SESSION 2
Leopold’s Legacy -- Actual and Potential --
in Natural Resource Management

Friday, April 3rd, 2009

This panel strives to deconstruct the implications of Aldo Leopold’s writings and actions on the field of resource management. Considering the moral imperative of the land ethic, how can contemporary managers abide Leopoldian principles while utilizing natural resources? Could it be that environmentalism as we know it is dying, and a new agrarianism is rising in its place?

Panelists
Gus Speth
Os Schmitz
Harry Bader
Michael Bean
Pat Leavenworth
Zygmunt Plater
Courtney White

GUS SPETH:

This program is moving from one distinguished panel to another all day, and we’re just delighted to have this next group as well. To introduce the subject, I’d like to introduce Professor Os Schmitz, one of our most distinguished faculty members, an ecologist who has a deep interest in these issues. He also doubles as our Associate Dean for Academic Affairs. Os, thank you for your moderation of this group.

OS SCHMITZ:

Thanks very much, Gus. The way I thought I’d run this session looking at Aldo Leopold’s legacy, real and potential, in using his ethics and philosophy in natural resource management, is by giving a few introductory remarks about some things that I think would resonate among this crowd, and then letting the individuals on the panel introduce themselves and give a brief presentation,
followed by some discussion that’s among the panelists and open to the audience.

So, to begin with, as Gus said, I’m an ecologist in the school. I have a deep interest in food web ecology, species interactions, and how these influence ecosystem processes. I was introduced to this whole area as an undergraduate student. My very first ecology course, the professor in the class said the required text for the first month is *A Sand County Almanac* with *Essays From Round River*. That was many millennia ago, and it has really stuck with me since and had a profound influence on the way I look at ecology.

Speaking to the issue of natural resource management now, I went through *Essays From Round River* and picked three themes that I think Aldo articulated, and he was ahead of his time in that respect. If you think about the whole evolution of natural resource management, in North America especially, we’re finally getting to where Aldo said we should be, but we really don’t have a lot of the science yet to support that, and we really need to do a lot more work. So, I’m going to read some passages from three sections, and I think you’ll see where I’m driving at.

So, the first one - and this one has always had probably the most profound influence on me – is from “Round River”: “The outstanding discovery of the 20th century is not television or radio, but the complexity of the land organism.” So, he’s really looking at land not just as a piece of dirt, but it’s the biotic components and the abiotic components. “Only those who know most about it can appreciate how little is known about it,” and that’s still true today.

“The last word in ignorance is the man,” and I should say person because the times have changed, “who says of an animal or plant, ‘What good is it?’ If the
land mechanism as a whole is good, then every part is good. If the biota over the course of eons ..., and here he has a profound sense that evolution matters. He has a very Darwinian perspective on this, too. “If the biota over the course of eons has built something we like but do not understand, then who but a fool would discard the seemingly useless parts? To keep every cog and wheel is the first precaution of intelligent tinkering.”

And, again, you know, we are trying to be intelligent tinkerers when we do land management and natural resource management, but we need to take more of a holistic perspective.

Then, from the “Land Pyramid” essay, “Land is not merely soil; it is a fountain of energy flowing through a circuit of soils, plants and animals.” Food chains. Right away he recognizes that there are species in these systems, but they’re connected. There are dependencies. “Food chains are the living channels which conduct energy upward. Death and decay return to the soil.” So, he’s also recognizing it’s a closed system in the sense that you have to have recycling to maintain a sustainable system.

“The lines of dependency in food and other services are called food chains.” So, here he also talks about services and hints that natural ecosystems provide environmental services, and that’s the reigning issue right now in a lot of ecosystem science and conservation, looking at the biota and the environmental services that ecosystems provide. So, he was 50, 60 years ahead of his time talking about these things as services.

And the final issue that I want to talk about, and this really gets at the heart of what we’re trying to do right now in this day and age, it comes from the essay “Substitutes For A Land Ethic.”
One of the basic weaknesses in a conservation based wholly on economic motives is that most members of the land community have no economic value. And that’s the central struggle right now in conservation. How do we value ecosystem services not just simply for financial return, but understand that market forces cannot really accommodate a lot of these issues?

“Creatures are members of the biotic community, and it strictly depends on its intensity. They are entities to maintain. When one of these non-economic entities is threatened, if we happen to love it, we invent subterfuges to give it economic importance.”

And so, what he is cautioning against here is giving primacy over our favorite species and creating reasons why we should protect them. What he’s arguing again ethically is that we need to think about the whole integrated system.

Now, the panelists that have been convened here are all individuals who have thought about how we go about doing land management, how we integrate species, ecology, into land conservation issues, and have approached it from different ways, some legal, some incentive based. But I think they all have embraced Leopold’s ethic: there isn’t just one solution, and we need to reach a holistic perspective in our ability to manage natural resources.

So, I’ll start with Zyg. He can introduce himself.

**ZYGMUNT PLATER:**

I’m honored to be back at Yale and hanging with Michael Bean and Gus Speth. I was going to start talking a little bit about endangered species quoting some
beautiful language from Aldo Leopold, “The Green Fire,” and “The She-Wolf’s Eyes,” but I don’t have time.

I discovered, really, I was invited here because I have the great honor and the grievous curse of having defended a two and a half inch little fish, the snail darter, an endangered species, a number of years ago. The young people here in the room may never have heard of it, but their parents have, and so has Rush Limbaugh and George Will ...

[LAUGHTER]

Endangered species - obviously Leopold cared about endangered species, ecological minorities. He said, “We stand vigilant guard over works of art, but species representing the work of eons are stolen from right under our noses.”

The Endangered Species Act is the focus that I will bring, having litigated that, but I think it’s important to note that endangered species in the realm we saw in our last panel is not just a little anomalous niche. There’s a lot, as Thoreau would have said, that we could do traveling with an endangered species. I’m looking at three different elements, focusing perhaps on the political realities of endangered species.

Three spectra that cut in and pick up on Os’s themes, but also pick up on Leopold’s. The first is the difference between focusing upon individual species and upon entire ecosystems. The second is the difference between the perspectives of a local community versus the perspectives of overview observers upon particular public policies.
And the third is the polarity or spectrum referred to earlier in these sessions, between ethics as a basic motivation for what we do, and utilitarian motives.

You can probably foresee how endangered species issues reach all three of these paired distinctions, and how in each case the realities of government are likely to intrude upon the ideal.

Government was necessary, Leopold knew, but he knew that it wasn’t very good, and he hoped for better government.

So, this is *Percina tanasi*. You can hear the tanasi part of it -- two and a half inches long, a tiny perch, endangered. And we focused upon the individual species because that’s what the Endangered Species Act is. It focuses, and I think Michael may talk a little bit more about that.

