Living with the Land

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Dennis C. Le Master

PURDUE UNIVERSITY
West Lafayette, Indiana

According to the invitation to speak here today, this symposium is, in part, a celebration of the centennial of the Forest Reserve Act of 1891, which Gifford Pinchot called in the late 1940s "the most important legislation in the history of forestry. . . ." Perhaps it would be useful at the outset to put this act in context.[1]

The legislation authorizing creation of the forest reserves was, indeed, an amendment to a bill whose purpose was to revise several public land laws, including repeal of the Timber Culture Act. The amendment was added at the eleventh hour after intense lobbying by Secretary of the Interior John W. Noble during the deliberations of the House and Senate conference committee on the larger legislation, and became its last section—section 24—which reads:

> That the President of the United States may, from time to time, set apart and reserve, in any State or Territory having public land bearing forests, in any part of the public lands wholly or in part covered with timber or undergrowth, whether of commercial value or not, as public reservations, and the President shall, by public proclamation, declare the establishment of such reservations and the limits thereof.[2]

Sixty-eight words in all; and not very well written, for, as Samuel Dana and others have noted, they do not even constitute a sentence.[3] But they mark the end of the general policy of the federal government of transferring public domain lands to private and state ownership to encourage settlement of the western frontier. At the same time, they also mark the beginning of the conservation era, which is the other purpose of this symposium: to celebrate "100 years of learning and practicing conservation principles."

Twenty-seven days after President Benjamin Harrison signed the legislation into law, he proclaimed the Yellowstone Forest Reserve which comprised 6.6 million acres.[4] Later he established fourteen additional reserves, totalling 7.4 million acres.

Grover Cleveland was elected president for a second time in 1892. Six months after he took office, he established two forest reserves in Oregon—the Ashland and the Cascade Range—totalling 4.5 million acres. He did nothing further in this regard until the very end of his term of office because of the lack of statutory authority for the protection and management of the reserves. Ten days before he was to leave office in 1897, he created thirteen new forest reserves containing 21.3 million acres upon the recommendation of the Forest Commission of the National Academy of Sciences.

Photo 1: As it is today, 100 years ago logging was an important part of debates on public land use.

Predictably, President Cleveland's action prompted a howl of public outcry in the West. Legislation was introduced as an amendment to the Sundry Civil Appropriations bill then pending before Congress to restore the thirteen forest reserves to the public domain. President Cleveland pocket-vetoed the bill, leaving the federal government without funds for the new fiscal year. President McKinley was compelled to call Congress into special session to address the situation. In the process, an amendment was introduced to the new Sundry Civil Appropriations bill which specified the purposes for forest reserve designation. Equally important, it provided for the protection and administration of the reserves. The bill and its amendment became law on June 4, 1897, and the latter came to be known as the Organic Administration Act of 1897.

The nation now had forest reserves and the statutory means to protect and manage them. From thirty reserves containing 39.8 million acres in 1897, the National Forest System has grown to 186.3 million acres of national forests and 3.8 million acres of national grasslands in 1991.

From six national parks in 1900, there are now fifty, as well as over 300 other units, such as national monuments, national recreation areas, national seashores, national lakeshores, national historic sites, and national battlefields, together containing 76.2 million acres. An extensive system of federally owned lands managed for the conservation of wildlife has developed since the turn of the century, and today the National Wildlife Refuge System comprises 88.4 million acres (of which 77 million are in Alaska).

A national system of environmental laws has been established dealing with air and water pollution, solid waste disposal, pesticide and toxic substance control, and protection of endangered species.

Most states have state forests, parks, and wildlife refuges on a smaller scale. They also have environmental laws to regulate air and water pollution, the use of pesticides, solid waste disposal, and the disposal of hazardous waste. They have agencies to enforce the laws.

Significant accomplishments have been made in the hundred years since enactment of the Forest Reserve Act. Yet they tend to shrink in significance when juxtaposed with a list of environmental problems that grows longer with each new assessment of the environmental condition of the country. For example:

- The list of threatened and endangered species continues to grow and now contains 1,028 plant and animal species of which 606 are indigenous to the United States and its territories.
- The annual loss of top soil is estimated to be 3.9 million tons, half of it from cropland.
- Air pollution continues to be a major problem in many cities; the worst is Los Angeles, where ozone exceeded

safe levels for 172 days during 1988.

- Depending on which federal agency is conducting the assessment, hazardous waste production ranges from 264 to 400 million tons per month, which is about 11 billion tons per year, equal to 44 tons per person per year, and the number of disposal sites is inadequate and steadily declines.
- Pollution of surface and groundwater continues to be a serious problem; for example, the Environmental Protection Agency has documented groundwater contamination by seventy-four pesticides in thirty-eight states.

