
NATURAL RESOURCES JOURNAL

Volume 25
Issue 6 *Enclosing the Environment: NEPA's Transformation of Conservation into Environmentalism (25th Anniversary Anthology)*

Fall 1985

Bringing Resource Conservation into the Main Stream of American Thought

S. Blair Hutchison

BRINGING RESOURCE CONSERVATION INTO THE MAIN STREAM OF AMERICAN THOUGHT

S. BLAIR HUTCHISON†

It is not hard to accept the fact that nations struggling for an economic toehold have difficulty in providing material things and quality living for all their citizens. That the United States with its unprecedented economic capability should have the same problems is certainly much less "acceptable." Why is it necessary that a portion of our people should be so deprived that they cry, "Burn, baby, Burn?" Why should our cities become drab piles of concrete that frustrate the human soul? Why is much of the beauty of our countryside being destroyed? Why has the productivity of the land, water, and air been allowed to sag, when they are the foundations of tomorrow's hopes as much as they are today's accomplishments?

It is perhaps unusual to mention the failure of the United States to handle its natural resources well in the same breath that we speak of its social shortcomings. However, the problems are parallel and interrelated. Both arose in large part from the lack of broad public awareness of what has been happening, with a consequent failure to develop strong programs for dealing with social and resource problems that seem normal enough spinoffs from a dynamic private economy.

We can take some comfort from the knowledge that at long last the size and difficulty of the problem of social injustice is now widely recognized. Belatedly, aggressive national action is being directed toward correcting this problem.

There is much less reason for comfort about the future of this nation's resources and environment. In the last three-quarters of a century there have always been strong voices for better resource management,[1] but conservation is yet to be completely woven into the national policy. It is still fair to say that conservation is something Americans support and worry about when they are not too busy with day-to-day affairs. They fail to recognize what an important part of living conservation is for society. Conservation has yet to move completely into the main stream of American thought.

As a consequence, there is still much to be concerned about. Mil-

† Assistant Director, Intermountain Forest & Range Experiment Station, U.S.D.A. Forest Service, Ogden, Utah 84401

1. Most recently and in a comparatively short span of time, public agencies, with the support of enlightened segments of the American people, have been able to generate a surprising amount of interest in and energy behind the abatement of air and water pollution.

lions of acres of land are eroding to a degree that is deeply disturbing. The capacity of much of the Western range to produce forage has been seriously reduced—some of it permanently. A large part of the forest has low quality timber because of lack of management or inadequate management. Much of the countryside is not being developed in a manner which will contribute to the greatest national good as too frequently is the case when fertile farmlands are being converted to subdivisions. Places of beauty that should be preserved as such are still being defiled. Streams are being degraded by the offal of civilization. Houses and factories are being built where parks should be and, as the Department of the Interior aptly pointed out several years ago:

> The shift of our Nation from a predominantly rural to an urban population has made a sinister sandwich of much of our land, buttering our soil with concrete and asphalt, piling people on people, and then hanging a pall of polluted air over all.[2]

There are several explanations for the failure of the country to establish completely adequate resource programs. The opposition of those using the resources who would be disadvantaged one way or another by more effective conservation policies has always been a big factor. Another is the human tendency to live for the moment and not worry about the future. Still another is lack of information. There are more. The confusion has been heightened by what has been called the myth of scientific supremacy. "This is the myth which rests on the mistaken assumption that scientists can fix everything tomorrow."[3]

However, a big share of the responsibility for the continuing lack of a completely adequate, properly balanced conservation program in the United States must be laid at the doorsteps of the conservation leaders and agencies themselves. Much fine work has been done and is being done, but the total problem and job of resource management is yet to be adequately described to the American people and Congress. Resource management needs have never been analyzed in a framework that gives full emphasis to all aspects of value and to all the consequences of mismanagement.

It would be unfair to underestimate conservation milestones such as President Lyndon B. Johnson's special message to Congress in March of 1968. According to the Associated Press, this message called for doubling the national budget for combatting air and

2. U.S. Dep't Interior, Office of the Sec'y., The Race for Inner Space (Gov't Printing Office, 1964).

3. *Id.* at 5.

water pollution and for land development.[4] It would also be unfair to underestimate the Johnson administration's amazing success in making natural beauty a national issue.[5] Nevertheless, such rallying efforts are yet to be supported by the kind of conservation leadership across the board and in depth that is necessary to solve our problems of environment and natural resource supplies.

