

Our Environment:

A Glimpse at What Mainers Value

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Understanding environmental worldviews is important because values can play a strong part in defining and resolving policy debates. Mark Anderson, Caroline Noblet and Mario Teisl present analysis of a survey that included questions about Mainers' environmental values. They note that people can value the environment in multiple ways at the same time, and that these values are not necessarily mutually exclusive. In the end, they say, "values matter" in environmental policy. 🐟

Measurement of environmental values, especially as they are understood and projected across time, is a central problem of any theory of sustainability (Norton 2005: 155).

IMPORTANCE OF VALUES IN PUBLIC POLICY

It was an early December morning and the auditorium of Greenville High School was marked by quiet chatter. County sheriff's deputies searched backpacks and questioned citizens at the entrance. Print and broadcast media were busy gathering interviews from Maine Land Use Regulation Commission (LURC) members and from both proponents and opponents of what came to be known as "Plum Creek." Plum Creek Timber Company, Inc., was proposing a concept plan to rezone thousands of acres of land in Maine's unorganized territories, and LURC was in Greenville for the first of four public hearings on the latest version of that plan. Greenville was the center of potential impacts. Local residents, business owners, and others from the region were ready to share their concerns and hopes for the future of their homes, businesses, and communities.

What was notable about these hearings was the passion that Maine people felt about the Plum Creek proposal. Mainers, whether for or against the plan, cared deeply about what should be protected and what should be developed. There were calls for protecting a way of life and a sense of place. Some residents expressed the desire for their children to have an economic future in the communities in which they were raised, so wanted their businesses to flourish. There were no unambiguously clear answers for LURC members about what would be good for the Moosehead Lake communities and what would not be in the public interest. For some speakers, "people from away" were proposing to change the region in unacceptable ways; while for others a different group of "people from away" was trying to block progress. Many deeply held values about how human beings should relate to the natural environment were in evidence. Public servants, both LURC commissioners and professional staff members, needed to navigate the choppy waters of these diverse values.

Understanding values and their role in complex solutions-focused research is central to the Sustainability Solutions Initiative (SSI). One component of the SSI Knowledge-to-Action Collaborative Team is built around understanding environmental worldviews, which are manifestations of underlying values. Different worldviews affect our understanding of the very nature of problems and the construction of research agendas by scientists and stakeholders. Hart and Calhoun (2010: 260) identify a central challenge facing scientists in the emerging field of sustainability science: "many decisions are also affected by values, attitudes, and belief systems that are completely unrelated to or in direct conflict with rationales based on scientific information." The boundary between scientists, stakeholders, and citizens is, at least in part, defined by values. So understanding differences in values is one step toward spanning this boundary.

The above example points out that values matter in defining and resolving policy debates, and that people can hold diverse values. Indeed, each individual can hold multiple values at the same time—values that can even lead to internal conflicts on how he or she views policy options. SSI's research recognizes that reactions to policy changes, both within and across individuals, can be heightened when values are ignored, simplified, or gathered only at the end of the process. A practical implication is in a charged policy discussion (e.g., Plum Creek), allowing people to present and discuss their values early may improve decision making while also reducing conflict. One way SSI researchers address this boundary is by involving stakeholder groups early in the process, often when defining the problem.

Values matter in public policy even though we rarely talk explicitly about them. Sometimes we even pretend that there are public policies that transcend value differences. Human values are complex, personal, and often uncomfortable to bring up in public discourse. Yet good public policy requires an understanding of value differences. For sustainability scientists working to be part of knowledge systems that create solutions (see Cash et al. 2003), exploring values differences will need to be central to their research approach.



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Philosophers and social scientists have uncovered diverse ways humans think about the value of the natural environment. Many ways to characterize types of values have been proposed (Anderson and Teisl forthcoming). For some people, nature is valuable only for the services it provides to human beings. Researchers have called this “consumptive use” value, a value that reflects what philosophers refer to as utilitarianism. Others feel that nature is valuable in and of itself without reference to human wants and needs. Researchers term this “intrinsic” value. Others believe nature’s existence is important for human beings, but not necessarily for the sake of nature itself. Researchers term this “existence” value. Yet the complexities are even greater than these individual differences suggest. Many people have been found to hold multiple values at the same time, and many of these environmental values are not mutually exclusive. In addition to the individual-based values, new findings suggest that some values are held collectively by communities and reflect natural or cultural phenomena of worth that transcend individual valuations (Norton 2005).

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Sustainability scientists can use insight into values differences in defining problems, in designing research collaboratives with stakeholders, and in communicating about research findings. Policymakers can benefit in two ways from understanding the diversity of value types. First, such understanding helps policymakers to better appreciate the underlying differences among the people they serve and helps them interpret the meanings of passionate expressions like those heard in Greenville. Second, understanding the values citizens hold can help policymakers both improve the discourse around contentious issues and design policies that better match what people value. What, then, do we know about the

values toward the environment held by Mainers and what are the implications for policymakers?