When juxtaposed to the environmental problems of the world, the accomplishments earlier assembled shrink even further. According to Worldwatch Institute:

- Each year the earth's tree cover diminishes by some 17 million hectares, an area the size of Austria.
- Annual losses of topsoil from cropland are estimated at 24 billion tons, roughly the amount of top soil on Australia's wheatland.
- The amount of carbon dioxide, the principal greenhouse gas in the atmosphere, is now rising 0.4 percent per year from fossil fuel burning and deforestation.
- Air pollution reaches health-threatening levels in hundreds of cities and crop-damaging levels in scores of countries each year.
- As human population and demand for resources increase and natural habitats are converted, the rate of extinction of plant and animal species worldwide increases, and biological diversity declines.[5]

The challenges of the future in conservation are different from those of the past. Today, conservationists are looking beyond stopping the direct loss of wildlife or forest lands as they were in the late nineteenth century. They are looking beyond stopping careless contamination of air, land, and water as they were in the 1960s and 1970s. They are looking instead at preventing further environmental degradation of the planet, and for good reason.

Political boundaries provide no protection against increases in carbon dioxide and other greenhouse gases, depletion of the ozone layer, various kinds of air and water pollution such as acid rain, wing-borne PCBs, and ocean dumping of waste. They erode easily to the tide of despair that attends a people chronically undernourished or malnourished such as they are today in Ethiopia, Chad, and Sudan. The world today is an interdependent place. We often hear that we have an interdependent global economy, but the ecosphere we share is even more so.

Most conservation leaders understand that they have to move

beyond reactive opposition to proactive support of new attitudes, new knowledge, new technologies, and new institutions to stem the degradation of the ecosphere. A new law, a favorable court decision will not be successful in meeting the challenges of the future. The fact is global environmental degradation proceeded quite rapidly during the twenty years following the first Earth Day despite the passage of a host of environmental laws around the world, establishment of hundreds of environmental agencies, litigation of thousands of environmental lawsuits, and the forming of a plethora of environmental groups of all kinds.

So what should be done about it?

If human life is to continue in a way with which we are familiar, we must build a sustainable society: a society that lives within its natural limits, a society that meets its needs without compromising the needs of other species or future generations of our own species.[6]

We must conserve in the sense of the plain meaning of the word, and work toward using resources more efficiently, such as water for irrigation, and reducing unnecessary consumption, for pollution always attends consumption to some degree.

We must recycle, using materials over and over again. Doing so saves energy and reduces pollution.

We must substitute use of renewable natural resources, such as trees and wind, for use of nonrenewable resources, such as fossil fuel and minerals. For renewable natural resources are replenishable; nonrenewable resources are not.

We must stabilize human population growth. The human population of the world reached 5.3 billion in 1989, which, given current technology, is well beyond the carrying capacity of the planet. My friend and colleague Durward Allen, the noted conservationist, estimates the human population of the earth is currently about five times its carrying capacity, an estimate which is probably about right, as defensible as any of which I am aware.[7]

We must develop new knowledge and new technologies. Candidly, we do not have the knowledge required to manage the nation's forest lands, including its national forests, national parks, and national wildlife refuges, in a way that meets contemporary society's needs. The Committee on Forestry Research established by the National Research Council made this point several times in a recent, well-publicized report. For example, the first sentence of the "Executive Summary" states: "(T)he existing level of knowledge about forests is inadequate to develop sound forest-management strategies."[8] Later the report reads:

> Despite the excellence of some individual researchers and centers of forestry research, the quantity and coherence of research do not match even current needs. Changes in public perceptions and uses of forests call for new information not now provided in sufficient depth.[9]

I submit this observation applies not only to forest science, but all the natural resource sciences and specifically to fisheries science, range science, wildlife science, and outdoor recreation.

Furthermore, we need new technologies. Of course, some will argue technology is a basic cause of the problem of global environmental degradation, and they are right. Indeed, there are technologies being used that are very costly in terms of their environmental impacts. But the requirement here is development of new technologies that can replace those that are environmentally destructive. The issue is not technology itself, but the kinds of technology we use, and it is critical that this distinction be understood. We cannot go back to some period of real or imagined tranquility and plenty. We simply have too many people to feed.

But this is the easy part. Lewis Mumford, one of the pioneers in sociology, wrote:

> Modern man is the victim of the very instruments he values most. Every gain in power, every mastery of natural forces, every scientific addition to knowledge has proved potentially dangerous, because it has not been accompanied by equal gains in self-understanding and self-discipline.

Self-understanding, in the sense of understanding the place of humankind in the ecosphere, is a significant obstacle to attaining a sustainable society. Kenneth Boulding, the distinguished economist, Roderick Nash, the historian, and several others have described what they call the frontier mentality which seems to pervade the industrialized nations of the western world. Such a mentality is characterized by a belief system having three components:

- That the world has an unlimited supply of resources available for human consumption;
- That humans are apart from nature rather than a part of it; and,
- That nature is something to be conquered.