In fairness, of course, we must recognize that many of the mistakes and omissions in past conservation have arisen from a lack of knowledge. The limitations on and needs of our resources were not as clear a few decades ago as they are today. Nevertheless, the thesis behind the following discussion is that the failure of the American people to respond more aggressively to the needs of conservation is primarily because the issues have never been properly described to them. Conservationists and resource agencies for all their accomplishments have not yet developed a coherent total picture of the renewable resource situation and its relation to the objectives of society. If this is true, there are three needs:

I. To clearly relate the renewable natural resources and their management to the goals of our society.
II. To develop and gain acceptance of a comprehensive code defining the responsibility of society in relation to its resources.
III. To develop clear objectives as anchor points for management decisions.

I

THE NEED TO CLEARLY RELATE THE RENEWABLE NATURAL RESOURCES AND THEIR MANAGEMENT TO THE GOALS OF OUR SOCIETY

President Lyndon B. Johnson remarked at the White House Conference on Natural Beauty in 1965:

> We have increased the wealth of our Nation and the prosperity of our people. Yet we do not do this simply to swell our bank deposits, or to raise our gross national product. The purpose of this Nation cannot be listed in the ledgers of accountants. It is to enrich the quality of people's life—to produce the great men and women which are the measure of a Great Society.[6]

---

4. 114 Cong. Rec. 5814 (1968) (Conservation—Message from the President).

5. Some giant steps forward were made during the same period in setting aside National Parks and more tightly securing the future of wilderness areas. However, this saving of bits and pieces is in a sense a peripheral consideration of conservation overshadowed by the perhaps more limited progress made toward maintaining the quality and productivity of the vast other natural resources being used in the production function of our society.

6. White House Conf. on Natural Beauty, Report to the President and the President's Response 41 (Gov't Printing Office, 1965).

Few would disagree with this as a statement of national purpose or deny that resource management decisions must be made with it in mind. Yet the kinds of values which cannot be listed in accounting ledgers have not received their proper share of attention in public policy formulation. We have yet to develop a set of scales on which the financial, social, ethical, and inspirational can be weighed together. Moreover, there is constant pressure to allow those values which can be measured more or less completely in dollars to dominate public agency decisions at the expense of those values which cannot be expressed in dollars and in some cases cannot be measured at all.[7]

Value in the market place has been a motivating and directing force in the American economy for which no equally effective substitute has yet been developed. The rise of this nation to strength and affluence must be credited to the market system as well as to an abundance of natural resources. Who would claim, however, that people place value only on things which they can buy? Neither do market values adequately take into account the importance of ". . . the survival of a species, a delightful landscape, the rise of a trout to the fly, the song of a bird, or the stillness of a forest. . . ."[8] Nor, to be more materialistic, do we have any indication that the profit motive and the unrestrained interplay of market forces can provide adequately for such things as watershed stability and future raw material supplies.

The problem is to be sure that these facts are not forgotten as we develop conservation programs. In recent years cost-benefit analyses have received growing attention in federal program planning. It is vital that we carefully weigh public expenditures against all the benefits. There is, however, an all too frequent tendency for dollar values to unfairly dominate such analyses. Wherever this happens the following acid observation by Admiral Rickover is devastatingly pertinent:

7. Lawrence G. Hines, Professor of Economics, Dartmouth College, maintains the situation is aggravated by the necessarily limited central purpose of most public agencies:

> The point is that the agencies planning highways or dams are compelled to adopt a single-purpose approach, generally ignoring other considerations except when they are forced upon them by an aroused public. For the agency to do otherwise—for example, to admit the economic and esthetic loss that results from the destruction of wilderness—is to weaken the case for the agency's projects, to reduce the number of projects that can be undertaken by the agency. Address by Lawrence G. Hines, Professor of Economics, Dartmouth College, before the Tenth Biennial Wilderness Conference, sponsored by the Sierra Club, April 7, 1967 (mimeographed).

8. Address by Russell E. Train, President, Conservation Foundation, before the 90th Annual Meeting of the Am. Forestry Ass'n held jointly with the Nat'l Council of State Garden Clubs, 1965.

> Cost effectiveness suffers from a philosophical weakness. It holds that one factor—the economic—is fundamental, and that all other factors —the social, cultural, and political—are derivative. This is a fallacy known to students of philosophy as the fallacy of reductionism; it reduces the complexity of reality to one of its elements, and offers that one as sufficient reason for the whole.[9]

Lecomte du Nouy makes the same point in a different way:

> Certain of our mental illusions are due to the fact that we consider a phenomenon, as we observe it, in the frame of our current life. . . . Let us suppose that we have at our disposal two powders. One white (flour) and the other black (finely crushed charcoal or soot). If we mix them we will obtain a gray powder which will be lighter in color if it contains more flour and darker if it contains more soot. If the mixture is perfect, *on our scale of observation* (that is, without the help of a microscope) the phenomenon studied will always be a gray powder. But let us suppose that an insect of the size of the grains of flour or of soot moves around in this powder. For him there will be no gray powder, but only black or white boulders. On *his* scale of observation the phenomenon, 'gray powder,' *does not exist*. . . . In other words, one can say that from the standpoint of man *it is the scale of observation which creates the phenomenon.* Every time we change the scale of observation we encounter new phenomena.[10]

