

Farm and Forest: Which Way to Sustainability?

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Introduction

The 20th century in the United States has seen a growing and changing conservation movement responding to public demands that have dramatically changed how landowners are expected to treat and manage their private property. As the nation has changed from a rural to an urban society, from a land ethic dominated by the sense of empty frontiers to one dominated by a recognition of limited space and resources, and from a national government that did little to affect land management to one where involvement has become so intense that charges of political micro-management and procedural gridlock are increasingly heard, the compact between the public and private property owners has been significantly altered. As the search for sustainability continues, that compact will almost certainly continue to change, perhaps in revolutionary ways.

It is interesting to note, and perhaps instructive, that private landowners have not been affected in a similar manner during this past century. You could own about the same amount of land, live in the same community, operate under the same umbrella of general civil laws and go to the same church, but if the principal crop from your land was timber, the chances were that you dealt with a significantly different conservation program than if you ran a grain or dairy farm. There would be some institutional similarities and some agency overlap, but the differences probably outweighed the similarities. And, when it came to the state and local laws you operated under, the differences were even more significant.

If you are a farmer who has wheat or a steer to sell, you can load it in almost any kind of truck or trailer and, if you are lucky enough to have a market, haul your crop to sale. If your crop is a log, you can't put it on your farm truck and transport it legally in many states. That comes under a different law. If you harvest a crop of wheat or corn, you are free to use about any technique you wish, then handle the stubble or stover however you like. If you harvest trees in any of 38 states, you will come under one or more state law(s) that regulate how you will carry out that operation. In an increasing number of states, a "state forest practices act" will establish fairly comprehensive guidelines for you to follow.

As a result, we arrive at the dawn of the 21st century with two different institutional approaches to conservation, one for forests and one for farms. Driving both are a public demand for sustainable management — for operating today's forests and farms in ways that meet today's needs without compromising the ability of tomorrow's citizens to meet their own needs. And challenging both are changes in land ownership patterns and community structures that render many 20th century approaches to conservation programs increasingly obsolete and ineffective.

As we search for ways to meet these challenges, it may be instructive to take a moment and look back to see how and why these two programs developed in divergent ways over the past century — to see what that may illustrate in terms of ideas about where we go from here.

The Conservation Century Begins: 1900 –1930

In 1880, Congress created the USDA Division of Forestry to produce information about forests and the forest industry. In locating the program in USDA, Congress clearly viewed the federal role in forestry as an integral part of agriculture, not public land administration. In 1891, the first American to study forestry in Europe — Gifford Pinchot — joined the staff of the Vanderbilt estate near Asheville, North Carolina, to guide the creation of a working forest out of run-down, cut-over farms and forests that were in deplorable condition.¹

When Pinchot was named to head USDA's Division of Forestry in 1898, he wanted to change it from a "bureau of information" that produced reports into an active, on-the-land participant in forest management. The target was private lands, almost entirely in the hands of farm families. The challenge that drove Pinchot — and the emergent Forest Service — was to help those owners learn and implement better management on private forests. His annual reports listed the division's

accomplishments in terms of how many owners and acres they had assisted, and how the owners had responded with private investments to improve their own forests.

By the time the administration of the federal forest reserves was transferred to the Forest Service in 1905, almost a decade had gone into serving private forest owners. Their annual reports expressed concern about the possibility of a timber famine unless improved forest conservation and use could be achieved on those private lands. The modern Forest Service has become so entirely consumed by the management of the National Forests in recent decades that this early heritage is easy to overlook.

At the time, a fledgling U.S. industrial economy was being constructed mainly from wood and driven largely by wood energy. President Theodore Roosevelt told the 1905 American Forest Congress that: "If the present rate of forest destruction is allowed to continue, with nothing to offset it, a timber famine in the future is inevitable."² The idea of a "timber famine" may have been more of a rhetorical device than an economic reality, but the concern was real when wood was a mainstay in the nation's development. Pinchot's Forest Service worried about how to reach the private owners who were the key to future forest conditions and timber supplies. The Office of State and Private Cooperation was created in 1908 to focus the agency's efforts.

Some of the terms that we use today emerged as foresters tried to convince farmers that trees were not just an impediment to farming, but an economic opportunity of their own if managed properly. Today, we say "tree farm," "crop tree" and "timber harvest" without thinking what special meaning they portrayed when used by early foresters in an agricultural society.

