**Imagining Our Environmental Future**

**ENVS 401 Course Overview and Project Descriptions**

The grand theme of this semester’s Environmental Studies Senior Seminar (ENVS 401) is: envisioning and planning for Vermont’s environmental future.  Of course, that's a rather big topic (!) and so we will be coming at it in a variety of ways, recognizing that any inquiry into the environmental future of Vermont involves attention to economics, decision-making processes, key players, grass-roots initiatives, climate change predictions and myriad other variables.  Moreover, while the focus of our work is on the State of Vermont, we are also investigating: a) the wisdom we can draw on from the future visioning of other communities, states and nations and b) the ways in which Vermont and the towns and communities that make up Vermont can be a model for other places.

Our intention is to offer to the public – through film, audio interviews and written work – the voices and visions of Vermonters, both those who are known leaders and those who are grassroots organizers working "in the trenches," as well as the creative voices from the next generation of environmental leaders.

 Running throughout our inquiry is a commitment to ask both the more straight-forward questions about creating a thriving environmental future, as well as the more subtle and frequently marginalized questions: how do race, class, affordability, opportunity, toleration of risk and access to power pertain to decisions that are made or not made, visions that are and are not realized?  When we speak of "our environmental future" who is the "our" we are addressing? How do the answers to that question shape what gets hoped for, visualized and actually accomplished?

 The central themes and organizing frameworks for this course have been developed in partnership with Elizabeth Courtney, former Executive Director of the Vermont Natural Resources Council and co-author (with Eric Zencey) of Greening Vermont: The Search for a Sustainable State [http://greeningvermont.com](https://mail.middlebury.edu/owa/redir.aspx?C=nZ34j12NSEuvKegHhNHfYl_vjdEfedAIfEzx48BozeiMUHzjx_fH6Vy-MC7uZlMfsu0VoNZCg_o.&URL=http%3a%2f%2fgreeningvermont.com). Under the broad topic of envisioning Vermont's environmental future, students are working in project teams with particular organizations and people who are participating in innovative, collaborative initiatives. **Projects from each Section of ENVS 401 will highlight some of the most exciting, innovative and challenging environmental activities in Vermont**:

**Section A**

* *Vermont Interfaith Power and Light*, a state member of the national organization, *Interfaith Power and Light* (Primary contacts: Betsy Hardy, Coordinator and Sam Swanson, President of the Board) <http://www.vtipl.org/> and <http://www.interfaithpowerandlight.org/>
* *Vermont Energy and Climate Action Network,* (Primary Contact: Johanna Miller, VNRC Energy Program Director & VECAN Administrator)<http://www.vecan.net/>
* *The Country, The City and the State House.* This is an umbrella term for students investigating the work of the Vermont Council on Rural Development’s Creative Communities Program, the Vermont Energy Action Network, the Vermont Sustainable Jobs Fund (<http://www.vsjf.org/>), the Vermont "Climate Cabinet" (<http://www.anr.state.vt.us/anr/climatechange/ClimateCabinet.html>) and the policy work of – or in connection with – particular members of the Vermont Legislature and of Governor Pete Shumlin's current Administration. This is also the group that will be able to identify and interview particularly significant individuals (some well-known and some not – but should be profiled) that fall outside of the parameters of the other two groups.

**Section B**

* The Vermont Agency of Natural Resources’ *Climate Change Vulnerability Assessment and Adaptation Framework* (primary contact: Brian Woods)
* The Vermont Council on Rural Development’s *Council on the Future of Vermont* and Working Lands Enterprise Initiative (primary contact: Paul Costello)
* The Institute for Sustainable Communities’ *Resilient Vermont Project* (primary contact: Patrick Field, Consensus Building Institute)

Participants in each of these initiatives developed their own strategy to plan for an uncertain future and come to a consensus around solutions.

Building on these visioning initiatives demands a comprehensive understanding of the work that has been done and how it will be connected to actions, some of which is already documented on the convening organizations’ own websites and in reports released to the public, for example:

* The Council on the Future of Vermont’s final report *Imagining Vermont: Values and Vision for the Future* available at <http://futureofvermont.org/>
* <http://www.anr.state.vt.us/anr/climatechange/Index.html>
* Resilient Vermont’s *Draft Roadmap Recommendations* <http://resilientvt.org/project-documents/>

• The National Religious Partnership for the Environment – Official Statements on Climate Change and Environmental Challenges from governing bodies of Denominations and Religious Organizations (e.g. Papal Statements on the environment). <http://www.nrpe.org/>

**• "**Interfaith Power and Light" chapter from the film *Renewal* (available on line). <http://www.renewalproject.net/>

However, no one has yet looked ***across*** these initiatives to document and communicate their particular innovations and experiences, to capture this moment in their development, and to see how together they are shaping what is possible for Vermont’s future. In two concurrent and collaborating sections ES students will be the first to take on this challenge, each focusing on three initiatives. Students will use an interdisciplinary approach to develop questions to understand, for example the historic, economic and political context within which the initiatives take place and how they develop over time. Students will explore how the process fits into existing organizational structures and decision-making processes at different scales, such as town and state. Students will also focus on narratives about why people engage in these initiatives that are vital to Vermont and its communities.

