Federal Environmental Policy: Progress and Prospects

Ten years ago, U.S. Senator Henry Jackson of Washington introduced a bill to establish a "national environmental policy" for the American nation. An amended version of that bill was eventually passed, with almost unanimous support, and signed into law by the President on New Year's Day of 1970--New Year's Day of what the President chose to call the "environmental decade" of the 1970s--New Year's Day of the decade in which, the President said, it was "literally now or never" to clean up the damage caused to the human environment by industrial civilization. The law was the National Environmental Policy Act: best known, perhaps, for its creation of "environmental impact statements," but also a broad and forceful declaration of congressional policy to maintain and enhance the quality of humans' natural environment.

We stand now, in 1979, in the final year of that decade. It seems worth taking stock, therefore, of what progress has been made in that decade and what priorities seem appropriate for the future.

THE POLICY AGENDA: THREE FRONTS

The environmental policy agenda of a decade ago included three major elements--three "fronts," as I called them at the time (Andrews, 1971). The first was pollution control. Air and water pollution had been concerns of the federal government since the 1950s, but existing policies were an ineffective patchwork of fragmented administration, rigid uniform standards, construction grants for municipal waste treatment facilities, and hopelessly cumbersome enforcement proceedings. Most ambient standards were to be set by the states; the federal government took only a modest research role in such problems as solid waste management and recycling, noise, and the discharge of toxic materials. In 1970, public concern was beginning to be aroused by problems such as the Santa Barbara channel oil spill, the burning of the Cuyahoga River, and the image of a "dying" Lake Erie.

The first front dealt primarily with the control of environmental pollution from private and nonfederal sources. The second, in contrast, concerned the adverse environmental impacts of major public actions. At least nine federal agencies had major engineering missions affecting the physical environment, and by the late 1960s conflicts were evident between these and other agencies whose missions were to preserve existing environmental conditions and amenities. Moreover, institutional mechanisms for coordinating and resolving such conflicts were inadequate. Such issues were not all new--antecedents included such celebrated controversies as the Hetch Hetchy Dam authorized for the valley adjacent to Yosemite in 1913, and the Echo Park Dam in Utah defeated by the Sierra Club in 1954--but by the late 1960s a broader and more effective public constituency mobilized to oppose large federally-sponsored environmental modification projects. The Storm King Mountain Pumped Storage project, Tocks Island Dam, Cross Florida Barge Canal, several highway projects, and nuclear power plants in general are examples of projects that generated opposition.

The principal policy instrument of the second front was the National Environmental Policy Act of 1969 (NEPA). NEPA stated a national environmental policy, established a series of procedural requirements to insure its implementation, and created a Council on Environmental Quality to oversee environmental

Richard N.L. Andrews is Associate Professor and Chairman, Resource Policy and Management Program, at the School of Natural Resources, the University of Michigan - Ann Arbor.

policy issues facing the nation. The most forceful clause of the law was its requirement of a detailed statement of environmental impacts to accompany every major federal action, which was in practice subject to review, comment, and litigation by other agencies as well as by interest groups and individuals.

Finally, the third front involved problems of resource conflict. It included a wide range of issues, such as wilderness and endangered species preservation, park and recreation planning, highway beautification, and land development controls. These issues were linked by their common conflict between market and nonmarket values of environmental resources. Various policies had been created--the Wilderness Act, Wild and Scenic Rivers Act, Water Resources Planning Act of 1965, Land and Water Conservation Act, and billboard control provisions, to name a few--but these were piecemeal actions, frequently ineffective and usually limited to a few uniquely valuable areas. Third-front policies recognized conflicting environmental values, and they added new authorities and programs. Like the policies of the first front, and of the second before NEPA, the policies of the third front failed to provide a coherent framework for focusing and resolving conflicts over the competing values of environmental resources