Certainly more and more conservation decisions are made with the big picture in mind. However, even now the evaluation process too often is one of measuring black and white boulders. Despite a presidential pronouncement that the purposes of this nation cannot be listed on the ledgers of accountants, official value judgments in reclamation works, timber growing, and other conservation planning all too often tend to retreat to such bookkeeping. We are constantly tempted by the desire for simplicity. We ignore that race horses are judged by how fast they run, oranges by how sweet they taste, lights by how bright they shine, views by their inspiration, and that value is a vast and complex consideration that cannot be calibrated, much less evaluated, through any single set of criteria.[11]

---

9. Rickover, *Quotation Without Comment,* 50 Air Force Magazine 16 (August 1967).

10. P. Lecomte du Nouy, Human Destiny 10-11 (1947).

11. Professor Seckler says,

> Now if this is indeed the community's value judgment that it is willing to sacrifice economic for other values, the market simulator finds himself in a very precarious position. By evaluating these programs in terms of economic value, he is, in effect, quarreling with community value judgments. In a way so subtle that it is not generally recognizable—even to economists—techniques

The role of scientific analysis in public resource evaluations is not diminished in the slightest by recognizing the limitations of the procedures. The job to be done requires great skill and perception and proper use of modern economic tools. It involves laying out in a logical fashion all of the factors that must be taken into account in the public decision. Some values can be neatly measured in dollars. Some can best be expressed in physical terms like pounds, visitor days, board feet, or pollution equivalents. Others cannot be measured empirically but only sensed or appreciated by an overall value judgment. Some are economic, some sociological, some ethical. Some involve what is known; others relate to unknowns. Many of the factors can be weighed quite accurately, others only approximated. Still others can be described only in very broad and sometimes unclear terms.

A. The Goals of an Affluent Society Can Be Almost Timeless

It is axiomatic that all individuals have a sense of immediacy that makes the present more real and important than the future. There is a common tendency to assume society's time preference is more or less the same as the individual's. This may be quite wrong, for it seems very likely that there is a willingness on the part of this nation to attach an extremely high value to future welfare.

Individuals and companies also have different spans of interest insofar as the future is concerned—spans that are rather strongly related to circumstances. To those living in poverty the day-to-day trials of maintaining body and soul are so demanding that future benefits requiring present expenditure are beyond their thinking. More prosperous individuals with a strong interest in the welfare of their children may discount only slightly the not-too-distant future.

Nations are no different; economic well-being has much to do with attitudes toward the future. Countries struggling for a toehold are so deeply concerned with the present that they have little energy to devote to enhancing tomorrow's rewards. By default they discount the future heavily. As well-being improves, the tomorrows take on increasing importance. John Galbraith's observation that "The natural priorities of a society proceed from getting the goods to getting the surroundings in which they can be enjoyed"[12] might

of economic evaluation can twist and pervert programs of the Great Society into the social and institutional ethic of the last century.

Seckler, *An Economic Study of the Demand for Outdoor Recreation,* [collection of papers presented at the annual meeting of the Cooperative Regional Research Technical Comm. for Project WM-59, San Francisco, Calif., March 25-26, 1968 (mimeographed)].

12. Galbraith, *Economics and the Quality of Life,* 45 Science 117, 122 (1964).

be extended to say that the priorities proceed also from achieving well-being to maintaining it. The United States, living in unprecedented luxury, has the economic capability to invest heavily in providing for the future without seriously encroaching on present prosperity. If we can assume that this is a country with a strong sense of destiny, the economic and social well-being of future generations is a matter of prime importance. Those defects in the resource situation today that are the result of cumulative actions of the past may in part be laid to conscious or unconscious discounting of today by our predecessors. Thus, once some level of present need has been satisfied, a perfectly reasonable and natural decision could be to rank future values on a par with those of the present. In other words, maintaining some particular level of resource productivity over time could be the objective, with the choice of how much to do or what to do being made on some basis other than *when* the benefits are to be realized.

B. Conservation Works Are a Source of Productive Employment

The work required to get the resource management job done has been regarded in the past as a cost, but it is also an asset as a source of productive employment.

Robert Theobald has pointed out that "We are entering an era whose requirements are as different from those of the recent industrial age as those of the industrial age were different from the agricultural."[13] In this new age of automation it is not enough to relate natural resource policy strictly to the role of these resources as sources of raw material and the need for maintaining the attractiveness of the country. Conservation and other national housekeeping activities are also sources of employment that can play a part in improving current economic stability and well-being. In this sense then, conservation is not only a means to an improved resource situation, but also a means for improving the distribution of current income among the American people.

