

**ENVIRONMENT MATTERS:
A VISION FOR THE SCHOOL OF NATURAL RESOURCES
AT
THE UNIVERSITY OF VERMONT**

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Context

The work we collectively do in the School of Natural Resources (SNR) --- teaching, learning, discovery, interpretation, and dissemination focused in the broad arena of natural resources and environment --- is increasingly relevant, important, and valued by a broad segment of a global society. If you have been formally involved in our fields for 10 or so years or more, you know it has not always been this way. It was not very long ago when environmental issues were perceived to be the purview of specialists, resource managers, or environmentalists (who generally opposed each other), and most of society was disconnected from and certainly not willing to invest in the state of the planet. Recognition and appreciation of the importance of our work has come a long way. As we sit on the front edge of the 21st century, we observe, for example that:

- 178 nations have signed on to the Kyoto Protocol in a collective effort to save the planet from an unprecedented large scale experiment about human and natural systems (embarrassingly, this does not include our own country);
- most temperate nations have adopted the Santiago Declaration to lay the ground work for sustaining forests on a global scale;
- major federal agencies and organizations, such as the National Science Foundation and the newly formed National Council for Science and the Environment, have dedicated their efforts and resources to enhancing environmental research and the “scientific basis for environmental decisionmaking”.
- literally hundreds of new NGO’s and foundations have been established in recent years to advocate for and support environmental quality and the development of environmentally sustainable approaches to human activities;
- environmental concerns, education, and research are visible and supported in urban and suburban as well as rural communities (e.g., the recent establishment of urban LTER’s in Baltimore and Phoenix), cut across class, race, and culture (e.g., the emergence of environmental justice), and extend from elementary schools through universities; and,
- ecologically based tourism has grown exponentially on a global scale as has the establishment of sustainable ecologically based living communities and the broad-scale visibility of alternative living technologies.

Indeed, the world increasingly recognizes the importance of a healthy natural and built environment. Furthermore, many people in the world are actively taking steps on a personal level to enhance, restore, or preserve environmental quality and to create the possibility of a humankind that can exist in harmony with the environment. These emerging cultural imperatives, along with unprecedented advances in information technology and a thoughtful scrutiny of higher education that has suggested it is “out of touch and out of date” (from the Kellogg Commission on the Future of State and Land Grant Universities), should both foster a new sense of responsibility about what we do and prompt a rethinking about how we approach our increasingly vital work.

What should be the “business” of the School of Natural Resources at The University of Vermont? Should any of this evolving context influence what or how we teach or seek to discover and, for that matter, how we relate to our students and to each other?

My opinion and feeling is that the changes going on around us matter. I can’t help but think, perhaps dream, about special features of our School that we must develop or sustain to insure that we remain an active, relevant, and vital community of students, staff, and faculty that actively strive to make a difference.

A Vision

I strongly believe that the School of Natural Resources (SNR) at The University of Vermont (UVM) is very well-positioned to emerge as one of the leading natural resource, environmental education and scholarly programs in the world. I hope we all aspire to nothing less than this level of accomplishment and reputation. I am certain there are some who believe this is a naïve or overly grandiose aspiration. After all, we are not and, are not likely to become, one of the large research-focused universities that many of us are familiar with and perhaps look up to. I am sure faculties at some of these universities will be able to publish more papers, get more and bigger grants, and spend less time teaching and interacting with students. In contrast, I believe we are well-positioned and uniquely structured to do work that is really important, very much needed, and not compatible with highly structured large research universities. That is, **to focus on implementing new pedagogies that actively engage students in learning that really matters, on producing better, more relevant papers, on publication primarily as a means of dissemination and critical analysis rather than a vehicle to secure our personal future, and on grants that address compelling scientific or societal challenges.**