SURVEY DATA ON MAINE PEOPLE’S VALUES

As part of a larger survey of Mainers’ attitudes on energy issues conducted in the summer of 2010, we asked a representative sample of Maine residents to rate their level of agreement with various statements designed to reflect variations in environmental values. Some of these items were drawn from a widely used measure of environmental worldviews called the “Revised New Ecological Paradigm” (Dunlap 2008), while others were unique to this study. Responses to these statements were collected using a five-point scale: Disagree Strongly, Disagree, Unsure, Agree, Agree Strongly.¹

This brief survey of environmental values in Maine offers an important glimpse at some surprising perspectives Mainers hold on the relation between human beings and nature. Our discussion here is intended to give policymakers and concerned citizens a means of thinking about how understanding environmental values might contribute to making better environmental policies.

There are multiple dimensions along which environmental values can vary (Anderson and Teisl forthcoming), and this diversity can be seen in some responses from Mainers in this survey. One important dimension emphasizes the idea that people have the right to use nature for utilitarian purposes. Utilitarianism, the idea that value is principally derived from use, is fundamental to the progressive conservation ethic developed by Gifford Pinchot more than a century ago (Nash 1982) and underlies neoclassical economic theory (Rawls 1971: Sec. 5). Pinchot expressed the utilitarian perspective when he famously argued for the scientific management of natural resources based on accomplishing “the greatest good, for the greatest number of people, for the longest period of time.”

Given the prevalence of the utilitarian ethic, it may seem surprising that our survey shows that Mainers generally disagree that human beings have the right to modify the natural environment to suit human needs (Table 1, statement 1). This could indicate that

TABLE 1: Responses of Maine Residents to Items Expressing Environmental Values

Statement	Total Responses	Disagree Strongly	Disagree	Unsure	Agree	Agree Strongly
		%				
1. Humans have the right to modify the natural environment to suit their needs	181	32.5	31.4	20.9	11.4	3.8
2. When humans interfere with nature it often produces disastrous consequences.	181	2.7	13.7	20.8	34.4	28.4
3. The earth has plenty of natural resources if we just learn how to develop them.	185	4.9	10.9	15.2	37.0	32.0
4. Humans will eventually learn enough about how nature works to be able to control it.	183	3.3	11.5	25.7	26.2	33.3
5. Nature is valuable for its own sake, even if humans get no goods or services from it.	183	3.9	4.4	10.9	37.7	43.1
6. Plants and animals have as much right as humans to exist.	185	4.9	8.7	14.6	31.8	40.0
7. I am concerned about the effect of global warming on Maine	186	10.8	5.9	16.1	31.2	36.0
8. The U.S. needs economic growth to protect the environment.	183	9.8	12.0	26.8	32.3	19.1

Mainers reject utilitarianism, or given responses to a second statement in our survey, that Mainers think that the modification of nature to serve human needs leads to undesirable consequences (Table 1, statement 2). Of course we need to be cautious interpreting data such as these since “interference” and “disastrous consequences” in the wording of these items in the survey may mean different things to different respondents.

The view that human interference with nature has negative consequences is in marked contrast to responses to another question. Mainers were asked about the human potential to learn about nature and ultimately control it. Nearly 70 percent of respondents believe the world has “plenty of natural resources” (Table 1, statement 3), reflecting people’s confidence in nature’s potential to provide, and a majority believe humanity will learn how to control nature (Table 1, statement 4), reflecting people’s confidence in human potential to harness what nature has to offer. It is not altogether clear how to reconcile this pessimism about past human actions with optimism about our species’ ability to control nature in the future. Maine people apparently hold at the same time the belief that human interference has been disastrous for nature in the past and that we will eventually learn enough to begin to

control it—although “control” may or may not be seen as a desirable thing for respondents. This seeming contradiction reflects that people often value nature and their use of it in complex ways not captured well in simple models of values.

These items in the survey largely have to do with utilitarian perspectives on human/nature interactions. One of the more surprising outcomes of the survey, particularly given Maine’s heritage of natural-resource use, was the way respondents reject utilitarianism as the only way of relating to nature. When responding to an expression of intrinsic value (the idea that nature is valuable for its own sake), approximately 80 percent of the respondents agreed or agreed strongly with this statement (Table 1, statement 5), which was designed to reflect a biocentric perspective (Lundmark 2007). This item, and the responses to it, does not calibrate the magnitude of this biocentric value, and the survey question does not ask respondents to trade this value against more utilitarian values. But the result was consistent with how people responded to a statement that plants and animals have as much right to exist as human beings (Table 1, statement 6). Given that the survey was completed in a time of economic stress in Maine, this level of support for intrinsic value of nature

