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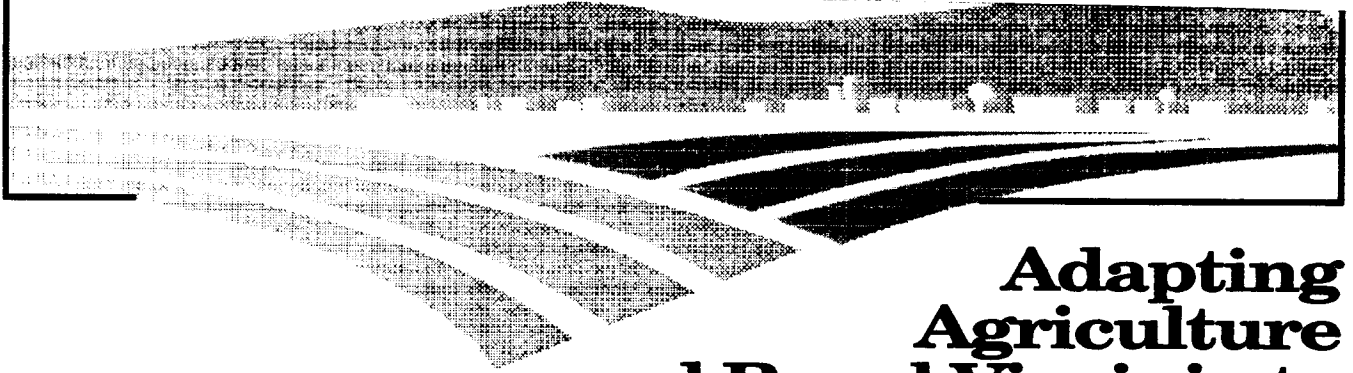
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REAP Policy Paper No. 1

Adapting Agriculture and Rural Virginia to Environmental Restraints

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From the Chesapeake Bay to the Blue Ridge, Virginia's rural communities and citizens are increasingly experiencing the effects of what many call the Environmental Era (Hays). This "era" has seen the rise in public awareness of a number of environmental issues, such as air and water pollution, waste disposal, land preservation, recreation, and amenities. While these issues have indicated a need for rural citizens to adapt to environmental restraints, new opportunities are presented by the society's decision to pursue environmental goals. The environmental issues are closely related to three broad areas of societal changes: changing values; changing economic realities; and changing politics. Rural Virginia's ability both to adapt to new restraints, and to take advantage of new opportunities, will depend on understanding these changes.

Changing Values

Attitudes in the United States toward the environment have changed dramatically: We have gone from "poisoning varmints" to reintroducing wolves, from "reclaiming wastelands" to protecting wetlands, from valuing natural areas for the resources they provide to valuing them as ends in themselves. The changes in attitudes are not transitory or even cyclical; rather, they are fundamental, deep, and permanent.

Over time, ecological concepts have been incorporated into popular perceptions. These perceptions have evolved to view the natural world as a "web-of-life," supporting animals and plants and essential to human health as well. Environmental protection has now be-

come a "consensual value"—a broadly held belief that is part of our nation's dominant public priorities (Rosenbaum).

As a result, the environmentalist's view is often the general public view. Environmentalists tend, for example, to be suspicious of traditional science and technology, which are seen as causing more problems than they solve (Douglas and Wildavsky). A similar suspicion of science and technology by the general public often is manifested as an aversion to environmental risks, particularly involuntary risks. This attitude has been seen recently in the public's response to the detection of low residues of agricultural chemicals in drinking water (Batie). At the same time, both environmentalists and the general public demand from science a better understanding of the linkages among the use of the environment, the functioning of the biological world, and human health (Hays).

Changing Economic Realities

Changing environmental values are closely related to changing economic realities. For example, until World War II, rural American countryside was land that nobody wanted: "The relocation of American agriculture created vast areas of countryside to which few wished to lay claim" (Hays, p. 137). This trend reversed after World War II, when Americans increasingly sought out rural lands for second homes, retirement, and recreational sites. In many rural areas, real estate values rose dramatically. At the same time, increased demands were being placed on rural areas for water development, siting of landfills or electrical power facili-

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ties, wetlands protection, or agricultural land preservation. "[T]wo sets of forces collided, exacerbating the drama of the struggle for control of land, air, and water beyond the city limits" (Hays, p. 139).