Belief systems change, usually quite slowly, and the frontier mentality must—the more rapidly the better—for it places humankind at odds with nature, and in so doing, sows the seeds of its possible demise. Indeed, a more appropriate belief system for the world today would be the frontier mentality stood on its head:

- That the supply of resources in the world is limited and must be shared with all living things;
- That humans are a part of nature and subject to its forces;
- That the creative and controlling forces of the universe—which we summarily call nature—must be recognized as being unconquerable, that they are only capable of being understood and successfully harnessed in nondestructive ways, like when the wind is used to propel a sailboat.

Photo 2: Humans are partners with nature.

Gains in self-discipline were a second failure identified by Mumford. Self-discipline in consumption has already been mentioned, but the gains must go much deeper, more philosophical.

George Will, the columnist, wrote a recent editorial titled "Too Much of A Good Thing?" In it, after asking rhetorically whether there can be too many individual rights, he responds: "Yes, when every social problem is presented as a clash of rights, and all advocacy is couched in the language of rights. . . ."[10] He continues:

> The exaggerated absoluteness of American rights talk implies that Americans are too childish or volatile to be trusted to respect rights that are subject to reasonable limitations. Our hard-edged rights talk slights the grammar of cooperative living, and slights the art of building coalitions by achieving compromises. The language of rights—universal, unalienable, inviolable—leaves no room for compromise.[11]

If a democratic society is going to endure, a balance must be struck between individual and community rights. With rights come responsibilities, and hence, a comparable balance must be

established between individual and community responsibilities. Society has the responsibility to protect individual rights, and individuals have a responsibility to contribute to the community, to be aware of and concerned about the impact of one's actions on others. These things go hand in hand, for, as was said long ago, Liberty without virtue will collapse, and of course the corollary, Virtue without liberty will become despotic.

As old and as simple and fundamental as these thoughts are, they seem to have been forgotten in recent years in the United States. Individual rights are being vigorously pursued at the expense of the rights of the community; they also are being claimed with little recognition of any concomitant responsibilities. They are the underlying reasons for the controversy over insider-trading on Wall Street, the savings and loan scandal, and the rip-off of pension funds in mergers and acquisitions by some unscrupulous companies. They underlie several environmental and natural resource issues like biological diversity, wetlands, and water use.

Recently, I was part of a comprehensive critique of national forest planning, which involved my participation in seven regional and two national workshops in which over 180 people, representing a spectrum of interests, participated.[12] All had experience with national forest planning. One of the things that stands out in my recollection of these meetings was the routine assertion of individual rights.

And the remedy may have to go beyond education. In many countries, including our own—and specifically with regard to public lands—individual rights may have to be restructured and perhaps even redistributed, for we seem to have reached an impasse.

A final obstacle to a sustainable society is a recent, unfortunate development in our political institutions in the United States. E. J. Dionne, Jr. authored a very interesting book titled *Why Americans Hate Politics*, published earlier this year. He wrote at one point:

> Most of the problems of our political life can be traced to the failure of the dominant ideologies of American politics, liberalism and conservatism. . . . [They] are framing political issues as a series of false choices. Wracked by contradiction and responsive mainly to their various constituencies, liberalism and conservatism prevent the nation from settling the questions that most trouble it. On issue after issue, there is consensus on where the country should move or at least on what we should be arguing about; liberalism and conservatism make it impossible for the consensus to express itself.[13]

To an unusual and alarming degree, the test of public programs today is not the net public benefits they provide, but the extent to which they conform to either of the two current dominant ideologies of liberalism and conservatism: ideologies that were essentially shaped during what Dionne calls "the cultural civil war of the 1960's." Similarly, the test of political candidates and judicial appointees is not their qualifications in terms of

education, training, experience, and accomplishments in public service, but ideological conformity, or "character," as it is euphemistically called.

The result is that little is accomplished. Divisive, emotional issues such as flag burning, school prayer, and abortion are simply reopened and argued over and over again. The purpose of democratic politics is to solve problems and resolve disputes. It is about what Arthur Schlesinger called "the search for remedy." The course we are currently on offers little in this regard.

Our federal political institutions are in disarray and in need of reform. The test of ideological conformity must be scrapped. Its fruit is bitter: inflamed rhetoric, negative campaigning, politicized nominations for judicial appointments, character assassinations, and, worst of all, government inaction on a host of serious problems that confront the nation—drugs, poverty, crime, urban decay, education, health care for the poor and aged, a stagnant economy, unemployment, aging infrastructure, a low rate of capital formation, and environmental degradation.

We as citizens must put aside our loyalties to current political leaders and apply a different test: the extent to which each of them is resolving priority problems of the nation. Then we must vote accordingly.