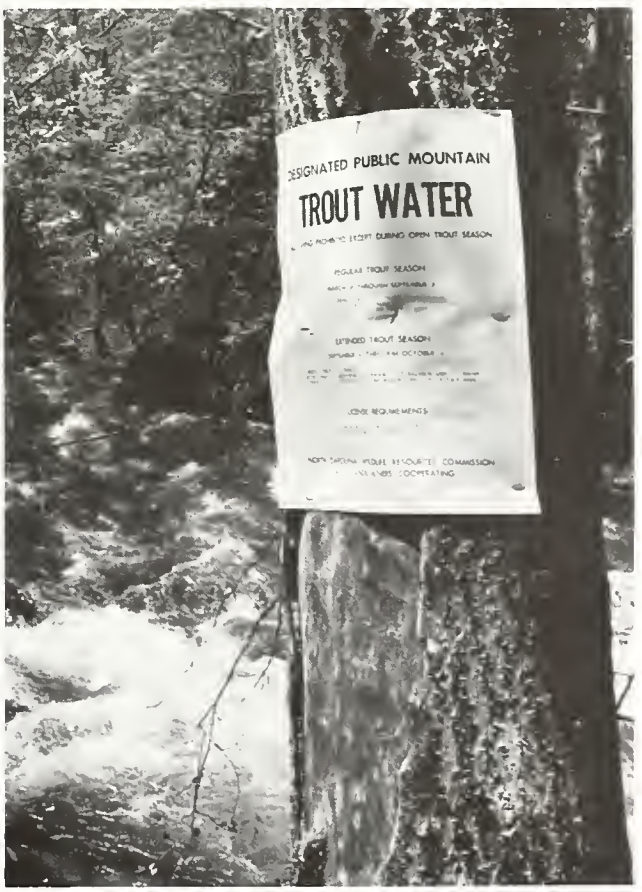
PROGRESS

How far have we come in the environmental decade since 1969? The record is voluminous in quantity but uneven in quality. Clearly, environmental policies of all sorts have become a major sector of the governmental agenda, whether measured by the number of laws and regulations, by the presence of administrative agencies and manpower, or simply by budget allocations. It was not the short-term fad many thought it to be at the time. It was instead a serious and lasting shift in the mixture of policy outputs Americans wanted from their government, and surveys have confirmed continuing public support of environmental quality programs (Mitchell, 1978). What those programs have actually achieved, however, is still less effective and more piecemeal than was hoped.

POLLUTION CONTROL

On the pollution front, progress includes dramatic increases in federal regulatory and budget authority, and reorganization of pollution control programs into a single Environmental Protection Agency (EPA). Federal "primary" standards for ambient air and drinking water quality, based on health criteria, now set a floor under state standards, but permit states to set more stringent standards. Environmental standards now extend to more pollutants than before: regulatory authority has been added, for instance, for toxic substances (the Toxic Substances Control Act), pesticides (the Federal Insecticide, Fungicide, and Rodenticide Act), and product noise; the Clean Air Act of 1970 and the Clean Water Act Amendments of 1972 authorize the EPA to require "best practicable" and "best available" technologies for pollution control; and a National Pollution Discharge Elimination System requires permits for all new point sources of water pollution discharge. Significant degradation of relatively unpolluted regions is now forbidden, and areawide water quality management plans are required in order to stimulate consideration of interjurisdictional problems and non-point water pollution sources. Funding also has been increased more than tenfold, at least in nominal terms;since 1972 the federal government has spent billions on municipal waste treatment plants alone, making the program one of the most expensive public-works construction efforts in American history. Federal grants are also available for planning and constructing solid waste resource recovery and recycling systems.

This apparent progress is mitigated, however, by several considerations both of effec-



Federal law now prohibits degradation of relatively pristine areas.