A few generations ago the individual worker by laboring long days was hard put to produce more than enough to satisfy the needs of his family and himself. The margin of production over basic need was narrow and precarious. It still is in some parts of the world, but a United States factory worker today turns out four to five times as many goods per hour of labor as his great-great-grandfather did a century ago.[14] The number of people required to pro-

13. Theobald, *Guaranteeing an Income,* 80 Commonweal 603 (1964).
14. R. Heilbroner, The Worldly Philosophers 253 (1961).

duce a standard automobile dropped from 311 in 1947 to 153 in 1962.[15] In the three-year period 1961-63 industrial productivity per man-hour rose at the rate of 3.5 percent annually.[16]

All evidence indicates that the end is not in sight. Computer-instructed automated machinery and other labor-saving devices will further multiply man-hour productivity and could turn employment problems from a national headache into a national nightmare unless there is bold action to deal with the requirements of the new age. One reasoned guess is that automation is eliminating 1.5 million jobs annually.[17] Some individuals go so far as to suggest that there may be no significant job creation in the private sector of our economy in coming years.[18] In contrast, the number of people needing work is expected to increase one-third by the year 1980.[19] Even if these forebodings seem exaggerated, it is hard to deny that we face the possibility of an increasingly difficult and explosive unemployment problem in the United States. There is little doubt that unless this country can find ways to provide economic opportunity for those deprived of adequate employment by industrial progress, we face social chaos far surpassing that which has thus far erupted in our big cities.

The poverty problem today is less than ever attributable to inadequate productive capability. Instead, it is due to the lack of effective mechanics for distributing our more than ample production equitably among the total population. Those excluded from employment by industrial and agricultural efficiencies are thus seriously deprived and become a social and economic drag on the entire nation.

This specter of chronic technological unemployment has given stature to the idea of a guaranteed annual income as well as the shorter work week. It also has led to the suggestion by the Ad Hoc Committee on the Triple Revolution that "Society as a whole must encourage new modes of constructive, rewarding and ennobling activity."[20] In other words, new sources of worthwhile employment become important, not so much for the purpose of increasing production as to provide a more equitable distribution of the abundance modern technology can produce. John Galbraith recognizes this

15. Chase, Money to Grow On 18 (1964).

16. The Ad Hoc Committee, The Triple Revolution 7 (1964) (Written and printed by the Committee as a public service).

17. Chase, *supra* note 15, at 15.

18. The Ad Hoc Committee, *supra* note 16, at 9.

19. Cooper and Johnson, *Labor Force Projections for 1970-80,* 88 Monthly Labor Rev. 129 (1965).

20. The Ad Hoc Committee, *supra* note 16, at 10.

when he says that in recent times increased output is sought not because of the goods that would be produced, but because of the importance of that output to economic security.[21]

Fortunately, it is not difficult to find ways to occupy idle hands for there is much that needs to be done. As others have pointed out, although private industry has been eminently successful in conducting those aspects of our economy where a profit is to be made, performance of the local, state, and federal governments has been far less gratifying. Public services have failed to keep pace with mushrooming private output. In large part, this has been so because the typical American has regarded government as a necessary evil and failed rather consistently to recognize the important role of government in any successful society. Only recently, for example, has it been clear for all to see that the security of being able to walk the streets unmolested rates high in any standard of living.

As a consequence of such national apathy and lack of insight, urban blight, inadequate educational facilities, weak law enforcement, degrading poverty, and deterioration of the environment are issues and problems we have to face.[22] Gunnar Myrdal has observed that the unharnessed human energy of the underprivileged who have been denied a decent livelihood by technological progress represents a great waste of productive resources.[23]

It is indeed a fortunate anomaly that although the towering needs in the public sector of our economy and the growing problem of unemployment both result from the inability of the market process to do the total job of allocating human effort, these problems are complementary. Each to a large degree is the solution of the other.

Except for the Civilian Conservation Corps program of the 1930's, conservation needs have not been widely hailed as an economic opportunity. The millions of man-days of labor necessary to accomplish conservation objectives has at times seemed an insurmountable hurdle. In our present dilemma of growing technological unemployment conservation needs are an asset also because they provide the worthwhile employment necessary for equitably distributing a high standard of living.

There is, of course, a mountain of other domestic and international public needs that could serve in the same employment-generating capacity. Urban renewal, mass transportation, education, housing, and other such activities must be weighed against the need for abating air pollution, maintaining natural beauty, stabilizing watersheds, producing timber, and other conservation activities. There is

21. J. Galbraith, The Affluent Society 119 (1958).
22. *Id.*
23. G. Myrdal, Challenge to Affluence 10 (1963).

a selection task to be done, but all of a sudden the question has been changed. No longer is it solely a matter of how much present effort can we afford to allocate to resources. We also must consider how necessary conservation works can be utilized to provide productive employment.