One of the themes that emerged from Pinchot and his European-trained foresters, who had observed systems where government regulation was common, was the need for some form of federal regulation of private timber harvesting. From his Forest Service post, and for many years after he left the agency, Pinchot advocated direct federal regulation of private timber cutting — an idea that drew the intense opposition of the timber industry, private landowners and conservation organizations like the American Forestry Association. This battle, which resulted in several failed attempts in Congress to impose federal regulation of private forests, was a significant force in shaping the ultimate conservation program for forestry.

Meanwhile, the federal government was increasingly involved in cooperative programs with the states. Fire suppression programs, driven by the enormous 1910 fires in Idaho and Montana, brought federal, state and private forestry interests together to fight a common enemy. The National Association of State Foresters was created in 1920 to help states communicate more effectively between themselves, and between states and the federal government.

Although wildfire control was the primary concern, the cooperation between the federal government and the states also began to respond to the increasing calls for technical assistance to work directly with landowners in solving forestry problems. In addition to helping with forest management, this approach offered a good political response to calls for federal regulation. A more effective state and local role could do the task, it was argued, if national policymakers would give it a chance. NASF provided a framework for developing and communicating that cooperative effort.

The Clarke-McNary Act of 1924 expanded the federal-state cooperative effort in several ways, including new federal funds to state programs for educational assistance and technical advice to farm woodland owners. The expanded program showed many successes. Between 1926 and 1931, the number of farms employing improved forestry practices was reportedly tripled, and over 600,000 acres of farm forests received technical management assistance. But these accomplishments paled in comparison to the enormous amount of farms and forests needing assistance. One report estimated that the federal-state programs had improved the forestry practices on less than 1 percent of the farms in the United States.³

Meanwhile, on the farm front, federal action in soil and water conservation was limited. Hugh Hammond Bennett began to raise the alarm about the loss of topsoil under cultivation around 1905, but official response was slow in coming. The land grant universities were promoting some soil conservation ideas, but the effort was fairly limited and uneven across the country. It was not until 1928 that the department printed Bennett's warnings in the bulletin *Soil Erosion: A National Menace*.

And it wasn't until 1929 when Congress appropriated the first funds to do soil erosion studies.⁴ A nation that had begun worrying about the future of its forests now began to question the future of the most basic natural resource of all — its soil. But as the social and economic euphoria of the 20's gave way to the despair of the 30's, the worries compounded. Could the nation survive, environmentally or economically? The answers were far from clear as the storm clouds spread from Wall Street to the Great Plains and California, then blew east again, laden with the soil of the nation's breadbasket.

Reshaping the Institutional Map: 1930–1960

The 1930s brought enormous change to all of the conservation programs of the United States. The Great Depression and the drought that was turning the Great Plains into the Dust Bowl was taking its toll on forests as well. Enormous forest fires overwhelmed state fire fighting agencies that were depleted by budget crises spurred by the business and economic depression. The nation was full of jobless people, often fleeing damaged landscapes marked by eroding soils, ravaged timber and range lands, and dysfunctional watersheds.

In 1933, President Franklin D. Roosevelt called for a Civilian Conservation Corps that would put people to work immediately, planting trees, stopping gullies, fighting forest fires and building dams. Congress passed the law in 10 days, and the program was launched. Young men went to work for \$30 a month in salary plus board, room, uniforms and medical care. They lived in camps of around 200 men each, supervised by military officers. During the day, the work was supervised by a forester or engineer, usually from the Forest Service or the newly formed Soil Erosion Service.

And they made their mark on the land. In the nine years of CCC operation, some 3 million men were involved, for a total cost of some \$2.5 billion.⁵ They built 40,000 miles of telephone lines, 50,000 miles of roads and trails, and thousands of terraces, dams and reservoirs. They planted 1.25 billion trees and spent over 2 million man-days fighting fire. Many federal and state forests and parks still use roads, trails, buildings, dams and other facilities constructed by the CCC.

Also in 1933, the Department of the Interior created a "Division of Erosion," under the direction of Hugh Bennett. The division, known as the Soil Erosion Service, used WPA and CCC labor to install soil conservation practices on private farms in large demonstration projects. By 1934, the SES had established 41 demonstration projects and were involving about 50 CCC camps in the work.

In 1935, the Soil Erosion Service was transferred to USDA and renamed the Soil Conservation Service. Congress, in P.L. 46, declared that "the wastage of soil and moisture resources on farm, grazing and forest lands of the nation . . . is a menace to the national welfare . . ." Secretary Henry Wallace consolidated all soil erosion control work in the new agency, including the CCC camps previously operated on agricultural lands by the Forest Service. By 1936, the SCS was operating 141 demonstration projects and 450 CCC camps.