This fish was threatened by a dam, but it wasn’t just the fish, but obviously it was an entire ecosystem. That shows you that Tennessee didn’t have enough dams in 1973.

[LAUGHTER]

There were 68 of them, and TVA desperately wanted to build another. Obviously the first two dozen probably made sense. But from there on, the building of dams, as one TVA friend told me, was driven by male menopause.

[LAUGHTER]
And so, the blue dot is the Teleco dam. The last 33 miles, everything there is dammed. Some of it’s flat land. So, it’s a long reservoir, but that blue dot is the last place.

To justify it, TVA said, “We will condemn 340 farm families, not to flood most of them.” Only 12,000 acres would be flooded. But 60 square miles of family farms would be condemned to resell to industry at a profit where there would be a fictitious city that would be built to bring thousands of jobs. If you environmentalists care about poor people, you’ll forget about this fish.

But this is the ecosystem, a river that was just incredible. I could wax eloquent, but we don’t have time - just an amazing place. That fort, though, was built by the Cherokee and the Brits. There was, right under us where this camera shot was taken from, Echota, the Jerusalem of the Cherokees. In other words, an ecosystem is not just the physics. It’s also human elements.

As Aldo Leopold understood deeply, to be sensible we as public policy analysts and advocates should be able to focus on an entire ecosystem, which, as you could see from that prior map, was seriously endangered along with the fish. But that just doesn’t work in the realities of our current legal system. Ecosystem protections were considered so dangerous to the standard porkbarreling congressional projects and programs that the U.S. Biological Service created by Bruce Babbit was soon afterward unceremoniously terminated. Defining ecosystems is also very difficult. Ecosystem dynamics are subjective in their parameters, so litigating ecosystem protections is likewise very difficult. Thus the focus of the Endangered Species Act and of our attempt to block a diseconomic dam that threatened the darter — as so often in modern conservation law — had to be upon the individual species.
The local people knew well that this pork barrel project and its marginal justifications were foolish, that the development of their land by industry was a joke in economic terms, and that the river was a treasure, its ecology endangered and incredibly important. Local people are typically ignored when environmentally destructive projects are promoted. Localism can be both functional and dysfunctional in terms of wise public policy. Local people, as Leopold realized with dismay, could nail endangered hawks to their barn doors. But Leopold also recognized the many occasions when the wisdom must be honored that came from those who “feel the soil between their toes.” You need that local wisdom within your overview analyses.

Many in the snail darter’s local community, of course, knew and loved the river and its rich agricultural valley without understanding ecology. This is Asa McCall, who had been holding off TVA for approximately a dozen years with that dog and his shotgun, and his wife, ferocious Nell.

[LAUGHTER]

We called a little meeting with the farmers, and said, “There’s a phrase in the Endangered Species Act that we’ve discovered might prove that this project is illegal.” These people — the farmers and other local allies — had fought long and hard against this dam, and lost. Their hearts were fairly broken. But Asa took off that hat you see right there, and said, “I’ve never heard of this fish before, but if it can save our farms, I say we’ve got to give it a try,” and he passed it around. We got $29 in that hat that evening. That was the court filing fee.

[LAUGHTER]
This is the statutory provision. It has teeth, although I admit it was written so as to be largely incomprehensible to lobbyists and the members of Congress who voted on it almost unanimously.

This is the little fish. This is Exhibit 12 at trial... [BELL RINGS] ... Oh, Lord!

[LAUGHTER]

Okay, we’ll rush. In any event, the God Committee was created, and found that the local people knew rightly that this project which had been pushed by all the government agencies and the Congress and the TVA made no sense. The utilitarian conclusion by one Committee member, the Chairman of the President’s Economic Advisors, was that “here is a project that is 95 percent complete by the time we finally got the injunction and if one takes just the cost of finishing it against the total project benefits and does it properly, it still doesn’t pay, which says something about the original design.”

[LAUGHTER]

But the press didn’t cover that remarkable outcome — good ecology making good common sense economics — because the story of the ‘stupid little fish being pushed by extremist environmentalists’ (‘homo-socialists’ as Limbaugh called us which I think was intended as pejorative) [LAUGHTER] simply dominated the way the story was told to the public.

As Justice Powell said in the Supreme Court, “Mr. Plater, what’s this little fish good for? Can you eat it? Can you use it for bait?” and I tried to say, “Oh, no, Your Honor, it’s a canary in the coalmine. It’s a vivid indicator of the value of its habitat.” I said, “As Exhibit 12 would show, the fish is small, elongated, requiring
shallow, clear, cool, highly oxygenated water." And at that point - I always tell my students “Use graphics!” - I had given a stack of the lithograph prints of Exhibit 12 to the Clerk of the Supreme Court of the United States. He jumped up and went down along the Justices’ bench and handed out copies of this beautiful print. I said to myself, “I'll bet I get at least one vote from this little fish’s big brown eyes.”

[LAUGHTER]

Utilitarian thinking is the norm. It’s hard to get political traction for Leopold’s ethic. I guess I won’t have time here to tell the story about the Congressman with genital herpes.

[LAUGHTER]

Congress, I regret, doesn’t seem to care about an ethic, as Professor Warren and Professor Purdy were saying, unless the public does — unless there’s tangible social disapproval of ethically ‘wrong’ things and social imagination of the ‘right’ things. In the snail darter case, ultimately, a congressional majority focused on the media image and didn’t consider the utility of the darter’s case even after the God Committee verdict.

Political realities that often so dismayed Aldo Leopold are what we constantly have to deal with in endangered species conservation policy. You can’t deal with ecosystems, you need to focus on individual species, and thereby we must miss some of Leopold’s most important recognitions.

In terms of ethics, it seems to me that Aldo Leopold recognized that political realities are usually and dysfunctionally shortsighted. But it also seems to me
that Wendell Berry, Bill McKibben, Aldo Leopold, and the carbon cycle are eventually going to make Congress and American government, through us, recognize that such ‘now/now’ thinking has to end. We inevitably must take thoughtful account of long-sightedness as well as shortsightedness.

[APPLAUSE]

OS SCHMITZ:

So, Pat, why don’t you introduce yourself and ...?

PAT LEAVENWORTH:

I’m Pat Leavenworth, a 1979 alumna of The Yale School of Forestry and Environmental Studies and the State Conservationist for the Natural Resources Conservation Service in Wisconsin - one of those "alphabet conservation" agencies that Leopold spoke of so "fondly" in his writings. He was both a fan and a critic of the work that we would do back then with our structures and our roads and everything else needed to put the land back in place after farmers had messed it up.