This is not exactly a new issue but its dimensions have certainly grown. It has been customary to attempt to estimate the local employment that would be produced if the extraction of various resources could be increased to one degree or another. However, the labor required to adequately *manage and protect resources,* has seldom been viewed as an employment opportunity. If the American people were more willing to accept this philosophy, conservation would be unshackled.[24]

C. Another Purpose Could Be to Strengthen Rural Economies

Conservation activities in general share with dam building projects a more or less unique characteristic among the public works. They are essentially anticoagulant. Urban renewal, mass transportation, education, and other problem areas that Gunnar Myrdal describes as the crying elementary needs of American Society, do nothing to relieve the metropolitan congestion that is becoming increasingly dominant in our pattern of life.[25] Most conservation and reclamation projects do, however, provide widely dispersed employment opportunities.

In fifty years the United States has changed from an essentially rural nation to one in which most of the people live in urban-suburban complexes. In 1960, 70 percent of the population—some 125 million people—lived in and around cities of 50,000 and larger. The trend toward population concentration has brought significant gains in production and distribution efficiency. However, these gains have been at a price which is only now beginning to be widely recognized. Air pollution, urban blight, commuter fatigue, and social problems of staggering dimensions are the emerging major issues of American society in the midcentury. These problems point up the need to more widely disperse economic opportunity and population, if this can be done.

---

24. Such a change in attitude will not come easily. Time Magazine, April 1, 1966, at 25B, reports the unwillingness of New Jersey lawmakers to approve new tax revenues. It points out that if efforts to create additional public income fail,

> . . . the Nation's most heavily industrialized state will be unable to provide college space for several thousand new high school graduates or treat more than 1,000 retarded children now awaiting state care. It will have to defer badly needed highway construction, and deny the financial aid that its two major railroads need to maintain commuter service.

25. Myrdal, *supra* note 23.

It is to be expected that more and more public leaders will, as Orville Freeman has done, call for an all-out national effort to slow the trend toward metropolitanism by creating and maintaining "greater opportunity for more people to live good lives where open space exists—rather than bunching up in our great cities." Freeman's challenge is not unreasonable, for he points out:

> I am not suggesting we abandon the city and dismantle it. The great cities of America will continue to grow, but I am suggesting that we should begin to create other alternatives than megalopolis as a place to live.[26]

The role of conservation labor requirements, as an asset as well as a cost, demands that employment opportunities have a part in resource policy decisions. Public agencies have generally welcomed emergency conservation projects. However, their interest has been largely opportunistic, viewing this as a way to get necessary work accomplished. The time has come in resource planning to relate resource development, management, and protection needs to the structure and objectives of American society—to consider the opportunity for using these needs as anticoagulants. The opportunity to develop a permanent, stable, rural economy should be fully considered.

II

THE NEED TO DEVELOP AND GAIN ACCEPTANCE OF A COMPREHENSIVE CODE DEFINING THE RESPONSIBILITY OF SOCIETY TO ITS RESOURCES

In an effort to capture at least momentary attention from a world preoccupied with flights into outer space, the U.S. Department of the Interior in 1964 published a special report called, "The Race for Inner Space." The report pointed out that "Our destiny depends more on the use of the space we now have than upon the acquisition of real estate on other planets. It depends upon the use we make of the outer crust of this earth and the atmosphere which wraps it."[27] This is but another version of the cry repeated over and over again in the past two-thirds of a century. Yet, despite the efforts of two Roosevelts, their predecessors, cohorts, and successors, the United States has enough gullies, pollution, and smog to support the claim that public policy has not managed as yet to completely meet the challenge of maintaining a productive, desirable environment.

26. Address by Orville L. Freeman, Secretary of Agriculture, First Annual President's Conservation Awards Banquet, Washington, D.C., 1966 (mimeographed).

27. U.S. Dep't Int., *supra* note 2, at 5.

There are some cynics who will say that it never will be met. Whether it ever is will depend first of all upon the success of a new generation of leaders in mobilizing public opinion and support. It will also depend on developing a political atmosphere in which it is easier to handle properly renewable resources than it is to abuse them—or at least one in which abuse is far more difficult than it is now. This in turn will depend upon the development of clear criteria for determining when deteriorating pressure on the resources exceeds tolerable limits. Also important will be the establishment of standards of productivity that are compatible with the aspirations of our society.