In another New Deal soil conservation program, Congress passed the Agricultural Adjustment Act in 1933 to provide financial support to struggling farmers. When the Supreme Court ruled the program invalid in 1936, Congress replaced it with the Soil Conservation and Domestic Allotment Act, which would meet the constitutional test by providing federal payments and cost-sharing on the basis that private landowners would replace crop acres with practices that would conserve soil and enhance productivity. The conservation practices that evolved under the program, long known as the Agricultural Conservation Program, included forestry practices such as tree planting, shelterbelts and windbreaks along with farm-related soil conservation measures such as terraces, waterways and range seedings. In a reflection of the development-oriented thinking of the times, the ACP also cost-shared in draining wetlands, chaining brushy rangeland and improving irrigation systems.

In 1937, USDA decided that demonstration projects, while proving that research-developed methods worked, would never reach all American lands, so a new outreach strategy was created. A "standard" state enabling act was drafted which would, if enacted by a state, create a local unit of special-purpose government called a soil conservation district. In sending the proposed act to the Governors, President Roosevelt indicated that, henceforth, all USDA assistance on soil and water conservation matters would be provided in cooperation with these local units. A USDA committee had recommended that soil conservation work be carried out through the state extension services, but Wallace rejected that idea on the grounds that there were inadequate control linkages between the

national policy and the land grant institutions (Morgan 1965).

The department also opened the door for increasing regulation of farm land use and activity with a clause in the standard enabling act that would allow the new districts to enact and enforce land use regulations under state authority. That clause, while avoiding the political bombshell of federal regulation, did not escape the anti-regulatory mood of rural America. Very few states retained the enabling clause and, in those that enacted it, the result was an almost-total lack of regulatory activity by the new districts. Those that tried it, even tentatively, usually abandoned it quickly in the face of intense local opposition.

The fact that Wallace walked a tightrope between the politically explosive issue of direct federal intervention in private land use and the need to carry out Congress' wishes with some direct control could not forestall controversy, however. Major opposition from State Extension Services and the American Farm Bureau Federation held up the formation of conservation districts in many states for decades, and almost resulted in Congressional action to transfer SCS administration to the Extension Service.⁶

In 1937, the Norris-BDoxey Farm Forestry Act gave USDA expanded authority to cost share with states to provide technical advice and service to farm woodland owners through farm forestry projects. By specifying that these projects should be done in cooperation with land-grant universities and state forestry agencies, this program set up additional interagency conflict, as it did not clearly define the roles and authorities of the universities in relation to the state agencies.

The controversies over program administration were heightened when, in 1938, Secretary Wallace assigned all farm forestry work under the Norris-BDoxey Act to the SCS, instead of to the Forest Service, as the state and federal foresters had anticipated. This was a program, Wallace thought, that was best integrated within the SCS concept of "coordinated farm planning," since it focused on woodlands as an integral element in farm management. But the state foresters and the Forest Service disagreed, with the state foresters particularly adamant about the need for any such project to be done under state, rather than federal, management.⁷ The Society of American Foresters weighed in on the issue as well, insisting that all forestry services should be delivered by professional foresters rather than farm planners trained in other disciplines, as a way to protect farmers from the "economic consequences of ill-planned and ill-applied practices."⁸ SAF made it clear that its opposition was not to SCS providing professional forestry services, but in using non-foresters who were not qualified.

In the face of that controversy, Secretary of Agriculture Claude Wickard transferred all farm forestry programs back to the Forest Service in 1945. In the view of historian Robert Morgan, the action postponed indefinitely "any likelihood that soil conservation districts would become multiple-purpose conservation units" as some had envisioned.⁹

In the midst of all this interagency jousting for position, World War II called for all-out production of both farm and forest products, and the wartime agencies, although their manpower was depleted by the war effort, responded. At the end of that conflict, thousands of young men came home to find jobs in the conservation agencies, and the nation turned once again to the development of a conservation program. This time, however, it was a program dominated by two new trends that would affect it for half a century: the rise of technology and the tenacity of agricultural surpluses.

The changes came fast and furious. As the big machines developed for fighting a war were turned to civilian usage, land that was formerly too densely wooded or too rough to farm was cleared and put into production. Wet areas were drained, rough land was leveled, channels were straightened, streams were dammed, brush patches eliminated. Farm fields got bigger and more uniform as the machines got better. Instead of "using each acre in accordance with its capability and treating it according to its needs," which had been Bennett's credo, American agriculture now was hell-bent to "farm every acre that would produce a profit."