Specifically, the end results will communicate:

* the initiative’s current vision for the future of Vermont’s environment
* the process through which this vision was developed and is likely to move forward
* the context within which the initiative was convened
* lessons learned from any ongoing implementation that can inform future action
* personal narratives and motivations from participants

In addition to a written report and any products the students and project partners decide on, students will develop interactive media in partnership with

* Gregory Sharrow, Co-Director and Director of Education at the Vermont Folklife Center http://www.vermontfolklifecenter.org/index.htm
* Victor Guadagno, President and Producer, Bright Blue An EcoMedia Company [http://brightbluemedia.org/](https://mail.middlebury.edu/owa/redir.aspx?C=nZ34j12NSEuvKegHhNHfYl_vjdEfedAIfEzx48BozeiMUHzjx_fH6Vy-MC7uZlMfsu0VoNZCg_o.&URL=http%3a%2f%2fbrightbluemedia.org%2f)
* Elizabeth Courtney, ASLA, Landscape Architect, Author, Environmentalist

**The students’ stories from this academic year will be the first entries in a new on-line media journal that will be launched publicly through an exhibit at the Vermont Folklife Center in May 2014.** (After the May launch, the on-line journal will continue as a forum for documenting sustainable scenarios through edited crowd-sourced material.) The exhibit may include video clips, still photos, audio slideshows and posters featuring stories about: envisioning and planning for the future of the environment as understood and practiced in Vermont; examples of and suggestions for moving from rhetoric to policy and funding; context about how these stories are informed by past and ongoing environmental developments in Vermont and elsewhere; and suggestions for how they can serve as a model for people in other places looking to plan for a more resilient future. Ultimately, the goal is to facilitate a conversation among citizens and policymakers about how to advance implementation of the featured initiatives and a future for Vermont that is socially, environmentally, and economically sustainable and just.

### The work in this course is further supported by a *Campuses for Environmental Stewardship* grant from the Northern New England Campus Compact (NNECC) and the Environmental Protection Agency to prepare college students for environmental stewardship and changing systems by promoting the delivery of courses embedded with climate change or water quality community projects.

***Student Projects for Section A*** (Principal faculty: R. K. Gould)

**Vermont Interfaith Power and Light**

Vermont Interfaith Power and Light is a state member of the national organization *Interfaith Power and Light.* The mission of national organization is to galvanize and leverage faith communities to act in response to accelerating climate change. In the context of this mission, the national organization promotes energy conservation, energy efficiency, and renewable energy particularly in the buildings that religious congregations use, but also to promote such work in the homes of businesses of congregants and to educate and encourage these practices in the towns, counties and bio-regions where these congregations are located. The national organization also organizes workshops and conferences, produces educational material, encourages the formation of "green groups" as official congregational committees and helps clergy and other leaders *re-imagine and enact liturgy* in ways that specifically address climate change as a spiritual and moral issue of great urgency. The national organization also facilitates *direct lobbying* on capitol hill and is unique in pressing for policy from a spiritual and moral perspective. The congregations affiliated with the national organization (and the state by state organizations of which it consists) are Christian, Jewish, Muslim, Bahai and "other." They span a range from liberal to conservative both religiously and politically, but are united in the commitment to press for personal and congregational changes of practice; local, grass roots action and state and national legislative change.

Vermont Interfaith Power and Light is a member of IPL and now had *over 70 congregations as member.* As with every state group, VTIPL develops initiatives particular to the state's particular needs. Among these are: 1) helping individual members of faith communities reduce the carbon dioxide (CO2) emissions they produce in their homes, workplaces, and through transportation, 2) conducting workshops for “EcoTeams” (groups of 5 – 8 households) often drawing on the workbook, Low Carbon Diet: A 30 Day Program to Lose 5000 Pounds, 3) helping congregations to develop liturgy and programming that speaks directly to the spiritual lives of congregants and helps them to see the connections between their spiritual identities and the moral challenges of climate change, 4) encouraging congregations to get directly involved in policy-making at the state and national level, 5) fostering the growth of "green committees" and/or "climate committees" in congregations and 6) creating and growing interfaith initiaties on climate challenges.