The gentleman in this photo is not Aldo Leopold, but Hugh Hammond Bennett who is the first Chief of the USDA, Natural Resources Conservation Service. He actually was the one to bring to light the whole problem with the Dust Bowl in the 1930’s. He worked with President Roosevelt to get funds for conservation. He testified as the dust cloud from Black Sunday came over the nation’s capital and darkened the halls of the Senate Chamber. He timed it that way, and said, “There, sirs, goes Oklahoma!” He received $5 million and was able to do some demonstration watersheds throughout the United States. The first one was Coon Valley in Wisconsin.
This is what Coon Valley looked like in 1933 -- wheat grown on very steep slopes followed by dairy. Planting and grazing steep slopes on the fine loess soils was bad land use just as Hugh Hammond Bennett had identified as the cause of the Nation's Dust Bowl.

And this place is where the Natural Resources Conservation Service and Aldo Leopold came together. Leopold and others at the University of Wisconsin requested Coon Valley to be the first watershed demonstration project in the country. And he and his sons, Luna and Carl worked there. He was the one who helped inject into the nightly fireside sessions ideas on how to solve all the natural resource problems in the watershed. They were inventing soil conservation as they went, never having done this before on such a scale. And Aldo instilled the wildlife element into the plans that they did there. He wrote about it in his essay: "Coon Valley: An Adventure in Cooperative Conservation."

So, they put in contour strips and waterways, and forested the steep slopes. There were over 400 farmers who participated. It was a two year project. About 95 percent of the land was treated. This was private land with very cantankerous land owners who were very suspicious of the federal government.

This is a National Geographic photo that was taken probably about seven or eight years ago. The staff called up our local office and said, “What is going on with the land?”

This is another aerial photo, recently taken by National Geographic. So, we have now the same practices in place that were installed back in 1933. The community is a culture of conservation. Their Sesquicentennial Parade featured the State Conservationist in a pink Elvis Presley Cadillac Convertible along with some of the original people who worked in Coon Valley. And the big production
at the end of the day was a symposium on what happened in Coon Valley when they proudly did their conservation work.

Coon Creek, which was muddy and had flash floods at least three to five times a year is now a Class I trout stream. And these are some photos taken as we progressed with conservation in 1934 and 1967.

These are the Haugen Brothers. They’re Norwegian bachelor brothers. Their father sat at the table with the Coon Creek planners in 1933. They still have the same conservation plan that was given to their father in 1933 and are following it without government incentives.

And the lesson here - Aldo Leopold was again a big influence in the thinking of the planners at this time - was to influence the private land owners in Coon Valley to do the right thing by the land. And the fact that the whole community changed its culture was a sign of what Aldo Leopold had said: that the land ethic evolves within the minds of the people within a community. And in Coon Creek they hold this ethic to this day.

I will say that not all of our watersheds in Wisconsin are such prime examples of conservation. We hold the Coon Creek Watershed as our vision for where we want to be as a private lands agency, and it's really about Aldo Leopold's early influence on my agency. Paul Johnson, our Chief of several years ago - Curt Meine referred to his visionary work, *The Geography of Hope* - actually took his management team to the Shack overnight and sketched out the chapters in the sand along the Wisconsin River for this publication. People make pilgrimages to the Shack all the time to refresh their conservation minds, by the way. We take many groups for tours there, and to Coon Valley.
Some of the principles of Leopold that we carry through and hope to perpetuate into our next generation of conservationists are, one, to keep it simple, minimize the bureaucratic rules that government "alphabet conservation" can often bring. Two, use the watershed approach to combat the evils at their source. Three, cooperative conservation should bring in all the partners. In those sessions in Coon Valley, we had Extension, wildlife specialists, Forest Service - all of the expertise that we needed to get the job done. Four, utilize the multiple resource approach to address the soil, water, air, plants, animals, and humans.

And then, five you must know the resource you need to protect. We are in charge of the soil survey. We guard that database for everyone to use so that they can know that particular resource and know how to use it wisely.

And then, six, reward those who do the right thing. Many of our programs, as Leopold aptly criticized, sometimes pay those who had been poor stewards to fix the resources that they had damaged. There’s a progression in the farm programs. Now we’re going to continue with another version of the Conservation Security Program called the Conservation Stewardship Program to reward those who are doing the right thing. And Paul Johnson, the NRCS Chief who put the Geography of Hope together, was a big proponent of this particular approach to land conservation. So, this is where we move into the future. Thank you.

[APPLAUSE]

HARRY BADER:
Thank you. My name is Harry Bader. As a public lands manager in Alaska, my debt of gratitude to the contribution of Aldo Leopold is in his reconciliation of the three primary competing theories regarding the human relationship to the land. And I think it’s important that not only in his writing but as a forest supervisor in
New Mexico, his decisions laid a foundation and pragmatism that is as helpful today as it was visionary in 1913.

I mean, today we know in retrospect that we can recognize the three competing ideas at the time of Leopold. As our nation moved into the 20th century, there was Muir, his eloquent and passionate advocacy of preservation. We have Gifford Pinchot who championed utilitarian conservation not only as a tool to protect the earth but to achieve social justice. We had Silas Holcomb in Nebraska who argued that it was our duty to reorder our earth so as to provide bounty and security for both the human body and soul.

All effective natural resources management today recognizes that we simultaneously build these three philosophies into our decisions every day, and that we bring these three philosophies onto the landscape. And it’s this approach that I think Leopold epitomized when he began to recognize that with a philosophical construct within that, pragmatism and muddling through was a necessity and a good thing because his recognition that we will never understand all of the parts. The only thing that makes us professional is that we continue to strive to get it better.

I think that on the Carson National Forests, the day-to-day decisions that Leopold made give hints every bit as much as his better known writings that good management was constantly mixing these approaches. And I’d like to quote Professor Graham Berlyn here at the Yale Forestry School who recently wrote an excellent book review on Leopold, said that Leopold was not about stopping the axe, but rather guiding the axe on when, how, and why to chop. And I think that’s the invaluable lesson that he brings us today.
I can think of two examples of bringing up Leopold in my professional life. As the manager of 40 million acres in the Arctic and Boreal Forests of Alaska, I had to think about what Leopold’s writings were, what Pinchot talked about, and what Muir championed. And probably the best example is decisions involving a human managed wild land fire system on the Alaskan landscape, our desire to try to draw lines that allowed the natural conflagration of lightning and drought, that continued the ways of ecosystems from time immemorial while trying to protect human life and property as well as create economic opportunity. We’re constantly balancing preservation, conservation, and exploitation to achieve these goals. Perhaps a more recent example through our consulting firm is the attempt to design ecosystem restoration in Iraq, which was intended to simultaneously bring back a people and an animal and plant community, to a landscape that had been inhabited by these same people for ten millennia, and that we’re going to do that through the nourishment of water, back again after having been drained. It was a messy business.