A. The Need to Determine the Capabilities of the Renewable Resources

In its haste to develop and use the renewable natural resources, this country has never really faced up to the question of how much use these resources could take. At first this situation arose out of a failure to understand the full significance of what was happening and to some degree out of indifference to or unawareness of public welfare. That a particular use might impair the productivity of a piece of land has seldom aroused sufficient public concern to deter the individual, company, or public agency from committing the offense. Damage to land ordinarily has not been included as a cost of operation.

The same can be said of water and air. There have been exceptions, of course, such as smelting companies that have anticipated with some certainty having to pay off claims for fume damage. Nevertheless, the arithmetic of resource evaluation in these cases has in general ignored or minimized side effects. There are many instances where attempts have been made to clean up water pollution, but our failures in maintaining water quality are legion. Only in recent years has the air been regarded as anything but a free dumping ground for society's volatile wastes.

Public awareness of resource problems has certainly increased, but the impairment of these resources continues though perhaps at a slower rate. Moreover, we have no assurance that trees, grass, fish, songbirds, and the many other products of the three basic renewable resources will be produced in sufficient abundance that future generations will not be deprived to some degree of these natural heritages.

How much soil movement beyond that which occurs naturally can be tolerated? How heavily can the vegetation of the range be grazed by livestock and wildlife without destroying it? To what extent can timber be utilized without adverse effect in forest areas

where growing conditions are harsh? How much pollution is it safe to allow in streams? What is the right pattern of city and green belt in megalopolis? How much exhaust from industrial and domestic combustion can the atmosphere accommodate safely? All of these are unanswered questions and there are many more.

Satisfactory answers to most of these questions are not available today because the task of developing precise criteria for determining the borderline of safe practice has proved complex and difficult. The kind of understanding necessary for the sound management of land, water and air resources is a long way from being achieved. As a consequence, conservation in general lacks any real standards of performance.

One of the many examples of this involves our forests. There are many acres of otherwise good timber growing land that should not be logged because of very fragile soils or very steep slopes. Such areas could easily be identified and mapped except that no one has yet been able to specify how much soil movement should be tolerated in individual situations. One of the most pressing tasks in American conservation today, therefore, is the research required to determine the capacities of the land, air, and water resources so that we can retain their quality and productivity under use.

B. Resource Malpractice Must Be Identified and Labeled

With rare exception the despoliation of resources does not occur with dramatic suddenness. The city nibbles into the countryside, a farm at a time. Spawning beds in our streams usually become silted over a period of years. The day-to-day decline in the purity of the atmosphere is imperceptible. It may take many decades for the fine timber in a woodlot to be replaced by a stand of culls. Most conservation problems are the result of millions of daily actions individually innocuous but collectively adding up to substantial losses that are eroding the resource underpinnings of the future. The present polluted state of Lake Erie is the cumulative consequence of countless ill-advised decisions by individuals. These individuals would have found it difficult to visualize that so large a body of water could become polluted or that what they did could be important from that standpoint. The logger who skids straight down steep unstable slopes because that is the quickest and cheapest way to get his logs from stump to truck, is seldom troubled by the thought that he may be setting up an erosion situation that will be difficult and expensive to correct. The city council that allows its park space to be appropriated for other purposes does not realize that each such action may be a step to eventual urban blight.

It is quite obvious that if the long list of resource use malpractices is to be reduced, it will not only be necessary to identify safe limits of use, as already mentioned, but also to develop more effective mechanics for enforcing these limits. In some cases the answer lies in laws with sharp teeth—water and air pollution being prime examples. A complete legal and ethical code should be developed that identifies and gives stature to public rights in the total value of the renewable resources.

The natural resources require something akin to constitutional protection to provide legal grounds for safeguarding the basic productive capacity of the land, water, and air, and the quality of the environment. However, the problem is more than one of developing legal standards. A code of ethics is required as a reference point in molding public opinion and creating pressures against actions that deserve the label of malpractice.

Perhaps the single most important idea to be sold is that even though the conflicts between dam builders and recreationists capture the headlines, the fate of the resources will be decided by millions of unspectacular actions and decisions each day. For example, the structural failure of a road located on an unstable slope or not built sturdily enough, resulting in the siltation of a stream, may be shrugged off as a minor loss. However, when viewed with the realization that the same thing is occurring in many other places, this failure is actually one fraction of a total calamity.

C. Maintenance of Resource Values is Today's Cost

Twenty years ago Aldo Leopold said, "Perhaps the most serious obstacle impeding the evolution of a land ethic is the fact that our educational and economic system is headed away from rather than toward an intense consciousness of land."[28] This lack of consciousness has permitted partial analysis that takes account of the costs of developing and utilizing resources but fails to include the destruction or reduction of resource productivity as a cost when it occurs. This is natural enough because leaders of economic thought in general have had no real conception of the full ecological impact of many resource practices. Nor have they had an understanding of the urgency for living within the capacity of the environment.

