.

It’s no coincidence that the first Earth Day aligned with the cascade of environmental legislation in the early 1970s. The day mobilized 20 million people — 10 percent of the U.S. population at the time — who demanded a new way forward. People had had enough of corporations dumping pollutants into the environment. The resulting wave of protests around the country forced politicians to listen. Environmental legislation, therefore, also relies heavily on society’s demand for action. Without a clear signal from constituents, legislatures have little political incentive to act.

Fifty years after Earth Day helped launch the modern environmental movement, we are again at an inflection point. What we do in the next decade could be the difference between life and death for millions of species — including humans.

We’ve had many successes in environmental legislation in the last

half century. But those successes can be easily unraveled, regardless of historical precedent. It’s not just the recent attacks on NEPA — it’s the rollbacks on methane leak regulations, car standards, and drinking water rules, as well as the approval of poisonous pesticides that kill species and pollute waterways.

Today, more than ever before, we need strong environmental protections. As the planet warms, we’re no longer dealing with just regional problems of water or air pollution. We’re dealing with global problems that require global solutions. And at the very moment we should be stiffening regulations to battle climate change, we’re loosening them.

Recent rollbacks encourage the ignorance-is-bliss mindset that governments have embraced for the last century: It’s easier to push off problems than deal with them. It’s the mindset that has gotten us into our current climate crisis.

The major statutes were passed starting 50 years ago. It’s a tragic irony that these protections are being destroyed the same year that the world marks Earth Day’s 50th anniversary. In the face of political complacency, we’re calling for the people to rise up and demand action this April 22. To change our trajectory, we need bold legislation.

While past generations have had the convenience of pushing these problems into the future, we have no more time to waste — as droughts, wildfires, floods, and hurricanes increase in frequency and intensity, we stand to lose everything if we do nothing.

As we did 50 years ago, it is time to take to the streets on Earth Day — April 22, 2020 — and tell world leaders enough is enough.

Kathleen Rogers is president of Earth Day Network. She has worked for over 20 years as an environmental attorney and advocate, focusing on international and domestic environmental public policy and law.

## Mixed Results, but a Basis for Success on the Big Issues

By Lynn Scarlett

As I have watched the ebbs and flows of environmental discourse, many story lines are not new: the environment versus the economy; command and control versus markets; or federal versus state action. I now see sharper edges and shifting dynamics but also opportunities for enhancing actions to benefit communities, economies, and nature.

Americans overwhelmingly support environmental goals. These sentiments translate into collaborative conservation at many scales with diverse participants. Also on the plus side, the legal infrastructure of protection remains largely operational.

But there are troubling divides — for example, on climate change — that impede action. Public spending constraints are acute. And challenges persist with the regulatory backdrop.

Implementation of the environmental laws presents mixed verdicts. Some laws, in their implementation, have rough edges that antagonize states, communities, and landowners; or, at the other end of the spectrum, insufficiently address significant challenges. Bedrock statutes face mixed assessments — they are too lenient or too punitive; too comprehensive or too piecemeal; too prescriptive or too imprecise; too top-down or too bottom-up.

Across diverse environmental issues and these competing assessments, policy battles center on four questions. First is the information challenge — how best to generate and use relevant information. This quest is rendered difficult within complex, dynamic contexts where harms are cumulative, responsibility is diffuse, or the time between cause and effects is long. The second question is how best to motivate better environmental

performance — the “stick or carrot” debate. Third, debate centers on how to address harms imposed by some on others. Finally, much discourse centers on how to coordinate action across jurisdictional boundaries and competing values.

These are not the questions generally summarized by competing policy camps. But attempts to answer them lie, I believe, at the core of much environmental debate.

Our nation’s environmental laws and regulations advance important public values. But no law — or its implementation — is perfect. We face legitimate questions about how to strengthen public participation and better incorporate science into decisions, or how to determine — for clean air, clean water, and more — how clean is clean enough. What rules can foster innovation and inspire a nation of stewards? How might we achieve integrated decisions that nurture thriving communities and healthy lands at large scales? These are honest questions about effectiveness, fairness, empowerment, and more. Our challenge is how to hold thoughtful conversations about them.

Despite some limitations, our basic statutes embody many essential building blocks. Consider the National Environmental Policy Act. NEPA requires review of federal actions for environmental impacts and assessment of management alternatives to improve results. Is NEPA ideal? No — it is sometimes cumbersome. Sometimes analyses overlook important impacts. But in its basic framing, it establishes the architecture for agency collaboration and public participation in evaluating federal actions.

Yet achieving robust participation has been a rocky journey. Its critics have pointed to missed opportunities and, sometimes, an emphasis on procedural fidelity rather than meaningful engagement. At the other end of the spectrum, critics see a procedural morass standing in the way of siting important infrastructure.

Then there is the Endangered Spe-

cies Act, a source of long-standing controversy — do burdens of protecting species disproportionately fall on landowners? Has implementation of the act prompted an orientation to do only what is necessary to avoid “take” of species?

Much has been written about that orientation. But this alarm has been coupled with a growing awareness that the planet’s web of living things is critical to sustaining soils, clean water, and clean air — essential foundations of human well-being. These insights have implications for the scale of environmental action.

Challenges of scale are increasing. Fire, water, climate impacts all present management requirements that extend beyond ownership patterns. How, then, can we coordinate action across jurisdictional boundaries? Our statutes did not anticipate this need, instead setting forth decisionmaking silos for air, water, waste, and individual species by separate agencies and bounded scales of action.

But the statutes give latitude for enhancing coordination. This is what the Clinton administration strived for through watershed management, the George W. Bush era sought through cooperative conservation, and the Obama administration advanced through Landscape Conservation Cooperatives.

We need to be asking questions about science, metrics, scale, and collaborative management rather than dwelling on binary narratives of economy vs. environment. Such narratives stand in the way of diagnosing problems and advancing shared solutions.

I am troubled at the tenor of the times — narratives of conflict and devaluation of careful thought tied to observations. But I am optimistic at continuing collaborative conservation and the power of science to help us understand what we might do as stewards of the planet.

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