But I take great comfort that it’s not apocryphal. We actually did have conversations where we would invoke Leopold and Pinchot and try to find analogies in the words of Shia and Zoroastrian and Sufist poets. It was very exciting to have those conversations. I think Leopold would have approved.

But, at the end, I’m also an Alaskan. And we are at Yale, so I’d like one more slide because I want to mark another centennial which is also instructive to us. And that is last month marked the centennial recognition of the start of the Ballinger affair, which drove Gifford Pinchot out of public life and into exile for a while. And he did so because he stood for scientific integrity and personal principle and against government corruption about the energy and land interests. In this case, it was energy leases for coal that was going to destroy the state of Alaska because government was not transparent, and he felt that the acts of
publicity and public testimony and public participation were a necessity of good government and the management of ecosystems. I think that Leopold, knowing of the Ballinger affair - because you couldn’t be at the Yale School of Forestry in 1909 and not be familiar with it - would have approved. Thank you.

[APPLAUSE]

COURTNEY WHITE:

My name is Courtney White. I am Co-Founder and Executive Director of The Quivira Coalition in Santa Fe, New Mexico. And I took my homework assignment to heart, which was to try to provoke some discussion and perhaps some debate. So, I’m going to float a thesis past you and try to support it in five minutes. I don’t know if I can, but I’m going to give it a whirl.

And by way of context, let me say that I’m a former Sierra Club activist in New Mexico who’s now a dues paying member of the New Mexico Cattle Growers’ Association, probably not pleasing both organizations in the process of doing that. The Quivira Coalition is a conservation group that produces local grass-fed beef outside Santa Fe.

So, my thesis is I believe environmentalism is dying and will be replaced within 15 years by a resurgent agrarianism focused on food and led by youth. I’ll start with two metrics. The first is condition of the planet. As we all know, the consensus among scientists and many others is that the global environment is deteriorating to the point where human and non-human wellbeing is in jeopardy. All important trend lines are pointing downward for the good stuff and sharply upward for the bad. And with climate change now underway, all those trend lines will likely steepen.
Environmentalism is not the cause of the situation, of course - far from it - but if the goal of the movement had been the prevention of these trends, I think we ought to look at it as having abjectly failed.

The second metric is a slow but steady dissolution of the bond between people and nature. This bond, once strong, has eroded over the years to the point where most Americans have just a fleeting relationship within the actual world today.

Aldo Leopold fretted about this decades ago when he wrote in the *A Sand County Almanac* that where were two spiritual dangers in not owning a farm. One was supposing that breakfast came from a grocery and that the other, that heat, came from our furnace.

These dangers came true. Today Americans rarely think twice about where their food or their heat come from. Worse, as author Richard Louv has written, the dissolving relationship between nature and Americans is especially pronounced among children today, and therefore a terribly worrisome trend. Environmentalism did not cause this downward trend either, but neither was it effective in reversing or stopping it.

So, my opinion: the movement is dying for three main reasons. One, the first is Wendell Berry’s longstanding criticism of the environmental movement for having never developed an economic program to go along with its preservation and health programs. It had no economic retort, in other words, to industrialism. And without a practical economic alternative, it gave the average American no alternative except to participate in a destructive model of economic growth.
Out west, this echoes all of the statesmen’s famous complaints, later a lament, that westerners had not yet managed to create a society to match the scenery.

In my experience in the Sierra Club, activists considered environmental problems to have environmental solutions, largely ignoring their economic sources. This meant we spent too much time and energy on symptoms instead of causes. Leopold flagged this problem as well when he cautioned us against trying to fix the pump without fixing the well. We didn’t heed his advice, however, and for over 50 years focused our attention on the pump while the well ran dry.

Second, environmentalism is dying because it left the land behind. “The movement lost a feeling of the soil between our toes,” to quote Aldo Leopold, meaning it lost an intimate understanding of how land actually works.

As a result, it lost what Leopold described as the conviction of individual responsibility for the health of the land. He wrote, “Health is the capacity of land for self renewal. Conservation is our effort to understand and preserve this capacity.” But by losing the feel of the soil between our toes, the movement lost the ability to understand, and thus preserve, land health, the foundation of all health, including spiritual and material health.

In my experience, while many environmental activists could recognize poor land use and worked rightly to correct it, they lost an understanding of good land use, particularly those for-profit activities such as logging and ranching, that could be conducted sustainably. Instead, as the movement drifted away from land, it began to equate play, not work, with the highest and best use of land, especially in the public domain. It put all its economic eggs in a basket labeled recreation. And as historian Richard White has observed, play wasn’t up to the task.
The third reason environmentalism is dying in my opinion is because it grew increasingly reliant on alarmism as a chief tool of persuasion. Leopold warned us about this as well, writing, “I have no hope for a conservation born of fear.”

In a statement that could have easily been written today instead of over 70 years ago, Leopold said, “Conservationists have adopted the pedagogical method of the prophets. We mutter darkly about impending doom if people don’t mend their ways. Doom is impending, all right. No one can be an ecologist, even an amateur one, without seeing it. But do people mend their ways for fear of calamity? I doubt it. They are more likely to do it out of pure curiosity and interest.”

Which brings me to the new agrarianism, indisputably on the rise. Across the nation there is a resurgent interest on local, family-scale, sustainable food, fiber, and fuel production, which began slowly in the 1980s and has gathered a great deal of speed recently. Local food is the focus of and key to this new movement, but it’s more than just food systems. It’s collaborative watershed groups focusing on restoring health through the innovative use of livestock to combat noxious weed infestation. It’s the carbon sequestering practices of good land stewardship, and much, much more.

Agrarianism is on the rise for a simple reason. It corrects the failures of environmentalism that I described, and thus more effectively addresses the challenges of the 21st century.

First, it’s economic by implementing sustainable profit and work at local scales, it creates a viable alternative to the industrial economy. It’s not theoretical. It exists, and it works.
Second, by definition, it puts our toes back in contact with soil again. The new agrarianism’s emphasis on stewardship, coexistence and resilience requires daily contact with the earth, digging, planting, herding, sawing, working.

Third, instead of relying on fear, agrarianism sparks curiosity and interest. It sparks joy and laughter. It requires care and affection and love to succeed, including affection for one another. It gives and not merely takes. But, most importantly, it’s on the rise because it’s capturing the attention of young people. I see this as I travel around. And where young people go, the rest of us sooner or later will follow.

With that, I’ll stop.