The situation is complicated by the fact that conventional economic thinking largely discounts the present importance of future values and impacts. This results in automatically establishing the arithmetic for rationalizing undermanagement of the renewable resources.

28. A. Leopold, A Sand County Almanac and Sketches Here and There 223 (1949).

The central issue, therefore, is what does the public want? Is this country to run on a liquidation basis, or is the objective continuing vitality and well-being? The idea of planned liquidation has an unpatriotic ring, and if the question were ever put to a vote, the overwhelming consensus would certainly be for maintaining the resource base needed for a strong, healthy nation.

Such a consensus by itself would be largely academic. However, Aldo Leopold pointed out two decades ago that:

> Conservation is getting nowhere because it is incompatible with our Abrahamic concept of land. We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect.[29]

The statement that conservation is getting nowhere is overdrawn as far as the present situation is concerned. The rest of what Aldo Leopold said is as true today as it ever was.

Only when the Abrahamic philosophy toward natural resources ceases to dominate the scene and the right of ownership is recognized as the right to careful use will completely adequate resource management be possible. Once the Abrahamic concept is replaced by Leopold's land ethic, it will no longer seem logical to say that everything done to insure future resource productivity must stand the test of discount economics. Within the philosophical framework of the land ethic concept, the world we live in can be regarded as rental property, the rental being the cost of maintaining resource productivity and the quality of our environment.

It seems realistic to regard *all* costs essential to maintaining a high level of productivity and quality of the natural resources as maintenance costs which are part of the price of doing business today.[30] Within this concept, tree planting, pollution abatement, watershed stabilization, landscape refurbishing, and all other measures required to keep the resources in first-class condition become current charges for living on the planet. Investment calculations involving discounting future values for comparison with present costs would have their place but not as determinates of how much should be done to maintain natural resource values.

The land ethic concept would put a new burden on landowners and resource users, for it would require that they assume the extra

29. *Id.* at viii.

30. Ciriacy-Wantrup talks of a low-cost minimum standard of conservation: ". . . a safe minimum standard of conservation is achieved by avoiding the critical zone—that is, those physical conditions, brought about by human action, which would make it uneconomical to halt and reverse depletion." His concept seems to have only remote similarity to the one described above. S. von Ciriacy-Wantrup, Resource Conservation Economics and Policies 253 (1952).

costs of operating in ways that will avoid unacceptable damage and maintain the productivity and quality of the resources. Whether some individuals and companies would have a legitimate claim to public help in paying the "extra" costs of sound resource management will continue to be a matter for serious thought.

D. The Nation Has the Capacity to do Far More Than it Has

Certainly it must be agreed that no more can be done to protect and manage the natural resources than is economically feasible. However, it is difficult to understand a rationale which says that this country lacks the economic capability, when all things are considered, to avoid resource deterioration. The United States has productive power half that of the rest of the world combined with only six percent of the world population. Eleven northern states have a productive power equal to Russia's.[31] As the production figures presented earlier indicate, the output per man-hour has increased so much that it is no longer a question of being able to produce enough but of finding things to do for people displaced by technology. It is this excess of manpower that provides an untapped capability for doing more. Although the failure of the economic system to work perfectly may prevent full use of the nation's manpower, it is the availability of unused human energy that determines the ability of the nation to do more.

III

THE NEED TO DEVELOP CLEAR OBJECTIVES AS ANCHOR POINTS FOR MANAGEMENT DECISIONS

In spite of past efforts to rally public support for various conservation causes, resource agencies are not in a position today to describe the total job of resource management in the United States or to estimate what it would cost. In part this is because resource planning has been piecemeal, and there has been no consistent effort to frame natural resource objectives in relation to broader national aspirations. Projections of possible long-range needs for water, timber, and a few other products and services of the natural resources have been made periodically, but they have never been correlated. Nor have they been compared with the capacity of the resources to produce. Finally, they have not been effectively translated into objectives for the management of individual parcels of land, water, and air.[32]

31. Editorial *When the World Looks at U.S.—A Study in Power,* U.S. News and World Report, July 24, 1967, at 24.

32. Rahm, U.S. Forest Service, Missoula, Montana, states:

Organizations pay heavily for the *assumption* that systems of management

Gross and Springer have criticized the "new Philistinism that expresses national goals and performance in dollar-sign figures," thus tending to sweep nonmonetary and qualitative considerations under the rug. They call for the development of transeconomic data providing a clear picture of social conditions so that there will be a better balance between them and the production aspects of an economy.[33]

A parallel need exists for data that reflect the state of the nation's physical environment in qualitative as well as quantitative terms. Even beyond this, however, it is necessary to develop national resource goals that are clearly related to national aspirations. For example, we must carry the national appraisals of the timber situation that have been made periodically by the Department of Agriculture's Forest Service one step further. They should be translated into official national timber production goals that provide strong direction to public action. Gerhard Colm has suggested "aspiration goals" for the purpose of planning what should be done in any particular period to achieve reasonable levels of consumption, social welfare, and environmental management.[34] Before such planning can be done effectively, there must be carefully reasoned objectives for all aspects of production, human welfare, and natural resource productivity.