**The project team partnered with VIPL** will focus and interviewing (audio or film) selected members of the Board, clergy of "model congregations" and active members of particularly innovative congregations. The team will also partner with VTIPL in fostering those areas of their mission that need more development (outreach, congregational green teams, work on policy). The team will also focus on making particularly interesting congregational case studies (serving as inspiration and/or models for others) available to the public, both via the web and in collaboration with the Vermont Folklife Center and Bright Blue.

**Vermont Energy and Climate Action Network (VECAN)**

VECAN was organized in 2005 to support the efforts of over 100 town energy committees in Vermont and to serve as a resource to these groups (and related initiatives) by sharing information, offering technical assistance and facilitating networking of groups and individuals with shared concerns and goals. In terms of organizational structure, VECAN is a network of Vermont organizations including: The Vermont Energy Investment Corporation, The Sustainable Energy Resource Group and The New England Grassroots Environment Fund, and Community Climate Action. It is "housed" with the Vermont Natural Resources Council and is coordinated by VNRC staff member Johanna Miller with the assistance of AmeriCorps member Keil Corey.

The primary mission of VECAN is to help communities all across Vermont "to reduce energy costs and climate impacts through conservation, increased energy efficiency and conversion to renewable energy sources" (<http://www.vecan.net/about/>). In order to do this, VECAN takes a tri-partite approach: 1) serving as an information resource and clearing house for town energy committees through publications, conferences and consultations, 2) providing direct education and technical assistance on town-based projects and 3) connecting committees to each other and with outside organizations and encouraging communities to work together regionally.

Town energy committees are in a unique place to support community-level action on pressing climate and energy challenges. (For an example of the work of one town energy committee check out <http://www.charlottevt.org> -- go to "town committees" then 🡪 "energy committee.") Nevertheless, these energy committees operate with varying levels of success across the state. A recent survey of Vermont’s energy committees by UVM Ph.D. candidate Tarah Rowse illuminated several themes: energy committees are largely comprised of “the choir”; they are largely volunteer-based (though some have limited part-time staffing); they often lack funding and capacity and many are suffering from “burnout.” Committee members' ability to tackle the needed work is hindered by these limits and constraints. The current program that many committees are deeply engaged in is the “Vermont Home Energy Challenge” which targets home weatherization and other energy efficiency improvements and is attempting—through an array of financial assistance programs—to makes these improvements affordable for all kinds of homeowners. (<http://www.efficiencyvermont.com/for_our_partners/community_partners/residential/town-participation.aspx>).

Some key challenges and questions for VECAN's work are:

* How do we make the transition to a clean energy economy with investments in efficiency that don’t unduly burden the poor. How can we change the frame of net-metering projects as being only for the wealthy? What programs are available to whom and what needs to change to make it more equitable?
* Given the tension around upfront costs and resistance to behavior change from some, how can we compellingly define the costs of inaction? What are the economic costs of getting to the state’s goal of efficiency improvements in 80,000 homes by 2020 and what are the economic, environmental, social, and psycho-spiritual costs of not getting to that goal?
* How do we cultivate connections to legislators to shift political will to further support efficiency, renewables, net-metering, etc. with both policy and funding? What factors are currently limiting political will?

**The project team partnered with VECAN** will identify and profile (through audio and/or filmed interviews) leading and particularly innovative and successful town energy groups. The team will also identify those town energy committees that are experiencing particular challenges because of the constraints named above.

The sharing of stories and effective case studies is one central part of the project teams work. The second dimension of the project teams work is to discern how (and communicate why) these case studies can be paired with policy making and the building of a more diversified climate movement that can coalesce around efficiency and conservation in order to truly move forward.

VECAN and VNRC have put together a series of efficiency case studies with the underlying focus on building homeowner’s confidence in their investment in efficiency improvements by highlighting financial savings. This approach is in response to market research conducted with the support of the High Meadows Fund that highlighted upfront cost and confidence as two key barriers to home retrofit projects. <http://www.highmeadowsfund.org/storage/research-and-learning-documents/energy-related-documents/2013-reports/Market%20Research%20Report%20FINAL%202013-02-15.pdf> . This project team will build on the existing case studies, focusing on how to communicate the messages of/in these case studies more broadly and more effectively – and in a variety of media -- to a wider public.

Another key challenge to adopting efficiency and conservation strategies is that they are viewed as less “sexy” than shifting to “new” renewable energy sources like solar or wind. Further, some might feel that efficiency and conservation projects require personal sacrifice in the form of behavior change, where as installing solar or wind might not. The project team will work to develop ways to communicate responses to these assumptions in ways that are compelling to a broad audience (in other words, if you are interested in making things "sexier" this project might well be for you!)