[APPLAUSE]

MICHAEL BEAN:

Good morning. I’m Michael Bean. I’m a lawyer with the Environmental Defense Fund. And as Professor Plater has indicated, I’ve been in this business of trying to conserve endangered species for a very long time.

The task of conserving rare forms of life is what Leopold called the crux of conservation policy. And what I want to suggest in my five minutes is that the evolution that is discernable in his thinking about conservation policy is an evolution that I think is underway with respect to how we approach endangered species conservation in this country.

A lot of us have quoted from Aldo Leopold today. I want to quote briefly from Robert Louis Stevenson, who said that “To hold the same views at 40 as we held at 20 is to have been stupefied for a score of years.”
I quote him because that’s a quotation that Leopold carried around with him in his notebooks. And I think it may at least in part explain Leopold’s own progression of views over his life.

Just to illustrate the progression of Leopold’s views, one of the things he said in 1924 which is not often quoted, at least in my experience, is that “ultimately the use of all resources will have to be put under public regulation regardless of ownership,” a philosophy that in some respects represented the approach the Endangered Species Act took some 50 years later when Congress enacted it in 1973.

The Endangered Species Act dealt not only with what public agencies like TVA did in the Tellico dam case that Professor Plater described, but it also regulated land use activity by private land owners, and did so potentially in a very far reaching way.

But a decade later, a decade after Leopold wrote those words, he described land owners who had rare species on their property as the “suppressed minorities” of conservation. And I think it was clear to him by then that having a rare species on your land was at least a potential hardship or a potential handicap.

And in much the same way, I think our efforts in these last few decades to conserve endangered species have brought to light the fact that some of the land owners, the very people whose participation is most needed to conserve species, to achieve our goal of recovering endangered species, have been somewhat alienated or disenfranchised by the perception that having an endangered
species on their land is not an asset but rather a liability. And that has vastly complicated the task of trying to conserve rare species.

Leopold in a late essay summarized his view of the history of conservation in the U.S. as follows. He said, “We tried to get conservation by buying land, by subsidizing desirable changes in land use, and by passing restrictive laws. The last method largely failed. The other two have produced some small samples of success.” So, it was clear by late in his life that he had largely abandoned his view that the use of restrictive laws, as he had advocated in the twenties, was likely to be successful in achieving conservation ends.

Ultimately, Leopold said that “when a farmer owns a rarity, he should feel some obligation as its custodian.” That is, if you are a landowner and you have on your land a rare species, a rare habitat, or a rare wildflower, he felt that the land ethic did impose upon that land owner some sense of obligation to serve as a custodian for that. But he added that “a community should feel some obligation to help him carry the economic cost of custodianship.” And I think those two things have to be kept in mind. That is, Leopold recognized that while individual land owners may host on their land rare species, the larger community -- and here he’s referring to the social community -- has an obligation to assist that land owner in perpetuating that rare bit of natural biodiversity on the land.

That, of course, presupposes that the larger community cares about these things. And for some of the reasons that Courtney has just indicated, there may be reason to worry that the amount of community concern about these things is lessening compared to what it might have been at some point in the past.

Nevertheless, I think that there has been in the administration of the Endangered Species Act a similar parallel progression of thinking about how to accomplish
the goal of preserving and restoring and recovering rare species, moving initially from an approach that relied almost exclusively upon regulation to restrict harmful activities that landowners might do, and eventually evolving into a recognition that it’s also necessary to offer incentives, to encourage the sort of positive land management that land owners can do.

Some recent evidence of that are administrative changes that began in the Babbitt administration but were actually continued in the last administration to encourage and offer incentives for land owners to manage their lands to host endangered species. Congress just last year passed new tax legislation that creates new tax incentives for endangered species conservation by private land owners, and Congress is expected to address again this year some further tax legislation that would expand those incentives.

So, I think in summary there’s an interesting parallel between the evolution of Leopold’s thinking toward conservation and the way in which our society over the last 30 years has evolved in its thinking toward how we can conserve rare species. Thank you.

[APPLAUSE]

OS SCHMITZ:

So, we have a bit of time for discussion. Based on the discussion and presentations here so far, here’s the rub that I take away from it: we’ve heard arguments that we need public oversight of natural resource management and natural resource policy. Society is becoming increasingly urbanized, and a lot of environmental movements are encouraging that we move into more of an urban setting rather than a rural setting.
So, how do we inculcate a land ethic into a highly urbanized society to get them to appreciate the land as an organism? I'm just curious what your thoughts are on that or whether you have different perspectives.

HARRY BADER:

If I can take a crack at it as having practiced public lands management for quite a while in Alaska, I'm actually an optimist about the connection of society to the landscape and their involvement so long as the public lands process is transparent and allows for opportunity of public participation.

I've got to say that the understanding of the science and the interactions of natural resources by the general public is extraordinary when you take public comment or public testimony when they have letters coming in. Public participation increases our information horizon. It shames us to avoid the vicissitudes of favoritism and bias, and often times exposes our own filtered lenses in a way that I don't think was possible 40 or 50 years ago because the newest understanding of ecology has so percolated into society. As a public lands manager I went in more cynical about the public, and I left exulting in the public and private education system for creating such an informed citizenry. So, I actually don't have the fear of the disconnectedness to society. As a public lands manager who takes public participation, I am amazed at the sophistication and the connectedness. And, you know, I will probably lose several jobs in Alaska to say this, but it was the public far away that saved Alaska from Alaskans many, many times. And I'm one of the people who the public participation thwarted from making a bad choice that I was about to make.

COURTNEY WHITE:

Well, I think you can't take the land out of the land ethic. The question is how to sort of inculcate or foster a land ethic in an urban environment. My first response
is: where is the land? How do folks get access to the land? Unless we’re saying
that an ethic is sending a check to an organization. These are the questions that
Richard Louv struggled with when he looked at children today. He starts his
book - called *The Last Child In The Woods*, which I would recommend folks
read - with a quote from a fourth grader who says, “I like to play indoors. That’s
where the electrical outlets are.”

And so, how do you get a land ethic into a child who wants to play indoors?
Well, the answer, I think, is land. Somehow you connect the urban to the land.
I’m not sure that moving more people into an urban environment to save the land
is the answer. But, you know, we struggle with these questions all the time. How
do you get kids to interface, interact meaningfully with land? But you can’t take
the land out of the land ethic. Somehow urban folks need to get out and about,
as I said, in a way other than just simply recreating on landscapes.