On the forestry front, fire became less of a threat as parachutists, air tankers, helicopters and big bulldozers replaced men with shovels and mule trains. With more incentive to risk the long-term investment, large companies bought up thousands of acres of forest land, much of it cutover and worthless, and began to plant and manage forests for the long term.

One forest firefight that refused to die, however, was the battle over federal regulation. In a post-war study, the Forest Service found that the war effort had exhausted the nation's forests, which were being depleted at nearly 20 billion board feet per year. The reason, they concluded, was poor practices on private lands that could only be halted with federal regulation. The political alliance led by the American Forestry Association, the State Foresters and the forest products industry also recognized the problem, but called for more public aid to private forestry and regulations at the state, rather than federal, level. After the effort failed in Congress in 1949, feelings were bitter, and became a campaign issue for Dwight Eisenhower. In 1952, with Eisenhower's election, the federal effort to impose forest regulations was shelved, and the bitter feelings from the effort could begin to heal. (In an aside that may interest history buffs, Philip M. Glick, author of the original soil conservation district enabling legislation from his post in the USDA's Office of General Counsel, provided the author with his hand-annotated version of S. 1330, "The Forest Conservation Act of 1943," which he claimed to have drafted at the request of Forest Service Chief Ferdinand Silcox. This was, in all likelihood, the basis for the final thrust for federal regulation of private forest practices.)

Also, reaching accommodation were most of the battles surrounding the Soil Conservation Service. As time passed and people changed, the bitterness between many State Extension Services and SCS died down. Conservation districts were formed in almost every county in America, and the often-prickly relationship between the cost-sharing programs of Agricultural Stabilization and Conservation Service and the districts gradually improved. Competition was still strong, however, and reflected in such events as the 1956 passage of the Great Plains Conservation Act, where cost-sharing contracts were administered by SCS instead of ASCS, and the 1954 Small Watershed Program, to be administered by SCS in direct competition with the public works programs of the Corps of Engineers and the Bureau of Reclamation.

In retrospect, the period from 1930 to 1960 was one in which the nation's priorities were not seriously at issue. We would, it was agreed, overcome a Great Depression, win a war and develop natural resources. America was, one commentary noted, "unified behind a positive agenda that involved bulldozers and factories."¹⁰ Where we were far from unified, however, was in how these things should be accomplished. In a reflection of FDR's approach to public management, the nation created many different approaches, agencies and programs to fight it out among themselves as to who was best suited for the tasks at hand. What emerged was a constant turf battle, derided by some as wasteful and inefficient, and applauded by others who saw virtue in a competition which, like the private sector, rewarded the most effective and penalized those that fell behind in the competition for good ideas and workable approaches.

The Environmental Era: 1960–1985

The next quarter-century, from 1960 through 1985, saw the interagency battles begin to subside, as agencies and programs found their "niche" and began to work together more comfortably. Turf battles still flared up, but less frequently. Now, instead of battling over how to achieve our common national goals, we increasingly discovered that we had no common goals. In agriculture, we couldn't make up our mind whether we were more intent on cutting production or promoting resource conservation. While conservationists strove to protect or restore the long-term productivity of the land, economists looked at mounting farm surpluses and subsidy costs, and noted that the national policy made about as much sense as trying to drive by pushing on the accelerator and the brake simultaneously.¹¹

When Rachel Carson's *Silent Spring* aroused public opinion about the environmental dangers in the new technologies being used to develop natural resources and enhance output, the national thrust to settle, develop and manipulate every acre was called into question. And the environmental questions only got more difficult. The straight-channel stream alterations of SCS drew a firestorm of criticism, as did the wetland draining that had previously enjoyed such strong support. Instead of applauding the direct (and usually private) benefits of development-oriented efforts assisted by public programs and dollars, Americans were increasingly critical of the indirect (and often public) costs incurred as a result.

In the forests, the depletion of private forests in the war effort spurred state laws designed to encourage proper harvesting and reforestation techniques. From seed-tree laws to strict reforestation standards, states increasingly strove to see that forests were managed sustainably, rather than mined of valuable timber and abandoned. The forest products industry, seeking a long-term supply of

industrial wood for its factories, joined in encouraging good forest management through educational and technical assistance programs such as the American Tree Farm System. But those efforts were not enough to deflect criticism aimed at the clearcutting of public forests as those lands began to replace the timber supply which was regrowing, but not ready for harvest, on the private lands.