Photo N.C. Dept. of Nat. Res. and Comm. Dev.

tiveness and of cost. Some policies have been amended to stretch out compliance deadlines, including motor vehicle emission controls. Others have not been fully funded, leaving EPA without sufficient resources to enforce fully the policies on paper. Still others lack sufficient statutory authority for effective management: in some places, for instance, nonpoint sources are more significant sources of water pollution than point sources, yet agencies can only effectively control the point sources. Pesticide control laws, too, place the primary burden of proof on the agency to justify control or withdrawal rather than on the applicant to prove environmental safety before use. Even waste treatment construction grants have been accused of subsidizing increased pollution, of generating urban and industrial development rather than simply improving water quality.

The cost of pollution control has also become a media issue. Even though the total annual cost of pollution control is a small fraction of total GNP--less than five percent--EPA is now under heavy attack for the allegedly inflationary effects of its regulations. It is true, however, that present laws do not provide for some strategies that might be more cost-effective--such as control of nonpoint sources, and in some cases, perhaps, charges per unit of effluent discharged--and administrative barriers may prevent others, such as coordination of water quality management by EPA with water flow management by the Corps of Engineers and Soil Conservation Service. Some statutory objectives of pollution control policy may even be unreasonable in principle, such as the goal of "no discharge" of pollution by 1985.

In short, in the past decade pollution control has become a major governmental activity and has resulted in an extensive system of regulations and infrastructure. While it has almost certainly provided cleaner air and water than we would otherwise be experiencing, it has in no sense achieved the final cleanup the President seemed to envision in 1970. Pollution control is currently under serious counterattack for a mixture of real and imagined shortcomings. Additionally, new problems are even now being identified over which no effective social control exists, such as the indiscriminate dumping of hazardous wastes.

ENVIRONMENTAL IMPACTS

Environmental impact assessment has brought unprecedented progress to the analysis and

Non-point source pollution often results from agricultural activity.

Photo courtesy N.C. Department of Natural Resources and Community Development

review of government projects, permits, and grant decisions, though less for basic programmatic decisions. Within agencies, where information was once limited to feasibility and justification, information about environmental consequences is now routinely generated

"THE MOST SIGNIFICANT ENVIRONMENTAL PROBLEMS DO NOT USUALLY CONCERN ONLY INDIVIDUAL PROJECTS..."

as major action proposals are developed and evaluated. Outside the originating agency, through the required Environmental Impact Statement (EIS) review process, units of government at all levels now have a much earlier and fuller understanding of what each is proposing to do. In North Carolina, for instance, state officials reported as early as 1972 that EIS review gave them (for the first time) a early warning system for federal proposals that might affect state responsibilities (Hufschmidt, 1974). Outside the government structure, impact statements gave potential victims of proposed actions a new and powerful tool for discovering and debating the actions. Other powerful testimonies to impact statement value are that nearly half the states and numerous foreign nations have since adopted similar requirements, and that the impact statement concept has been emulated in other subject areas--inflation impact statements, minority impacts, national security impacts, and so on.

These achievements were not costless, and many criticisms of EISs have been expressed and debated. Some of these are that they are costly, gather too much data, don't affect many decisions, and encourage political stalemate rather than effective administration. These criticisms have been answered by proponents of the EIS process. First of all, long-term costs and data needs are integral to responsible planning, and in any case are far less than the cost of bad decisions. Second, while EISs explicitly modify only a small number of actions, many more actions are either stopped or modified earlier in their development under threat of EIS review. Finally, most would agree that democratic pluralism is worth some extra administrative cost.

Two larger deficiencies of the EIS process remain, however. The first is a failure to insure comparable assessment of major ongoing programs. The most significant environmental problems do not usually concern only individual projects, such as dams, highway links, or waste treatment permits, but also involve fundamental patterns of human activity driven by whole programs and production patterns. The EIS, keyed to specific action proposals, largely fails to touch these enduring programmatic forces; it may influence some decisions on new individual proposals but leave untouched the mandates that gave rise to them. The EIS process lends itself better, unfortunately, to reconsidering large but localized actions rather than those that are dispersed but collectively important.