We probably should also force a reform of political campaign financing, and we might consider seriously limitations on terms of office.

We must compel resolution to the domestic problems confronting the nation.

I would point out that I have placed both of these last two obstacles at the door of the United States, and I have done so purposely. The United States is key to whether humankind develops a sustainable society. Today, it stands alone as a world power. But it also plays a leading role in the environmental degradation of the world. It has only 4.8 percent of the world's population, but produces one-third of its pollution and solid waste. Paul Ehrlich makes the point differently. He wrote:

> [A] baby born in the United states represents twice the destructive impact on Earth's ecosystems and the services they provide as one born in Sweden, 3 times one born in Italy, 13 times one born in Brazil, 35 times one in India, 140 times one in Bangladesh or Kenya, and 280 times one in Chad, Rwanda, Haiti, or Nepal.[14]

The reason, of course, lies in the volume of our consumption, the kinds of things we consume, and the kinds of technologies we use.

I have gone far beyond the Forest Reserve Act of 1891 this morning, left behind national forests and national parks, user groups, professional societies, and universities. I have taken a broader view because the apparent extent and rate of environmental degradation of the world compels a re-evaluation of what we are doing, what we have done, and what we ought to do.

We struggle with conventional thoughts, old and familiar words

like nature, and past accomplishments when we consider the world as it has come to be: smaller, more complex, interdependent. No longer can we isolate ourselves individually or collectively from the understanding that human activities have a profound impact on the planet because of population size and growth rate and certain technologies that are being used. The ecological whole that is the planet is inseparable from ourselves. We are part of it. Everything we do affects it.

Choices are necessary and will continue to be made regarding how we live our lives individually and socially. They will be made in the context of an interdependent ecosphere. And their success or failure must be considered in this larger context.

So should past accomplishments such as the Forest Reserve Act of 1891. It made a difference: ending a policy of systematic disposal of the public domain and the general perception of a nation having unlimited forest resources; providing a giant step in the conservation of natural resources and preservation of our priceless natural heritage; establishing a land ownership that is unique in the combinations and kinds of forest resources provided the American people.

What could be done here that would lead to a comparable celebration one hundred years hence?

Consider please steps that would lead to a sustainable society, not only for Flagstaff or the Southwest or the nation, but for the whole world. Consider steps toward a society that lives within its natural limits, that lives in harmony with other species, that lives with the land, not struggling against it.

For if such steps are not soon taken, I am not sure what kind of celebration there might be one hundred years hence, not sure there would be much to celebrate.

NOTES

[1] Gifford Pinchot, *Breaking New Ground* (New York: Harcourt, Brace and Company), p. 85.

[2] 26 U.S. Stat. 1095.

[3] Samuel Trask Dana, *Forest and Range Policy* (New York: McGraw-Hill, 1956), p. 101.

[4] Information on the names, dates of establishment, locations, and acreage of the reserves is taken from: Norman Wengert, A. A. Dyer, and Henry A. Deutsch, *The "Purposes" of the National Forests: A Historical Re-Interpretation of Policy Development* (Ft. Collins, Colorado: Colorado State University, 1979), pp 41-42.

[5] Lester R. Brown, "The New World Order," in *State of the World 1991,* Lester R. Brown, project director (New York: W.W. Norton, 1991), p. 7.

[6] Cf. Lester R. Brown, Christopher Flavin, and Sandra Postel, "Picturing a Sustainable Society," in *State of the World 1990,* Lester R. Brown, project director (New York: W. W. Norton, 1990), pp. 173-190; Daniel D. Chiras, *Environmental Science: Action for a Sustainable Future,* third edition (New York: Benjamin/Cummings, 1991), pp. 12-15, 454-466; G. Tyler Miller, Jr., *Environmental Science:*

Sustaining the Earth, third edition (Belmont, California: Wadsworth, 1991), pp. 28-32, 463-465.

[7] Personal conversation with Durward L. Allen, October 16, 1991.

[8] Committee on Forestry Research, *Forestry Research: A Mandate for Change* (Washington: National Academy Press, 1990), p. 1.

[9] *Ibid.*, p. 27.

[10] George F. Will, "Too Much of a Good Thing?" *Newsweek*, September 23, 1991, p. 68.

[11] *Ibid.*

[12] William E. Shands, V. Alaric Sample, and Dennis C. Le Master, *National Forest Planning: Searching for a Common Vision* (Washington: Forest Service, U.S. Department of Agriculture, 1990).

[13] E. J. Dionne, Jr., *Why Americans Hate Politics* (New York: Simon & Schuster, 1991), p. 111.

[14] Paul R. Ehrlich and Anne H. Ehrlich, *The Population Explosion* (New York: Simon and Schuster, 1990), p. 134.