Concerns for adequate timber supplies and productive farmlands were being overshadowed by concerns over clean air and water, protection of endangered species, scenic vistas and safe food supplies. Technology and development were increasingly seen as the problem, not the solution, to dealing with our landscape. And it was not just in relation to natural resources that these public attitude shifts were being noted. It could be seen across most aspects of American life. As Strauss and Howe argue "Where we once unified behind a positive agenda that involved bulldozers and factories, we are now transformed into enervators who work to prevent the bulldozers and factories from hurting anybody or anything."¹²

The changing public values forced the conservation movement onto the defensive. Stung by the criticism that they were "anti-environmental," agencies and programs nonetheless found themselves opposing proposals for environmental action, not because of the goals sought, but because of the approaches being proposed. As the environmental political movement pressed for more federal regulation of private activity, the "pro" and "anti" forces on regulation found themselves once again at sword's point, but this time the public was more engaged and demanding. Opposing regulation increasingly sounded like opposition to good environmental practice, particularly when those charges were leveled as a political debating point.

On the farm front, regulation was still heavily opposed, and largely avoided. As the conservation program switched from a concern with retaining soil productivity through erosion reduction to attempts to reduce offsite environmental impacts through attention to water quality issues, the program approach was still one of education, assistance and incentives. Farmers were, it was argued, environmentalists at heart, needing only the information and capacity to provide the kind of land and water stewardship that the public increasingly expected.¹³

Forestry, on the other hand, carried no such cachet. Much of the private voice in the policy battles over forest issues was the voice of big industry, and many of the fights were about regulating the emissions from wood and paper factories. Forestry, in the public's view, was an industrial activity, not a private farming operation, even though half of the nation's timber supply came from non-industrial private lands. As a result, policy makers at the state and federal level who were reluctant to impose regulations on farmers or suburban homeowners showed no such reluctance when it came to big business, which is where they viewed forestry.

The result can be seen in pesticide application bans or restrictions on forest management that are much stiffer in many places than those imposed on farmers, golf courses, or suburban yards, even though the application rates, runoff rates and pollution potential of the latter may be many times higher than are ever common in forest applications. Unprotected by either an agrarian myth or huge voting numbers, forest owners became easy targets for stiffer regulatory controls as the environmental movement matured and strengthened.¹⁴

The New Environmental Era: 1985 – 2000

The 1985 Farm Bill marked a turn in the soil and water conservation approach, as the agrarian myth began to crumble in the face of persistent evidence that America's farm practices were not achieving the kinds of environmental effects the public increasingly demanded. The widespread plow-out of marginal croplands spurred by high commodity prices and made feasible by the huge machinery and increasingly-large farm ownership structure of the 1970's resulted in Congressional action to preclude such lands from becoming eligible for future farm programs or crop subsidies. The destructive and expensive cycle of federal payments for putting erodible land into cultivation, paying to install conservation practices to try to protect it, paying again to retire it from production and return it to permanent cover, then continuing the cycle -- and the payments -- again after the retirement program ended, had finally worn out its welcome. The federal government, still unwilling to regulate such actions, was at least trying to keep from continually subsidizing it.

In a late move during the farm bill debate, the environmental community attached similar restrictions to the conversion of wetlands, and Congress made an across-the-board move to link conservation stewardship with farm payments to the conservation compliance program. Henceforth, farmers seeking federal subsidies would be asked to demonstrate a higher level of stewardship than they otherwise might. SCS, with considerable reluctance, was drawn out of its totally voluntary program into one where its field determinations meant real money — and sometimes, intense controversy — to the local cooperators in the conservation districts.

In small, tentative steps, the demands for land management that protected offsite, public interests were increasingly translated into stiffer requirements on farm practices. Iowa's soil and water conservation law, which allowed conservation districts to set soil loss limits, and neighbors to object if a landowner's actions harmed them, was in many ways closer to the forest practices acts in the western states than to the totally voluntary soil and water conservation programs of the past.

As the 20th century comes to a close, it seems that Americans have once again largely closed ranks around some major goals in regard to its landscape. We now generally agree that land should be managed in a sustainable manner; that it should not be destroyed by any generation. We believe farms and forests can be managed in ways that not only produce food and fiber, but which protect clean air and water, provide wildlife habitat, and support pleasant vistas and functional communities. We have pretty much decided that the conflict identified between economic viability and environmental sustainability was a false dichotomy — that we cannot long have one without the other — and that private and public values are, in the long run, pretty much the same thing. And we've generally agreed, much to some people's consternation, that individuals won't always act in the public interest — even if they are yeoman farmers. Social goals are increasingly seen to require social controls.