Second, impact statement procedures have created a valuable procedural vehicle for disputing proposed actions, but have not provided a clear substantive vehicle for resolving such disputes (Andrews, 1976). An imbalance in information has been redressed, and an imbalance in political momentum altered somewhat; but a change in priorities, including such basic environmental policy areas as energy use and urbanization patterns, cannot easily be shown. Nowhere is this clearer than in foreign assistance, where the consequences of U.S. actions are far more critical to human well-being than are many domestic projects. Not until 1979 did the President finally affirm the applicability of NEPA's requirements in foreign assistance, and then only in a narrow definition that excludes socioeconomic implications.

In short, impact assessment has proven to be an unexpectedly effective innovation both as an administrative procedure and as a conceptual model for more responsible planning. Like pollution control, however, it too is under attack for allegedly contributing to inflation. It can also be trivialized, both by agencies substituting paper production for analysis and by groups using it tactically to fight small battles at the expense of more basic priorities.

RESOURCE CONFLICTS

Perhaps some of the most significant progress, albeit still in a fragmented pattern, has come on the third front. Efforts to pass a National Land Use Policy Act failed, as did similar state efforts, but many of its central principles have been enacted in other statutes. The Coastal Zone Management Act of 1972, for instance, provides incentives for state coastal land planning. Regulatory authority over pollution provided for in the Clean Air and Clean Water Acts gives powerful instruments to guide land use from a perspective of environmental impacts. Three broad new statutes, the Resources Planning Act, National Forest Management Act, and the Public Lands Policy and Management Act of 1976, guide the management of public domain lands. Fisheries management within 200 miles of the U.S. coast is provided by the Fisheries Conservation and Management Act of 1976; endangered wildlife and plants

Improper deforestation practices can lead to soil erosion and sedimentation problems.

Photo courtesy U.S. Forest Service

are protected by the Endangered Species Act of 1973 and the Marine Mammal Protection Act.

Laws by themselves do not, of course, guarantee implementation, and clearly the evidence is not yet in on the practical effectiveness of many of these policies. Moreover, problems equally serious or more so remain unaddressed; examples include overcommitment of western water supplies, groundwater drawdown, and the large-scale loss of agricultural lands and wetlands. The mere passage of these laws, however, signifies major progress in establishing explicit environmental protection policies. Additionally, the political dynamics surrounding the policies have shown the presence of an effective and persistent environmental protection constituency which has also achieved state-level victories. In 1976, for instance, Michigan voters passed a nonreturnable bottle ban by a two to one margin in spite of a multi-million dollar oppositional advertising campaign financed by the beverage container industry; in 1978, California voters approved a major water quality bond issue that appeared on the same ballot with the Proposition 13 tax cut initiative. Clearly, environmental quality is alive and well as a policy issue with the general public, despite propaganda to the contrary by some industries and agencies. There is, moreover, much yet that needs to be done.

PRIORITIES

In 1972,political scientist Anthony Downs asserted that political issues in America follow a predictable pattern. The issue rises suddenly to public attention and concern, declines as people begin to see the issue as conflicting with other values and goals, and finally comes to rest at a stable level of attention that is higher than the original level but far lower than its apex. Downs (1972) predicted that environmental issues would follow more or less the same cycle.

The "environmental decade" is now ending, and both its history and current events suggest that environmental policy has become a more persistent subject of public attention than was once expected by Downs and others. Some modification of early legislation has occurred, but hardly enough to suggest that support for environmental policy is fading. Even under intense lobbying, for instance, only minor weakening amendments have been passed to such laws as NEPA, the Clean Air and Clean Water Acts, and the Endangered Species Act. Furthermore, additional environmental legislation has been passed as recently as 1978 to expand the national park system, to tighten environmental controls on offshore oil drilling and strip mining, to promote energy conservation and solar energy development, and to triple federal funding for control of toxic substances (Environmental Study Conference, 1978). In the Executive Branch, too, both the Forest Service and the Bureau of Land Management are reviewing their lands for potential wilderness designations. The environmental decade may be ending, and some specific issues changing, but environmental policy continues both to attract a strong level of public attention and support and to grow and adapt in response to new priorities within the environmental policy domain.