Meanwhile, employment in agriculture, mining, and manufacturing has been declining. The decline has caused rural residents to migrate either to larger trade-center communities or to metropolitan areas. These trends may accelerate as the economy becomes more service- and information-based, and as new technologies impact rural farms and firms.

External forces, such as federal legislation, can also change the local economy. The federal farm bill, for example, has been a type of "social contract" between society and farmers, designed to support and stabilize farm income, but the contract is now conditioned by demands that farmers be good stewards of the environment. While the 1985 farm bill primarily continued existing programs, it contained four historic environmental items—the sodbuster, swampbuster, conservation reserve, and conservation compliance provisions—that fundamentally reoriented agricultural policy. The 1990 farm bill added further initiatives in water quality protection, pesticide record-keeping, conservation easements for wetlands, and research in low-input farming alternatives.

The environmental provisions of the farm bills can affect both economic activity and farming decisions. For example, enrollment of acreage in the conservation reserve reduces farmer purchases of fertilizer and other inputs, and the effect can multiply detrimentally through a local economy. Meanwhile, farming and land-use decisions are constrained by the requirements a farmer must meet to partake in federal farm-benefit programs.

Many other federal laws, such as the Clean Air Act, the Safe Drinking Water Act, and the Surface Mine Reclamation Act, can also significantly affect rural economies and local decisions. The 1986 amendments to the Safe Drinking Water Act, for example, are expected to result in substantially greater costs for water in rural Virginia (Raflo). In addition, other environmental issues—global climate change, acid rain, and others—will probably stimulate more federal legislation with effects on rural communities and their economies.

Changing Politics

As with public values and economic realities, changes in politics are producing environmental restraints on rural decision-making. The most important political change is the upcoming reapportionment of Virginia's voting districts—state legislative districts in 1991, and Congressional districts in 1992. Allcott described the expected impact of the reapportionment:

The 1990 census...will move the political epicenter to Fairfax County. New district lines, drawn to accommodate the region's surging population, will give final, visible form to the most important trend in Virginia politics since Reconstruction: the shift in power from a rural to a suburban base.

Congressional and state legislative voting patterns indicate that representatives of more urban areas are far more inclined to vote "pro-environment" than are representatives of rural areas (Hays). Thus, the 1991-92 reapportionment in Virginia, resulting in more urban representatives, will probably increase the number of legislators who support environmental issues.

The impact of environmental issues on rural areas will also be affected by two other important political changes: 1) a shift of responsibility for environmental regulation from the federal government to the states; and 2) a secondary shift of responsibility from the state to local governments.

Over the last several decades, responsibilities shifted from the federal government to the states in many policy areas, including rural policy, farm policy, and environmental issues. When federal funds were readily available, as in the 1960s and 1970s, such a shift of responsibilities was challenging, but manageable, for the states. In the 1980s, however, the Reagan Administration shifted costs as well as responsibilities to state governments. States were, and are still, caught in a revenue bind: State and federal regulations, demands for services, and demands for environmental quality are increasing while federal funds are decreasing. There is no indication of any imminent change in this trend.

The shift of responsibility from the state to local governments can be seen in Virginia's responses to two major environmental issues. The first issue is Virginia's 1988 Chesapeake Bay Preservation Act, which obligated local governments to improve Bay quality. Local officials have had to find the management, technical expertise, and funds to control polluting land uses. State regulations established criteria for use by local governments in responding to requests to use and develop land in preservation areas. The historical local control of many land use decisions has thus been restrained by environmental objectives, and state or federal involvement will probably increase if voluntary actions do not improve Bay quality.

The second issue is the recent federal requirement that states develop solid waste management plans and achieve recycling goals. In response, the Virginia Department of Waste Management directed local areas to recycle 25 percent of their solid waste by 1995 (VWRRC[a]). However, some local officials believe the 25 percent goal is unattainable under current market conditions for recycled products. The Department of

Waste Management has modest funding to assist local governments, but the costs to local governments could greatly exceed these funds. Tom Taylor, Executive Director of the Mount Rogers Planning District Commission (PDC), has noted that, as of June 1991, the eight jurisdictions of the Mount Rogers PDC were collectively spending approximately \$150,000 to meet state requirements for solid waste plans, while receiving only \$10,000 in state assistance. Without adequate markets for recyclables, the recycling mandate may result in significant ongoing costs for local governments and taxpayers (Taylor).

When environmental restraints on public and private decisions increase, so does conflict. In resolving conflict, all participants will pursue the course that seems most favorable to their interests; generally that course involves an appeal to public power. The appeal could be to the courts, to local, state, or federal government, or to other institutions.