A common language and some common concepts are emerging. Terms like "ecosystem management" and "ecosystem-based assistance" reflect a rapidly-expanding scientific consensus around the idea that we need to keep natural systems intact, and that areas such as wetlands once thought to be worthless may be part of larger cycles and processes that, if interrupted, can cause serious problems far away from the immediate site. We speak of "landscape-level impacts," and try to help people understand how the management of one plot of ground may, in fact, be important to an entire watershed or mountainside.

For the USDA soil and water programs, the era comes to an end with conservation compliance, sodbuster and swampbuster continuing to function, but perhaps losing most of their influence. As Congress increasingly turns farmers and their fate over to the private market, and eliminates the public subsidies that could be used as the lever to enforce conservation compliance, the effect of those programs will wane.

The result, it appears, is that we are once again at a point where the main question in conservation is not what we would like to achieve, but how we should go about it. The search for workable methods takes place, as it has in the past, in an era of great change in the way Americans own and manage land. The result is almost certain to change these programs dramatically.

Another change of massive proportions — the increasingly bipolar nature of land ownership in America — affects both farm and forest lands and their management in the late 20th century. While land ownership and use patterns may have more influence over the fate of these lands and the effectiveness of public conservation programs than any other single factor, it is not the result of, nor is it subject to, public conservation policy.

America's forests, for example, are now in the hands of almost 10 million owners, with almost 94 percent owning 100 acres or less. Recent surveys show that the fastest-growing segment is in the 10 acre to 100 acre sizes. It has been estimated that, given present trends, by 2010, a total of 150 million acres of America's timber lands — 38 percent of its productive forest — will be held in ownerships smaller than 100 acres, averaging, in fact, around 17 acres per owner.¹⁵ Landowner studies show convincingly that, as plot sizes get smaller, management attention wanes and the use of professional management advice declines.

Large ownerships, usually corporations, Indian tribes or institutions, have remained fairly stable, and are not expected to grow significantly in the future. What is being lost, rapidly, are the 100 acre to 500 acre ownerships that may have previously been a reasonably functional private forest management unit. The acreage in these plots is expected to decline by over 25 percent between 1978 and 2010, while the number of ownerships rises 10 percent. So, even within this category, more owners and less acres means that average size of ownership is rapidly declining.

Forestry is, therefore, entering the 21st century with less than 1 percent of the owners holding 43 percent of the forest land, while 95 percent of the owners hold 38 percent of the land in small plots. It is interesting to speculate on how ecosystem-wide consideration can be applied to a watershed full of 17 acre ownerships. And it is clear that one-on-one technical assistance programs, as well as many of the past cost-sharing programs, are increasingly inappropriate to the situation. The small landowners are too numerous, too inattentive to forest management, and too scattered for limited public programs to reach, and the big owners either don't need or won't use them. The mid-sized ownerships, for which public assistance programs were designed, are disappearing.

In terms of private outreach programs, the most notable, long-lasting and successful has been the American Tree Farm System, which has been providing free forest planning assistance to its member "tree farmers" since 1941. Donated technical services from public and private foresters has involved thousands of professionals, and today the system counts around 70,000 members who have met its technical standards for sustainable forest management. But, to provide context, there are almost 150,000 additional forest landowners each year as land ownership fragmentation continues. Serving those owners with a Tree Farm-like program would take two complete new Tree Farm Systems each year!

On agricultural land, the bipolar structure is as evident, but somewhat more difficult to track. The increasing size and corporate nature of many aspects of farming are clearly shown in the available data, but the fragmentation into small ownerships is harder to illustrate. When a farm is divided into five-acre or 10-acre "ranchettes," the land is no longer classified as agriculture, nor are the owners any longer farmers. So, we can't identify trends in one-acre to five-acre grassland owners the way the data is collected for land in forest cover.

What we can tell, from the 1992 Census of Agriculture, is the trend toward larger and larger farm operations. Between 1982 and 1992, the number of fat cattle sold from operations smaller than 500 head declined by 30 percent to 40 percent, while the number sold from large operations increased 10 percent. In dairy, the number of milk cows in herds of 200 or less dropped 60 percent while the total in herds of 500 or larger rose 80 percent. By 1992, it was estimated that 82 percent of the nation's feeder cattle were held in operations holding 500 or more; 50 percent of the milking cows were in herds of 200 or larger; 80 percent of the swine were in operations that sold 200 or more per year; and 65 percent of the broilers came from operations that sold half a million or more birds per year.¹⁶ As air and water pollution problems became increasingly traced to these highly-concentrated livestock operations, how effective is the argument that these are yeoman farmers, working in family operations and dedicated to being good stewards?