Nationwide resource goals can accomplish two purposes: first, they give the best possible indication of the amount and nature of the national effort that should be applied to management of the environment; second, they set the "tone" for local resource management by indicating the direction it should take and the emphasis individual resource values should receive.

There will at best be only the most tenuous connection between national and local objectives in the sense that we can carefully slice the national goals into many pieces, thus prescribing what and how much should be done in each locality. The geographical allocation of each national goal would have to be correlated with the allocation of all other goals. It would have to take account of the productive capabilities and the economic and social needs of each locality. The

---

and organization can substitute for tough and inspiring goals as the principal integrative force of all organized behavior. It would be unthinkable to run today's organizations without today's management tools. But tools alone won't do the job.

Management Notes #17, at 1 (1966).

33. Gross & Springer, *A New Orientation in American Government,* 3 The Annals of the American Academy of Political and Social Science 1 (May 1967).

34. G. Colm, *Man's Work and Who Will Do It In 1980,* Jump-McKillop Memorial Lectures 5 (Graduate School, U.S. Dep't Agric., Wash., D.C. 1965).

indefiniteness of the problem of coordinated allocation makes the task unmanageable. While the allocation of a single national goal to localities without reference to related considerations would be an oversimplification, any attempt at simultaneous allocation of all the resource goals would result in a fantasy of numbers and judgments.

In the absence of any meaningful coordinated objectives, the public land manager still fumbles in an attempt to relate the management of his individual piece of real estate to overall public objectives. In a sense he is attempting to fit jigsaw pieces into an overall picture that has never been painted for even a single product such as timber let alone the multidimensional picture of all uses. It is doubtful if any public land manager in the United States has a firm idea about what trend of timber production, what water yield, what level of watershed stability, how much outdoor recreation, etc., in his area is consistent with the best interests of the nation in the long run. It is not surprising then that although countless resource management plans have been written, few have been truly viable documents laying out an orderly sequence of actions.

Since Messiahlike instructions cannot be given from Washington parceling out the national goals or interrelating them to each other, or relating them to the situations and capabilities of each area, people in every locality must develop their own goals. If the sum of local objectives exceeds or falls short of national production goals or national estimates of reasonable cost, reassessments will be in order in the process of continuing feedback.

Much has yet to be learned about local planning for resource management. Two "truths" are beyond dispute, however. The first is that the production of raw materials, natural beauty, pollution, land stability, recreation, etc., are not independent considerations but interlocked pieces of a total problem. Before really effective local resource programs can be developed, a master design must be prepared. This master design might be compared to the architect's general plans for a skyscraper, which are necessary if for no other reason than to provide a structure and context for the specialized plans for the heating, electrical, and other systems. Few, if any, such master designs have been prepared in local resource planning. The second truth is that the future is the most impenetrable of all unknowns. What we don't know about the future is in fact more important in planning than what we do know. For this reason resource management designs should contain a large factor of safety. Moreover, resource planning should attempt to reserve a maximum choice for future generations by postponing actions that need not be made today.

IV

THE CHALLENGE TO IMPROVE UNDERSTANDING

The power center of American politics has largely been made up of economic issues with noneconomic factors on the sideline. In an affluent society with a large body of well-educated people in urban areas, matters such as natural beauty, and air and water pollution may eventually become major political issues. This in turn could result in support for a better balanced and more adequate effort in resource management.[35] However, instead of merely expecting that we may be on the brink of a change in public sentiment, conservation leaders should do all that they can to make it happen. This is a sensitive area—rocking the boat—but it needs doing.

If a banner is necessary, we might well use the three interlocking circles that are the trademark of Ballentine ale. It needs to be emphasized that national well-being involves three interlocking issues: *people, production,* and *environment.*

35. Heilbroner injects an optimistic note:

> After two centuries of sailing almost as the winds directed us, the tiller of society is again in our grasp. More and more we have taken on our own shoulders the responsibility for selecting our destination—with all the inescapable dangers as well as the chances for progress that active navigation must bring. We are leaving behind us a world in which our futures were shaped, at least in the large, by the pressures of economic action; we are proceeding into a world where economic forces will play an important but no longer a predominant role.

While the trend he describes is clearly evident, the orientation of land management policy still has a long way to go in that direction. Heilbroner, *supra* note 14, at 283.