Environmental issues are intertwined in a complex way with these political institutions. As environmental disputes increase in rural areas, the skillful use of rural political institutions will continue and intensify. Consequently, rural governments will need more highly skilled, knowledgeable, politically astute professionals, as well as more money for conflict management.

Adapting to Environmental Restraints

What, then, do these trends mean for rural Virginians? Most importantly, they mean that the demand for improved environmental quality is a real and robust phenomenon to which Virginia citizens must, at a minimum, adapt. That is, at a minimum, environmental objectives will impose potentially costly restraints on development, extractive industries, farming, and waste disposal. Many local governments, particularly those representing small populations, lack the three things needed to respond adequately to environmental restraints: revenue; technical expertise; and conflict management expertise.

Revenue

Who will pay for improved environmental quality? Even if many costs are shifted to the user of the environment, such as the farmer or rural businessperson, costs of administration and enforcement of public policies still remain. Moreover, forcing the farmer or rural businessperson to bear the cost is not always appropriate. Many states, therefore, are experimenting with other ways to raise revenues for improved environmental quality.

One way is user fees, such as pesticide and fertilizer taxes. Iowa, for example, taxes pesticides and uses the

revenues for groundwater protection and management. In Virginia, the Underground Storage Tank Fund imposes a tax of one-fifth of a cent per gallon on motor fuels, with the money to be used to help underground tank owners meet federal financial responsibility requirements (VWRRRC[b]).

The state government can also look for better ways to assist local governments. Three types of state action seem promising: 1) replace property taxes lost when a local government protects a critical habitat area from development; 2) provide environmental payments to farmers for environment-enhancing activities; or 3) forgive property taxes on privately owned critical habitats, in return for the granting of a permanent conservation easement or for a life estate—that is, for eventual public ownership of the land after the death of the current owners. In these ways, the state would also be providing leadership in the pursuit of environmental goals.

Technical Expertise

Technical expertise is an increasingly valuable commodity. State agencies are providing technical assistance on environmental issues, but more is needed. Better use of networking is needed between officials responsible for implementing environmental policy. This networking need not stop at a state's borders, because many states are finding different ways to meet environmental goals. Organizations such as the National Governors' Association frequently provide information on state programs to other states facing similar issues.

Government officials can also make better use of the expertise found in academic institutions. There is generally poor integration between the needs of state and local governments and the information available at universities and colleges. The reasons are somewhat complex. Academics are rewarded for carefully tested, objective research results, which cannot always be provided in the time and form needed by officials. Academics tend to use scientific criteria to evaluate a policy; officials must also consider political, financial, and administrative criteria (Rosenbaum). Also, officials can be quite sensitive to criticism by academic experts, and may view critical comments from academic experts as threats to their programs and progress. For these reasons, flexibility and open-mindedness may be absent, and the result may be mutual dislike, distrust, and avoidance.

Despite these impediments, there *do exist* successful models of government interactions, academics willing to provide best guesses and policy-relevant assistance, and mechanisms to improve integration of expertise with governing decisions. The following passage provides several examples.

In California a Policy Seminar was established to

bring university professors and state officials together in order to forecast and find ways of coping with problems that loomed ahead on the state's policy agenda. In Iowa a Legislative Extended Assistance Group...was set up and enjoyed modest success in promoting research by faculty members as well as informed discussions with state legislators on a variety of problems the state faced. In Pennsylvania a Legislative Office for Research Liaison...began to play a leading role in finding faculty members who could help state policy-makers—particularly on scientific and technical issues. (Rourke)

Conflict Management Expertise

Throughout Virginia, many conflicts have been resolved when environmentalists and developers have met and discussed their interests. State and local government officials can look for similar ways to build coalitions and resolve conflicts. Two instructive models are the following: the Groundwater Protection Steering Committee, which has helped coordinate the groundwater protection strategies and activities of nine separate Virginia agencies; and the University of Virginia Center for Environmental Negotiation, which has assisted in many conflicts, including the successful passage of five Virginia General Assembly water-related bills in 1989.

Conclusion

In the 1990s, environmental objectives will become more important, especially within state and local government policy. Governments that recognize this trend

will be better able to develop the programs, research, funding, and expertise to meet the challenges and capitalize on the opportunities ahead. Adapting to new environmental realities is a difficult, but important, mission for rural Virginia; innovative and anticipatory thinking are the keys to accomplishing this mission.

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