And what future is there for the historic USDA conservation approach through education, technical assistance and cost-sharing support?

The Search for Sustainability – Conservation in the 21st Century

If it is reasonable to suggest that, in spite of the often-raucous political fighting over conservation and environmental issues that still occurs, the United States is once again entering a period where there will be a reasonable social agreement on our conservation goals, it seems equally reasonable to suggest that we have a significant problem in agreeing on how to reach them. "Sustainability" in some context is likely to be the catch-word, as the public's demands revolve around the goal of keeping entire landscapes and watersheds healthy and functional.

But, as noted earlier, a landscape full of tiny land ownerships, whether in forest or not, is a complicated social challenge in which to achieve any kind of coordinated land management strategy. We may have the science to understand what needs to be done, but we clearly lack the social institutions needed to apply what is known. And many of the attempts to do so will likely fail on the

political battleground of private landownership rights.

The vast majority of the land, in both agriculture and forestry, will be held by giant organizations, often corporations, which Americans do not trust to exercise good stewardship or to protect public values. As illustrated by the increasing trend toward state regulation of forest management practices, the public does not hesitate to impose regulations on these large corporate entities. And the trend is, if anything, continuing. Scarcely a year goes by without a new public initiative in California or a referendum in Maine, aimed at imposing rigid limits on how private owners can manage or harvest the timber they own.

As Maryland faces the challenge of regulating fertilizer and manure applications to address the water pollution problems in the Chesapeake Bay, the situation looks similar. Big companies will have more regulations imposed on them, and the little farmers caught up in the swirl, while they may be the most seriously impacted, will have the least effect on the political outcome.

On the rapidly-expanding margins of population centers, the increasingly-fragmented land ownership patterns will interfere significantly with both commercial agriculture and forestry, and much of the role of encouraging good conservation management will shift to local general government and its land use regulations. USDA's technical and financial assistance programs are overwhelmed by the sheer numbers of owners involved, and all indications point toward a worsening, not improving, situation in that regard.

One prospect lies in the creation of enhanced opportunity for private service providers. That is already a viable option in regard to forestry; it may become increasingly viable for soil and water conservation as well. As opposed to public programs, where the supply of assistance is set by political decisions in a highly competitive public policy setting, private supply can respond to increased demand and higher prices.

Where local erosion and sediment control legislation demands a plan prepared by a qualified professional before permits are allowed, a thriving private consultant business exists. Those demands aren't filled by NRCS technicians, whose numbers couldn't begin to respond to the need. How long before that situation begins to exist in some of the more rural areas, as they begin to be marked by an overwhelming proliferation of small owners whose actions are causing local or regional environmental problems?

Both the state forestry agencies and the NRCS face a similar challenge here. Both have been providing free technical assistance for decades. They have a loyal, but shrinking, audience of forest and farm owners who effectively utilize those programs — and who, in most cases, so fully utilize all the available service that the agencies have little, if any, capacity to reach out to new clientele.

Meanwhile, most of the people and land are shifting into the very small and very large ownerships that can't or don't use the public services. Seen in this light, the future for the publicly-funded technical assistance programs looks increasingly limited.

And there are patterns that indicate that this isn't necessarily as bad as many have painted it to be. In New Hampshire, for example, the public forestry program has never provided free technical assistance. It has been operated for almost 75 years as an educational program, run by the University of New Hampshire. The state forestry agency does fire management, state land management and program administration. Landowners who want to develop a conservation plan to qualify for a federal program are referred to private consultants. One result is that New Hampshire boasts a very high ratio of professional forest advisers to the amount of forest land, even though the state is not a large timber producing area at this time. Private consultants serve landowners whose main goal is wildlife habitat and water quality protection, largely, many people feel, because landowners have not been trained to anticipate that such assistance should come free of charge.¹⁷

In 1965, President Lyndon Johnson proposed a "user fee" for technical assistance services.¹⁸ He thought the technical services were so valuable that they should be paid for by the landowner. The proposal died in a firestorm of political opposition, but one wonders what might have emerged if it had been accepted. Would we have a "New Hampshire effect" in the technical assistance program

today, after 30 years? Would we have more land care professionals, and a system that could respond to increased demand more flexibly? One wonders ...