I believe that as educators (i.e., individuals committed to both the generation and dissemination of knowledge) we are in an extraordinary and unique position to make science really matter. That is, to share new and relevant discoveries and interpretations with energetic learners that range from undergraduate and graduate students to citizens, working professionals, and societal leaders in a manner that can begin to change the world. **While our foundation must be in high quality and relevant research and scholarship, it is the “impact” not the “doing” of that work that really matters. Our greatest legacy may perhaps be those that have been influenced by us and the work we do.** First and foremost, this includes the thousands of students who have learned from us and thoughtfully developed personal philosophies and action plans that incorporate perspectives to which we have collectively contributed. **I envision a School that not only strives to make such an impact, but also takes enormous pride in this type of accomplishment.** I don’t believe the traditional and highly splintered major research universities are in a position to do this effectively in environmental fields. While many of these institutions are well-positioned to maintain traditional programs of research, they are not structured or encouraged to explore the human relationship with nature or to grapple with the tough, contemporary interdisciplinary issues that have emerged as the foundation of environmental challenges and opportunities. Our challenge is to insure that our work about environment really matters.

Defining A Path to the Future

The special features that, I believe, contribute strongly to the unusual potential of SNR are our non-departmentalized structure, our relatively small size, our inherent dependence on substantial breadth rather than depth, a strong and committed set of partners and advisors, and, of course, our location in Vermont. The Kellogg Commission, which comprises the presidents of numerous major universities in America, in its assessment of higher education in America, has concluded that “society has problems, and our institutions have disciplines” and the two are simply not compatible. My sense is this is true more for environmental matters than perhaps any other field of study. Most natural resource and environmental issues represent a complex mix of ecological, socioeconomic, and cultural perspectives and university colleges and departments are not well organized to bring the multitude of expertise and resources available to bear on such problems in a coherent way. It is different in SNR. We have no structures within the School that limit our potential to provide holistic examination of complex problems. Our limitation is only our mindset. The School must continue to be an assemblage of disciplinary specialists combined with thoughtful integrators. **I envision a School where all faculty and staff have both the capacity and inclination to place their ideas and knowledge into a larger context and respect and value the unique perspectives of their colleagues.**

Some might argue that our small size is a severe limitation. In my view, our size allows us to be nimble, responsive, opportunistic, and fully accessible and accountable to each other and our students. We are the right size, perhaps the ideal size, to function as a community of spirited learners that can provide an engaging environment for our students and ourselves. Our students clearly relish this dimension of the School. Communities are built on trust, respect, and mutual contribution to the whole. I get excited about the prospect of SNR as a community of dedicated learners that see and appreciate the value in each other’s contributions. We don’t all have to agree, but we lose something extremely valuable and rare in higher education if we give up on each other. Our size should help create a forum for debate and dialogue within the School that cuts across perspectives, while discouraging retreat into isolating bunkers that shelter our traditions and disciplines. Our size also requires that all members of the community contribute to the direction, productivity, and mission of the School. **I envision a School where everyone contributes to the broad goals and directions of the School, and is judged and rewarded on such contributions in addition to their individual accomplishments. It is a School built, in part, on an altruism of ideas and effort and a belief in the larger good.**

If there is a constraint associated with our size, it may be that we lack the subdisciplinary depth found in larger institutions. This, of course, can be an opportunity rather than a shortcoming, but only if we work to capitalize on our diversity as a strength, to incorporate it in our curriculum, teaching, research, and outreach activities. Depth and breadth is a matter of perspective and definition. As a School, we are accumulating depth in the spheres of knowledge that we have defined, although these may not conform to traditional definitions. Our School comprises an eclectic group of faculty and staff that provides a range of expertise and perspective that cuts across a broad spectrum of disciplines and philosophies. We have defined an extraordinary niche and mission for ourselves that is derived from this range of disciplines and philosophies. Importantly, disciplinary strength within the School is critical for both our credibility and integration efforts. Almost all assessments of future needs for environmental analysis, information, and action has called for “interdisciplinary and multidisciplinary approaches”, “integration of ecological and social dimensions”, the need to build a “new science of sustainability”, and the importance of overt connections between “science and policy”, “ecology and economics”, and “conservation and commerce”. University leadership nationally has concurred with these assessments, but at the same

time acknowledges that most universities are not structured or positioned to move in this direction. In contrast, we are ideally positioned and structured and have already implemented curricular and course initiatives. We can and must do much more. **I envision a School that understands, appreciates, and takes pride in the strength of its breadth and that is committed to devising new and innovative ways of delivering a broadly imagined ecosystem-based education tied to each of its academic programs.** I can imagine a faculty working to develop and implement new types of pedagogy, course packaging, and delivery that deploy in novel and exciting ways the breadth of knowledge and the details of discipline in the School to address analysis of critical issues. This is doable in our School and can serve as one of our most distinctive accomplishments.