**MICHAEL BEAN:** Just to add to that, I think in the 30 years or so I’ve been in this
business, the question I’ve been most frequently asked is, “What can I do?” And
although our development department wants me to say, “Write us a check,” what
I in fact find myself telling people is, “Take a child for a walk in nature,” because I
think there is this growing disconnect, and fewer and fewer opportunities for kids
to be exposed to the sorts of experiences that I had and I suspect most of my
fellow panelists had as a kid that shaped our attitudes and outlooks and careers,
really. And unless we take some affirmative steps to provide our children and
grandchildren with similar opportunities, I think we will see less and less
understanding of where food comes from, and what nature is all about, and that
in the end will undermine our goals.

**ZYGMUNT PLATER:**
I’m thinking the hope has to come from urban populations thinking about non-urban conditions. And my thought is the blogosphere has got to be part of the way this is going to change. Now, I understand that modern communications are probably transmitting less about Leopold and more about Britney Spears, but the fact is that this generation responds to images, and what Professor Bader was talking about, information which leads to intriguing questions. I’m hoping that that is indeed an area of optimism that a kid in the city can be thinking deeply about issues not only around the United States but around the world by looking at images and information brought in these new ways. Let us hope Leopold would share that hope.

PAT LEAVENWORTH:

Well, in my realm of agriculture - and it’s been mentioned - the concern about safe food has really benefited us in terms of the public’s awareness of where their food comes from, and how it’s grown. They even want to visit and see where it is grown. So, by that token, they are involving themselves in the agriculture industry more so than I think in past decades. And I’m hoping this trend will continue.

There are also individuals. We have someone called Will Allen in the city of Milwaukee who brings children into his greenhouses that he has right there and shows them how food is grown, how soil is formed with is special worms, and he supplies food through the community market - fresh foods - to people who do not have supermarkets nearby. So, little movements like that in urban areas are helping out a lot, too.

OS SCHMITZ:

Would anybody in the audience like to contribute?
**Audience Member:** Urban gardens out-produce industrial farms by a ratio of at least five to one, if not ten to one. I also want to say I have been to two industrial cities that are greener now than they have been for 30 or 40 years because of community gardens. One is Detroit. I just gave a talk on ethnic growers in Detroit. The community-organized gardens there are fabulous, and the kind of ethnic diversity in that community is astonishing. We don’t hear about this. We hear about the auto industry. We don’t hear about the greening of Detroit by local poor people, by nuns, by the new Muslim population that’s moved in, by the African American activists. So, that’s one.

The other is Holyoke, Mass., the first industrial planned city in the United States which was created by the rich white men from Boston who created the textile mills of Lowell and Lawrence that displaced so many Yankee farmers. The Puerto Rican community called Nuestras Raíces has created a network of community gardens that touches 1,000 families. They have children’s gardens for boys and girls. We’re talking about the poorest, most despised inner city community of kids who are gardening from the age of six. They know how to plant seeds. They’re planting organic gardens. So, I just want to say there is hope.

There are thousands and thousands of gardens all over America. I did a talk at the Queens Botanical Garden, which has a Platinum LEED Award. It has a garden on its roof. It’s in the center of Queens, and it is used constantly by that community. So, I just want to put that out there.

I also want to say that I was a delegate to Slow Food in Italy this fall, and the largest contingent was the International Youth Food Growing Movement.
OS SCHMITZ:
Let’s hear from right here -- right here first, ladies first.

[LAUGHTER]

Audience Member:
I’m interested in a discussion on values placed on the land and the importance of economic value placed on the land. Ecosystems as service markets have the potential to bring billions of dollars that don’t depend on annual approval by Congress to the conservation movement. But in order for those to work, they’ll require liquid markets which will require simplification and commodification of these goods. And what we’ve heard is that complexity and diversity is important to resilience. So, I’m just wondering what the dialogue is between the folks involved in this conference and others that you work with, and the regulators and the market actors, the investors.

MICHAEL BEAN:
Well, there’s a huge amount of activity with respect to at least one ecosystem service, which is carbon sequestration. And, of course, that is driven by the perception that there’s going to be a regulatory regime in place that will necessitate reductions in net greenhouse gas emissions, and that might be achieved by various offsets.

With respect to other types of ecosystem service markets, those are far less developed conceptually with the exception perhaps of wetland mitigation banking, in part because of conceptual problems of quantification and things of that sort, but also there is an absence of a driver. There are voluntary markets for various of these services, but in the absence of a regulatory program that creates a need to purchase services, these markets have been slow to take off.
I do think as we understand the potential for payments for ecosystem services to reward good land stewardship, to facilitate land restoration and so forth, there will be more development that is encouraging in this respect. But with the exception of carbon sequestration, these are ideas that have been slow to take off, but a lot of intellectual energy is being devoted to them by groups like Resources For The Future and others.

**OS SCHMITZ:**

Gus?

**ZYGMUNT PLATER:**

Could I just add to that? It seems to me, following up on what Michael says, that ecosystem services will be valued when people who do business plans have to build them in, or want to build them in. And, as you say, commodification is part of the problem. I fear that regulation is often necessary to force ecosystem service accounting into a business plan. And I have to disagree with Courtney there that it seems to me some well placed vivid disasters are often necessary, and alarms about them. Lake Okeechobee - remember when the Kissimmee River was channelized - we suddenly learned that the marsh was straining out all kinds of things as an ecosystem service that was worth billions of dollars. But it took the regulation of the Water Pollution Act responding to the failure of ecosystem services there to make people calculate those back into their business plans.

**GUS SPETH:**

A number of you have addressed the frustration, I think, that everybody who’s been in this business for a while feels: that not more progress has been made, and that we are losing a lot of ground, a lot of land. And so, I want to read you a
quote from Aldo Leopold that he wrote in a letter to a friend of his, William Volt, who was writing a book about the prospects for survival.

He wrote that, “The only thing you have left out is whether the philosophy of industrial culture is not in its ultimate development irreconcilable with ecological conservation. I think it is,” Leopold says.

So, he’s basically raising a much deeper issue about whether we in fact are trying to accomplish our objectives in a system of industrial culture which is not going to let us accomplish our objectives, and that we have to dig a lot deeper and change a lot more profoundly if we’re going to escape the bounds of this culture and deal successfully with these issues.

He goes on to add at the end of this letter, “That the situation is hopeless should not prevent us from doing our best.”

[LAUGHTER]

So, I would love to hear what the panel thinks about that issue.

EL:

I appreciate very much these comments about gardening and farming and all, but in academia I see a big shift during my career from the study of whole organisms to little black box stuff where we’re worrying about cellular physiology and DNA a lot. You can ask why. And I think part of the why is that there’s a lot of research funding promoting that. And I think it’s very important that we look forward to some kind of shift in that. But I think that’s a very important aspect of it. You know, these kids don’t even get out in the field in our biology program. They go
all the way through for a bachelor's and haven't been on a field trip. So, that's a concern.