What is clear is that while the political opponents could prevent a market-based structure for professional assistance, they have never been able to mount an equally effective campaign for the public budgets needed to sustain the existing system. Shrinking agency professional ranks coupled with rapidly-increasing numbers of small landowners, increasing concentration into huge production units, and growing public demand for more effective control of off-site environmental impacts simply does not add up. The situation is going one way, and the system is going another.

Both soil and water conservation and private land forestry need a new strategy for the 21st century. Increasingly, it looks like that will be a strategy that is not designed by conservation policy, or by landowners. Instead, it looks like tighter environmental regulations aimed at large producers and a more complex land use regulatory scheme aimed at small landholders. Getting either of these audiences to utilize professional technical assistance, to prepare and implement plans for their own operations that are reasonably consistent with the needs of the whole watershed or landscape in which they exist, and to follow reasonable rules of conduct, looks increasingly beyond the capacity of a voluntary system whose supply of assistance is set by political priorities rather than by consumer demand. In the 21st century, the consumer demand will be established by the community rules set down by general government, and the response to that demand will be by private businesses who can grow and shrink in response to the market. The challenge for conservation public programs and their supporters, in my view, is to figure out how to facilitate that coming transition and retain the role of public voice and quality control expertise that will be so seriously needed. Lyndon, where are you when we need you?

Endnotes

1. For a brief review of the forestry programs and their emergence, see Sampson, R. Neil and Lester A. DeCoster, *Public Programs for Private Forestry* (Washington: American Forests, 1997), pp. 1–21. [[Back to Text.](#)]
2. American Forestry Association (1905). *Proceedings of the American Forest Congress*. Washington: H.M. Suter Publishing Company. [[Back to Text.](#)]
3. Pinkett, Harold T. (1985). *The Soil Conservation Service and Farm Woodland Management, 1938–1945*, in Helms, Douglas and Susan L. Flader (eds.) *The History of Soil and Water Conservation*. Washington: The Agricultural History Society, pp. 178–187. [[Back to Text.](#)]
4. A brief overview of this history is contained in Chapter 1 of Sampson, R. Neil (1985) *For love of the Land*, League City, TX: National Association of Conservation Districts, pp. 1–25. [[Back to Text.](#)]
5. CCC statistics taken from Zimmerman, Eliot (1976), *A Historical Summary of State and Private Forestry in the U.S.* Forest Service, Washington: USDA Forest Service, State and Private Forestry, pp. 119. [[Back to Text.](#)]
6. These battles are reviewed briefly in Sampson, *For Love of the Land*, chapter 5, and discussed in Hardin, Charles M. (1952), *The Politics of Agriculture*, Glencoe, IL: The Free Press. [[Back to Text.](#)]
7. Zimmerman, p. 64. [[Back to Text.](#)]
8. Clepper, Henry (1971). *Professional Forestry in the United States*. Washington: Resources for the Future, Inc. [[Back to Text.](#)]
9. Morgan, Robert J. (1965), *Governing Soil Conservation: Thirty Years of the New Decentralization*. Baltimore: Johns Hopkins Press. [[Back to Text.](#)]
10. Strauss, William and Neil Howe (1997). *The Fourth Turning: An American Prophecy*. New York: Broadway Books. p. 215. [[Back to Text.](#)]
11. Held, R. Burnell and Marion Clawson. 1965. *Soil Conservation in Perspective*. Baltimore: Johns Hopkins Press, p. 74. [[Back to Text.](#)]
12. Strauss and Howe, p. 215. [[Back to Text.](#)]
13. Several excellent essays on the shifting cultural situation affecting farmers and environmental responsibility are found in Swanson, Louis E. and Frank B. Clearfield (eds.) (1994). *Agricultural Policy and the Environment: Iron Fist or Open Hand*. Ankeny, IA: Soil and Water Conservation Society. 206 pp. [[Back to Text.](#)]

14. Ellefson, Paul V., Anthony S. Cheng, and Robert J. Moulton (1995). Regulation of Private Forestry Practices by State Governments (Bulletin SB-605-1995). St. Paul, MN: Minnesota Agricultural Experiment Station, University of Minnesota. 225 pp. [[Back to Text.](#)]
 15. Sampson and DeCoster, Public Programs for Private Forestry, p. 71. [[Back to Text.](#)]
 16. U.S. Department of Commerce, Bureau of the Census (1995). 1992 Census of Agriculture, AC92-S-1. Washington: USGPO. 204 pp. [[Back to Text.](#)]
 17. Sampson and DeCoster, Public Programs for Private Forestry, p. 49. [[Back to Text.](#)]
 18. Sampson, For Love of the Land, p. 158. [[Back to Text.](#)]
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