A School of our size and mission can not do it all alone. We need partners, collaborators, and exposure to innovators and new and different ways of thinking. Such partners come from across our campus, from other universities, and from colleagues in state or federal agencies and non-government organizations. As a relatively small School in a small state, we are fortunate to have numerous enthusiastic partners and collaborators and a distinguished Board of Advisors that expand the base of our expertise, the application of the knowledge we generate, and our reach and connections. However, we also need to partner with those who think differently from us. Many in the private, for-profit sector see the world differently than we do, but have a tremendous perspective to add to our repertoire. In recent months, I have come to learn about the goals, needs, and challenges of organizations and institutions quite different from ours, such as the Vermont Law School and Stowe Mountain Resort. I have been struck by our similarity of purpose, dramatically different approaches and needs, and our mutual sense of interdependence. That is a desire and need to share expertise, facilities, and resources. **I envision a School built on partnerships, not only as a source of funds and opportunity, but also as an element of enlightenment and as building blocks for our most meaningful work.**

Vermont is an extraordinary place, especially for those of us who care about the natural world and the place of people within it. Outsiders look to our small state when it comes to environmental matters, whether the topic is land use or watershed planning, sustainable forestry, land trusts, or conservation history and action. We are fortunate to live in a state with a clear environmental emphasis that is recognized nationally. The history, culture, economy, and landscape of Vermont are tightly intertwined with the natural world. Whether we are focusing on aquatic systems or forests, animals or microbes, politics or economics, natural or disturbed systems, or human implications of changing landscapes, Vermont is place that is relevant, visible, and can both benefit from and provide a place for our work. As a place, Vermont cares enormously about the work that we do and depends on our thoughtful and objective input. Of course, this is not to say that SNR should ignore issues, needs, and opportunities elsewhere. Indeed, we can and must be global in our teaching, learning, and discovery. **However, I envision a School that understands and appreciates that Vermont, as a place, culture, and people, represents both an opportunity for distinction and to fulfill our commitment and responsibility to share knowledge and have impact where it matters and is valued.** A Vermont school of thought about environment can have real meaning. I believe we should aggressively and proudly espouse Vermont as a base of our efforts for undergraduate and graduate student learning, research and scholarship, and sharing of information that is important and useful.

Understanding What Really Matters

While most of us likely believe that knowledge and discovery considered broadly have value, I would argue that the work we do --- teaching and discovery about environmental matters --- is among the most consequential of all fields. Environmental work really matters.

We must respond to the challenge of understanding complex natural and human systems and their interactions, and describing how human activities may alter earth processes in ways that threaten the future of humanity. Perhaps more importantly, we are also challenged to develop meaningful solutions; to imagine, model, design, and demonstrate alternative ways of doing business that can lead to ecological and economic sustainability. F.H. Bormann, world renowned ecologist and member of the National Academy of Science, the American Academy of Arts and Science, and SNR Board of Advisors, clearly articulated the challenges before us in an article in which he reflects on his more than four decades of work in environmental science, education, and policy. He wrote “to find our way we need to better understand how the natural world works; how environment, politics, economics, and society interact to affect how the world works; and how humans can work more effectively with, and not against, nature. We need to question many assumptions deeply ingrained in ourselves and our societies.”

The task and responsibility is enormous, and traditional approaches to science and technology are not likely to be sufficient to develop long-term solutions. “Good science” alone isn’t enough. Scientific evidence needs to be put into a context of long-term societal welfare. **I envision a School up to these challenges --- a faculty, staff, and student community committed to innovation and reflection --- a passionate community of dedicated learners that understands the urgency of the challenges and exhibits the courage and perseverance to seek new ways and solutions --- a School of Natural Resources at The University of Vermont that fully understands environment matters.**

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