Some of the immediate priorities for environmental policymaking are relatively predictable since many are already on the political agenda. The indiscriminate dumping of hazardous wastes has attracted increasing public concern, as it poses direct threats to human health as well as to other species; legislation to strengthen controls on these practices is scheduled for consideration in 1979. Preservation of wilderness, wildlife, and natural park lands in Alaska has been accomplished by Executive order, but this too is an issue for legislative action in 1979. Finally, the reauthorization of the Endangered Species Act is an issue as appropriation authorizations for the Act will expire early next year unless extended.

For the longer term, however, fundamentally important policy issues remain either inadequately resolved or in some cases unaddressed.

Some of these are at a global scale; as we in the United States worry about the price of gasoline, other nations are running out of such basic resources as food and firewood; and as deforestation progresses, it leads predictably

"WE CAN PREDICT THAT MAJOR ADJUSTMENTS IN MAN-ENVIRONMENT RELATIONS ARE LIKELY TO OCCUR."

to destruction of soil fertility, reduction of food crops, soil erosion and river sedimentation, and increasing human poverty and malnutrition (Eckholm, 1976). Within the United States, vast amounts of both money and legislation have been poured into the "energy crisis," but little effective change has yet occurred: the rate of increase of demand has slowed, and some increase in research and development on alternative fuels has occurred, but extraordinarily little planning has been done--even by planning researchers, let alone by government agencies--for dealing with the American environment in a future where fuels will be either economically or even physically scarce. We can predict that major adjustments in man-environment relations are likely to occur, some new, but others perhaps replicating problems we have faced in the past. These problems include water scarcities (especially in the arid west), accelerated harvesting of forests, perhaps soil losses in the plains and midwest, human hardship and perhaps changes in urban form and property values to minimize energy costs.

THE PLANNER'S ROLE

While specific issues may be speculative, the basic framework of environmental policy needs is now clear enough--barring a major war or other catastrophe--to permit far more energetic and imaginative response by planners than is now occurring. As Maynard Hufschmidt has noted,environmental quality is directly related not only to amenity and natural ecological values but also to economic growth and to public health and safety (Hufschmidt, 1971). It is imperative, therefore, that planners recognize and plan for these needs in relation to all their activities and communities. Most of the problems discussed in this article will directly concern professional planners for the foreseeable future. The sooner planners intensify their involvement with them, the greater their opportunity to plan for them rather than merely react to them.

REFERENCES

Andrews, Richard N.L. 1971. "Three Fronts of Federal Environmental Policy." *Journal of the American Institute of Planners* 37(4): 258-266.

Andrews, Richard N.L. 1976. "NEPA in Practice: Environmental Policy or Administrative Change?" *Environmental Law Reporter*, 6 (March):50001-09.

Downs, Anthony. 1972. "Up and Down with Ecology: The 'Issue-Attention' Cycle." *The Public Interest* 28:38-59.

Eckholm, Erik. 1976. *Losing Ground: Environmental Stress and World Food Prospects*. New York: W.W. Norton.

Environmental Study Conference Weekly Bulletin, U.S. Congress, October 13, 1978.

Hufschmidt, Maynard M. 1971. "Environmental Quality as a Policy and Planning Objective." *Journal of the American Institute of Planners* 37(4):231-242.

Hufschmidt, Maynard M. 1974. *Environmental Statements and Water Resource Planning in North Carolina*. Report No. 94. Raleigh, N.C.: Water Resources Research Institute of the University of North Carolina.

Mitchell, Robert. 1978. "The Public Speaks Again: A New Environmental Survey." *Resources* #60. Washington, D.C.: Resources for the Future. September-November.