MICHAE(Be)_L BEAN:

On Gus's question: It's important, I guess, to keep in mind, Gus, that at the time Leopold wrote that, industrial culture was nowhere near what it is today. We didn't have industrial agriculture on the scale we have it today. We didn't have the mega cities we have today. We didn't even have the interstate highway system that has spawned so much growth throughout the country.

So, I do think that is a major challenge. You know the often quoted first precaution of intelligent tinkering from Leopold -- unfortunately he didn't give us the second precaution as to what you do when you can't live up to that first precaution.

In my own mind, I think the task for conservationists is one where the best opportunities remain on what I described as the working landscape, the landscape of ranches, farms and forest lands, where I think it is possible to work with those land owners to influence how they farm, how they ranch, how they conduct their forestry activities so that the land ethic in the broadest sense in which Leopold understood it can be realized. But for that part of the landscape that has in effect been sacrificed to industrial culture, I think we have to recognize that we're way beyond the first precaution and we have to figure out what the second and third precautions really are.

HARRY BADER:

One quick comment is, you know, I enjoy being an optimist. And I'd like to have two comments on what's been discussed here thus far:
One on the question of industrialization and changing this system, and the other on ecosystem services.

I have yet to be involved now with a timber management plan, whether it’s in eastern Afghanistan or a wetlands restoration project in Iraq, or whether it’s a timber sale in interior Alaska, where, in the plan, a discussion for the potential sale of ecosystem service is not built into the prescription. When we were in eastern Afghanistan, we were just talking about a project of mainly yellow cedar with a potential developer, and ecosystem services was intimately involved and integrated into the idea because we were thinking about, well, maybe if we use wood for electrical generation, we can market those carbon credits on a voluntary market. So, something as removed from industrial, peaceful and blissful forest management as eastern Afghanistan is, every step of the way we’re talking about planning for and not precluding the sale of ecosystem services. That’s one thing.

One thing I’m going to say as a kudos to Yale is that the world’s largest forester for ecosystem services and marketing is a Yale alumnus, Mark Wishnie, with Equator International. Their sales mark is approaching the $1 billion mark. And, you know, he graduated from Yale in — what — 2001. So, I mean, that’s success. So, congratulations to Yale and creating people like that.

And then, again, about the disconnect of society with nature, I worry about a romanticism of a prior connection to nature. You know, the comment was made, and I think it’s a very, very good one, but also it could be misleading, that a child of 12 wants to play indoors because that’s where the electrical outlet is. 70 years ago in the United States that child would have worried about the sweatshop that he was going to work in as opposed to the video. And in Tajikistan and other places, those children are worrying about the sweatshops they’re working in now.
And so, I think industrial society liberates us to be more in tune with the land in many ways. We don’t have to mine it like we did 70 years ago. We don’t have to mine it to stay one step ahead. Efficiency and development is also a helpful thing, and knowledge because this industrialization of natural resources builds institutions that helps us to be better informed, better trained, and more forward thinking. And I think that Yale and other institutions should take great pride in what they do. And I think that the Leopold legacy at the end of the day was never pessimistic. I’ve never really known a writing that was pessimistic. It was definitely forward thinking, and I want us to keep being forward thinking.

**ZYGMUNT PLATER:**

Gus, I find my hope for the future in disasters.

[LAUGHTER]

The idea that these will capture the public understanding and imagination. I can tell you that my students from the eastern seaboard really respond to the map that shows what a one-meter rise of the ocean will do to the eastern and western seabords. That, I think, will focus them in a very real way on what Bill McKibben was trying to organize them for.

And the other is: look around us. We’re in the middle of, I guess you could call it, GD2. The Second Great Depression is on us, and let’s hope it doesn’t go there. But people, I think, must realize that the economic forces that Leopold talked about as the antithesis of thoughtful long-term thinking - those economic forces brought us into a mindless, narrow economic disaster. I think there is already a very important reaction constructively against that disaster in which we are still struggling.
PAT LEAVENWORTH:

I’m seeing a lot of hope in our arena in the agricultural landscape. There is a lot of innovation going on in terms of biofuels, in terms of establishing wind generation, on farm solar panels, being able to rotate your cattle using water systems that are powered by solar panels, for example. I’m finding, this year, since this economic crisis has come about, there’s a whole lot more of it going on, just as you were saying.

PETER BROWN (in audience):

I’m really dubious about whether you can fit a Leopold ethic to payment for ecological services, goods and services. And I think we really have to be pretty careful about that because the respect part of Leopold’s ethic pretty much goes out the window when you do that. There are lots of counterarguments, but I’ll just offer three, not to take too much time.

One is, well, of course ecological services -- you can have them, you know, nature a la carte. Right? Maybe you don’t want the whole meal; you’re just going to pick through the parts you want and order that, and that’s all you pay for. So, that would go against his idea of things having to be looked at in an integrated way.

Second, there’s always the chance that if the service is terminated, then there is no value. So, as an example in literature of valuing a small forest near a coffee plantation because the bees lived in the forest they pollinated the coffee plantation, therefore the forest had the value because that’s where the bees like to live. So, when the world coffee price plummeted, the plantation was cut down, therefore the forest has no value anymore. So, we’ve really got to be careful about this.
The third is it ignores technological innovation. So, the famous case is the Catskills are preserved to safeguard the New York reservoirs. But if we’ve got a better technical solution to water filtration, then we can go ahead and build shopping malls and houses all over the Catskills. So, I think this is something this group should really ponder with a lot of caution.

**Mark Bradford (in audience):**

My question is about using services or ethics to preserve ecological diversity. And so, by and large, the functioning of the land is carried out by organisms we can’t see, microbes within us all, bacteria, fungi, and viruses.

So, up to about a century ago someone put forward the argument that these things are everywhere, so we don’t have to worry about them. Well, in the last two to three years, there’s been a lot of research showing that even at the scale of just a few meters, we find distinct microbial communities. So, if you’re a bacterium, can you pin your hopes on either the environmental or the agrarian perspectives for survival?

**COURTNEY WHITE:**

Have we used the Endangered Species Act yet for a bacterium?

**MICHAEL BEAN:**

Not yet.

**COURTNEY WHITE:**

Not yet.

[LAUGHTER]
Well, goodness. My experience with ranchers, and in doing some food production ourselves, you know, we call ourselves a land health organization. And land health, of course, starts with the soil and starts with what’s in the soil, starts with the bacteria and everything else that’s in the soil. And in the work that I’ve seen - call it agrarian, call it whatever you want - the improvement of land function, particularly land soil function, is where it starts. That’s the attitude of many of the ranchers we work with. You know, they’re asking pretty hard questions about soil cover and filtration. And then they do the land improvement. You’ve got to remember, in the southwest Leopold wrote lots and lots about the fact that he was the first really to identify soil erosion tied to overgrazing in the twenties and teens.