TABLE 2: **Cross Tabulation of Responses to Biocentric and Utilitarian Items**

Statement 1 Humans have the right to modify the natural environment to suit their needs	Statement 5 Nature is valuable for its own sake, even if humans get no goods or services from it.		
	Disagree or Disagree Strongly	Unsure	Agree or Agree Strongly
	%		
Disagree or Disagree Strongly	3.3	5.0	55.6
Unsure	2.8	3.9	14.4
Agree or Agree Strongly	2.2	2.2	10.6

is especially surprising and intriguing. Mainers clearly value the natural world in complex ways that include recognition of both the usefulness of nature to human beings and the intrinsic value of nature in and of itself. Values can also be revealed indirectly by people’s concerns and expectations for the future. For example, responses to statement 7 (Table 1) indicate that many Maine residents have concerns about climate change, with more than 60 percent agreeing that they are “concerned about the effect of global warming on Maine.” Although we do not know the details of what motivates this concern, when combined with other values statements in this survey, we can speculate that part of the motivation reflects concerns for adverse impacts on “plants and animals” and on human systems. Note that a significant minority, more than 10 percent, of Maine residents strongly disagrees with the global warming statement while about 15 percent were unsure.

The survey also provides insight into what Maine people see as solutions to environmental problems. Insights like this are important to sustainability science, which embraces an evolving ethic that the very definition of problems and the nature of solutions is a responsibility shared among researchers, policymakers, stakeholders, and citizens. As we see in the responses to statement 8 (Table 1), more than half the respondents agree that “the U.S. needs economic growth to protect the environment.” The idea that per capita economic growth improves environmental quality is sometimes called the environmental Kuznets hypothesis (Stern 2003). Resource and environmental econo-

mists disagree over the applicability of the Kuznets hypothesis to environmental and economic problems. Although the hypothesis may apply to localized, visible air or water pollution reductions, it is not necessarily applicable with environmental effects with longer temporal or larger spatial scales (e.g., global climate change). Nonetheless, the majority of survey respondents embrace the expectation that economic growth is necessary for environmental protection.

We do not propose to translate this glimpse of Mainers’ values into direct policy implications. Rather we think they are indicative of the diversity of values that Maine people hold on environmental issues and of the complex way in which people respond to environmental issues. We do, however, believe that values, and knowledge about values, are important to consider when developing and implementing public policy. Further, the public policy process itself can be positively transformed if values are explicitly considered.

DISCUSSION

Surveying citizenry to find out what they think is fundamentally important when public policy is made. However, when survey data are used in policy formation, they tend to be survey data on a specific issue—should a dam be removed from this river or should a wind power facility be located on that ridge? This research suggests that surveys limited in this manner may not be sufficient.

It is also important to understand the apparent contradictions in people’s values as part of policy debates. People can value the environment in multiple ways at the same time, and these values are not always mutually exclusive. One can believe that an aspect of nature has consumptive use value and intrinsic value at the same time without the two views being necessarily contradictory. We can see an example of this when the responses to the idea that people have the right to modify nature (data from statement 1) are cross tabulated with the idea that nature is valuable for its own sake (data from statement 5). It might be expected that if one agrees with one of these statements one would necessarily disagree with the other. In fact, more than 10 percent of the respondents to this survey agree with both perspectives (Table 2).

These findings suggest that environmental policy need not always be an either/or proposition; instead it can be some of both. Consider, for example, landscape conservation set-asides such as those made under the Plum Creek decision. People may value the public acquisition of land both for the recreational opportunities it may provide (consumptive and non-consumptive use values) and for the intrinsic worth of the species or ecosystems that exist in those parcels. If people do hold multiple values in this way, it suggests that a program that only purchases land for multiple-use management, by definition reflecting a use-based perspective, might not address completely the values of Maine citizens. An alternative program design that segregates land into parcels with different uses and protections could more fully address the multiplicity of values. Of course there will also be examples where environmental decisions are necessarily zero-sum games, and not all the values held by the citizenry can be supported by the policy prescription. In these cases, some values will need to be supported at the expense of other values.

In the end, the important point is that values matter in environmental discourse and policy. We should be prepared to understand and discuss our values with each other as we work to make Maine a better place. Indeed what is “better” is the very crux of what values are all about. Solutions are those policies that result in outcomes that best reflect our values. 🐟

ACKNOWLEDGMENTS

This research was conducted in conjunction with Maine's Sustainability Solutions Initiative, supported by National Science Foundation award #EPS-0904155 to Maine EPSCoR at the University of Maine.

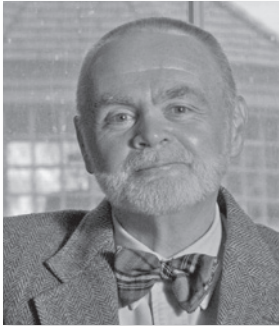
ENDNOTES

1. For a complete copy of the survey, please contact the authors.

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