


Endangering the Health of All: Destroying a Half Century of Health Leadership Along With America's Environment

 See also the *AJPH* Environmental Health Workforce & Regulation section, pp. 284–298.

We are saddened to witness the recent erosion of US international leadership in environmental health. Yale University's environmental performance index rates countries across a range of environmental health programs. In 2018, the United States ranked 27th out of 180 countries (<https://bit.ly/36ip7F0>). Controlling for the strong relationship between wealth and environmental programs, the United States now ranks last compared with its affluent peers in Western Europe, Asia/Pacific, and Canada. While the United States ranks high in those areas addressed from the 1970s—for example, air quality, water, and sanitation—it ranks poorly with regard to climate change and other new challenges.

A 50-YEAR RECORD

The 1969 National Environmental Policy Act (NEPA), signed on January 1, 1970, signaled Americans that the nation was creating an environmental ethic. NEPA required an environmental impact statement for significant federal government projects and

for projects that required federal licenses, permits, and funding. NEPA has served as a model for more than 100 countries and perhaps is the most emulated US law. Also during the 1970s and early 1980s, the US government passed other major laws that established the United States as the international champion of environmental health.

Both Democrats and Republicans pressed forward with an ambitious agenda in the face of visibly deteriorating environmental quality and landmark disasters such as the 1969 fire on the Cuyahoga River.^{1–3} Various federal laws established the Environmental Protection Agency (EPA) as the centerpiece of environmental protection, but there were other key players. The Department of Energy, Department of Defense, and Department of Transportation, as well as the Occupational Safety and Health Administration and other federal departments and agencies, developed environmental agendas and received budgets to respond to environmental health challenges.

Congress demanded a governance process grounded in research

to support rules and regulations and embedded science into the enabling laws for the EPA and other agencies, such as the Clean Air Act (CAA). In some instances, it required robust external scientific advisory processes to ensure the quality of science underlying environmental regulations, as with the CAA and the Clean Air Scientific Advisory Committee (CASAC). EPA and other agencies built strong research programs to support their actions, and consequently each state did not need its own large science staff.

America's improvements to the environment in the past 50 years have afforded health for humans and other species and are admired globally. During the period from 1976 to 1980, the first systematic monitoring of blood lead levels found that 88% of US children aged one to five years had blood lead levels of 10 micrograms per deciliter or

higher. By 2007 to 2010, that percentage was down to 0.8%. Generations of children have thereby received the gift of higher intelligence and less nerve damage. Lung function in children has improved, especially in the most air-polluted areas, because of air-protection laws. Rivers that were cesspools and toxic sinks have become swimmable, increasingly fishable, and usable for nearby walking and biking trails. Dozens of pesticides in many products and mixtures found to be seriously toxic across species have been phased out or have had usage amounts dramatically reduced. Virtually all of these improvements grew out of well-balanced and rigorous scientific assessments, though often the ensuing environmental regulations were opposed by economic interests that marshalled powerful political allies. Over time, these actions have made air, water, and food safer and healthier.

We do not assert that the process of leadership by the national government on the environment was smooth over the last half century. Much of the environmental legislation has been challenged legally and politically as too expensive, as leading to

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unfunded mandates, and as taking power from states. Senior EPA staff found that budget allocations were not well matched to risk-related priorities.^{4,5} However, the federal government responded to new challenges, such as lead paint and leaded gasoline, asbestos, and environmental justice, and provided leadership in calling for the Intergovernmental Panel on Climate Change, the United Nations' climate change science research, to be separated from the United Nations' political processes. On balance, the governance process worked and moved forward a progressive national agenda that has had international implications.

THE ONGOING ROLL BACK

Recent actions affecting the pathways by which science is incorporated into EPA's regulations have reversed more than four decades of congressional and agency actions. Changing selection processes have led to a replacement on advisory committees of academic scientists with industry consultants.⁶ In a recent irrational twist, an academic scientist who receives funding from EPA through a competitive peer-reviewed process, therefore presumably among the most knowledgeable on the subject, is precluded from providing advice to EPA because of an alleged conflict of interest. Yet, the door has been opened for industry scientists to participate without concern for conflict of interest.

Two congressionally mandated committees—the CASAC, which provides specific recommendations concerning the standards for major outdoor pollutants such as ozone and particulate matter,

and the EPA Science Advisory Board (SAB), which is chartered to provide broad input on EPA scientific issues—have been egregiously affected. The usual internal processes for selecting CASAC members have been changed, and much of the key epidemiological evidence is being excluded. As mandated by Congress in the 1977 CAA Amendments, CASAC has seven members, one of whom must be from a state agency. However, for the first time, CASAC has three of its seven members from state agencies with all three reporting to Republican governors. In addition, the panel's pollutant-specific experts have long been brought in to supplement the charter members. The additional scientists brought on for the airborne particulate matter review were dismissed.

SAB's input has also been severely restricted. For example, it was not consulted on one of the most significant proposed actions of the current EPA leadership: requiring public release of the raw data from any study used as the basis for regulation, the so-called Transparency Rule, which we believe makes it more difficult to change air and water rules because epidemiological data are protected by confidentiality agreements and therefore can no longer be used. After receiving public input that stressed the Health Insurance Portability and Accountability Act (HIPAA) issues, the SAB was asked for advice to fix the HIPAA issue, in essence treating SAB as technicians to fix a faulty monitoring instrument rather than to give advice on the scientific implications. Particularly worrisome was that the SAB members were told at the last minute to send in individual comments rather than develop a

consensus report that would be more representative of the opinion of the scientific community.

IMPORTANT STEPS

It has taken a short time to weaken and in some cases tear down the international leadership position the United States has long held. Environmental and ecosystem health are at risk; continued attention is needed to the “legacy” issues, and we are ill-equipped to deal with the new challenges related to climate change, emerging infectious diseases, food security, and cascading and cumulative environmental health risks. The US public health community needs to deeply engage with the political process as individuals and to act as a strong professional voice in a vigorous effort to re-establish itself as a force guiding actions to curb environmental threats. It needs to engage the public broadly, particularly youths who face the future risks of these threats. We need to collectively work with progressive states and local governments to promote the programs that the federal government has backed away from and work with far-sighted businesses and nongovernment organizations to push for stronger, not weaker, environmental management. We also need to continue to be central players at the international level by writing, joining committees, and engaging with international colleagues and audiences on building science.⁷ Tragically, without action, environmental quality could go backward, and we need to slow the acceleration of climate-impacted outcomes and reverse the painful pace of environmental degradation. With future administrations, there may be

support for restoring what this administration has damaged. We need to be ready for that opportunity. **AJPH**

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CONFLICTS OF INTEREST

The authors declare no conflicts of interest.

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