So, I think from the perspective of bacteria, they would be pleased with some of the agrarian practices that have been developed in the last 20 to 30 years. And what’s exciting to me is that many of the land managers that we work with, the ranchers in particular, public or private, don’t have a new ethic. They have more knowledge, and this is really kind of what’s important. Many of the environmentalists look at ranchers as having a deficiency of an ethic. Right? Well, you’re overgrazing...well, the truth is that many of them have that ethic; what they lack is knowledge, and in that process of implementing land practices that are sustainable. You know, we talk a lot about sustainability, but folks need to think about who’s actually being sustainable out there. And I would advocate that certain kinds of ranch practices are truly sustainable. They improve land health, and therefore they make the world better for bacteria, I think - keep them off the endangered species list.

[LAUGHTER]

OS SCHMITZ:
Okay. Go ahead, Nick Robinson, Pace Law School.

**Nick Robinson (in audience):**

There’s a real issue here that all of you who have talked about land management have to look at, and that is judicial review. We have a contract clause in the constitution that lets contracts for ecosystem services and private land be protected. So, parties agree to do it. That’s fine. But when we regulate - and Aldo Leopold had a great faith, I think, in the law - we regulate and then the Supreme Court can do what it did this last week, which is undermine 30 years of my work on the Hudson to regulate thermal plumes to protect the fish in the Tappan Zee, and just say economics trumps good biology in the Hudson.

I think 80 nations have gone on to amend their constitutions to go back to create a norm that would put the land ethic into the law. But if there isn’t a basic norm for that, what we have in our appellate courts today is instrumentalism. We just have a kind of, oh, if this is what the government wants, it’s fine. You can have a Guantanamo Bay prison - that’s fine; we don’t care about these other norms.

And I think we’re at that point, I think where the Alhambra is doing a good job being demolished by us. And we’ve got to go back to some norms. And as long as the courts are not going to have that basic norm and are going to be instrumental in the Supreme Court and in the circuit courts, the only recourse left is to use the private contract and let people privately protect land. But that’s not sufficient. And Aldo Leopold thought that the law was stronger than it was, and some of these basic norms were there. And I wonder if you could all comment on whether he was wrong.

**ZYGMUNT PLATER:**
We focused for the first 40 years of environmental law on the judges, on the courts. And so, it’s possible now in the age of Obama that we’re going to find out that that strategy is going to be less important than focusing on legislation, but also regulation in an executive branch. And that’s part of it. But every citizen’s understanding of the subtleties of ecology as they become more and more prevalent, I hope, will shape politics.

Meanwhile, look at the Supreme Court we’ve got. I call it the fruit of the poisonous chad.

[LAUGHTER]

Or the fruit of the poisonous bush. But courts change.

Nick Robinson:  
You’re emphasizing that focusing on courts, I think, is no longer sufficient.

Michael Bean:  
I would only add that I don’t think it’s an either or situation. Obviously we need or would be greatly aided by having stronger laws and stronger interpretation of those laws by courts. But at the same time, I think an awful lot of practical activity takes place at the citizen level that influences a great deal of the land and its biota. And the environment that facilitates and encourages that sort of voluntary stewardship is worth nurturing because even one’s most optimistic view of how far the courts are likely to reach into society, leaves a lot of private activity that’s still going to be largely independent of that.

Os Schmitz:  
So, we have time for one last question. Go ahead, Christina.
Christina:

Okay. Actually, I wanted to comment that one of Aldo Leopold’s most important legacies in natural resources management is actually laying the foundations for what became known as the North American model of wildlife conservation. The most obvious link, besides a lot of the things that are in his writings, was in 1930 when Aldo presented at the first American game conference on the first American game policy.

Basically, the North American model impacts my everyday life and work, and it impacts anyone who works in wildlife conservation and policy. It’s basically shaped the entire biological and political wildlife landscape that we have in the United States today, whether or not one supports it, and I was hoping that one of you could comment on the North American model, and Aldo Leopold’s legacy with that.

ZYGMUNT PLATER:

Harry, that’s you, right? Leopold took forestry and turned it into resource management. I love sticking ex students with tough questions.

[LAUGHTER]

HARRY BADER:

I don’t really want to bite, but I think it’s safe to say yes to all of that, and that probably goes back to what I was trying to describe: the recognition of what Leopold means to landscape management is not his writing in terms of literature and his better known works, but is precisely his day to decisions and recommendations and management. And I think that that’s what’s going to continue. And that’s why, in my comments, I want to focus on that the books are
good and inspiring, but as a land manager we look to the models and decisions and the records, and that’s the legacy. And will it continue? I think as long as he’s not idealized, yes, that’s exactly what’s going to happen, and I think we’re safe in this conference to say that’s how the legacy is going to continue. I don’t know if that answers your question well or not.

Christina:

Well, I just find that model of conservation basically is not discussed at all in the academic arena. I was a student here at Yale and a graduate of 2006. I was never taught it in any of my wildlife related courses. And, I mean, it had some really important impacts. After he presented in 1930, that basically led to the establishment of cooperative research units at the universities. Later on, in 1937, that American Game Policy requested that there be a stable source of funding for wildlife - fish and wildlife - in this country, and that led to the passage of the Pittman-Robertson Act in 1937, and later on the Dingle-Johnson Act in 1950. And these are things that are still very much relevant today.

HARRY BADER:

Right, and they’re not going to change. That’s the power of the legacy. The only thing I would hope for in the change is that all users of the landscape would pay into it and not just the hunting arms and ammunition industry. And I think it’s important to note just what outdoor recreation organizations have opposed expansion of that funding model and those that have endorsed it.

The fact of the matter is that three quarters of all outdoor recreation organizations that manufacture recreational equipment oppose the expansion of the excise tax, and that wildlife management, fisheries management, is based on the shoulders of the payments of the consumptive users. I think that that model, if we can expand upon it, should make sure that everyone contributes. I was involved in
this debate as an Alaskan land manager, and we were witheringly attacked by all those non-consumptive equipment manufacturers when we attempted to endorse it, so much so that careers were almost lost. And I think, as a consumptive user, I am extraordinarily proud of that, we are the ones who fund landscape management.

OS SCHMITZ:

Okay. I think we’ll wrap up. I hope you’re gathering from this that the issue of land management and the land organism is not a done deal; it’s an evolving concept, and hopefully the kinds of things that we’ve discussed today will get you to think a little more about it and think about what we’ve learned from the legacies and how we can create our own legacies in the future to be more progressive. Thanks for showing up.

[APPLAUSE]

[END]