**"The Country, The City and The Statehouse"**

This is an umbrella term for students investigating the work of the Vermont Council on Rural Development’s Creative Communities Program, the Vermont Energy Action Network, the Vermont Sustainable Jobs Fund (<http://www.vsjf.org/>), the Vermont "Climate Cabinet" (<http://www.anr.state.vt.us/anr/climatechange/ClimateCabinet.html>), and the policy work of – or in connection with – particular members of the Vermont Legislature and of Governor Pete Shumlin's current Administration. This is also the group that will be able to identify and interview particularly significant individuals (some well-known and some not – but should be profiled) that fall outside of the parameters of the other two groups.

**The project team for this set of initiatives –** as with the other two project teams **–** will be focusing on the most compelling – which doesn't necessarily mean "success stories" -- narratives coming out of the work of these groups and the work of the legislature. The range of sub-projects and possibilities are considerable and the task of this group will be to cast a wide net with respect to stories that need to be told and people who need to be profiled and, simultaneously, to be discerning as to where the focus needs to go and who the people are whose stories most need to be told. This project group will also be tasked with paying particular attention to environmental justice and social justice questions in terms of the choices made about who to profile and what stories to tell. This project team will also be paying attention to some underlying themes that are present (whether explicitly or not) in all of the groups we are investigating. For instance: "who has power where and what kind of power?"; "where does funding come from and where does it go and how does this affect what actually happens on the ground?"; "What new ways of looking at the environment and economics (for instance, use of the Genuine Progress Indicator and the perspectives of the Gross National Happiness movement) inform – or do not yet inform – the thinking of particular people and the approach of various non-profits focusing on Vermont's environmental future?"

***Student Projects for Section B*** (Principal faculty: C. M. Ashcraft)

**Vermont Agency of Natural Resources: Natural Resource Vulnerability Assessment & Adaptation Framework**

The Vermont Agency of Natural Resources (ANR) is the state government’s primary environmental agency, consisting of the Department of Environmental Conservation, the Department of Fish and Wildlife, and the Department of Forest, Parks, and Recreation. Their mission is to “draw from and build upon Vermonters' shared ethic of responsibility for our natural environment, an ethic that encompasses a sense of place, community and quality of life, and understanding that we are an integral part of the environment and that we must all be responsible stewards for this and future generations”( <http://www.anr.state.vt.us/index.cfm>). Representatives from all of Vermont’s primary agencies—ranging across natural resources, commerce, community development, agriculture, and transportation—form the Governor’s Climate Cabinet (<http://www.anr.state.vt.us/anr/climatechange/ClimateCabinet.html>). This Cabinet in turn informs the work of the ANR’s Climate Change Team (<http://www.anr.state.vt.us/anr/climatechange/About.html>). One initiative of the ANR’s Climate Change Team that you will be engaging with is the Natural Resource Vulnerability Assessment & Adaptation Framework.

The Natural Resource Vulnerability Assessment & Adaptation Framework develops a climate change adaptation strategy for Vermont. According to ANR, “Adaptation refers to measures taken to prepare for, respond to, minimize, or eliminate impacts to people, communities, and ecosystems that are associated with a changing climate” (<http://www.anr.state.vt.us/anr/climatechange/Pubs/AdaptationProject2011RFP.pdf> ). The project identifies potential future climate scenarios and determines what effects those changes could have on four northeast ecosystems – lakes and ponds, rivers and streams, wetlands, and forests – and the species that exist within them. A consultant, TetraTech, analyzed available information on climate change vulnerability and identified gaps in information for understanding Vermont’s vulnerability to climate change. Stakeholder meetings were held with experts, including representatives from the ANR, area NGOs, academics, scientists, and program managers with control over relevant resources. One of the stakeholder workshops focused on setting natural resource adaptation goals, i.e. what needs to be done to address the impacts of climate change and improve the resilience of natural communities and ecosystems, for example prioritizing habitat connectivity for wildlife migration.

ANR is in the process of finalizing the comprehensive report from this initiative, which will include interviews and a narrative about planning for adaption through the end of this century. Results from the process to develop the vulnerability assessment and adaptation framework are already being incorporated into development of the State Wildlife Action Plan. A final piece of this initiative, public engagement, involves communicating to the public information about the technical findings on the challenges to natural resource conservation and management associated with climate change and the process by which the report was developed. ANR’s specific goals are to increase public awareness about Vermont’s adaptation goals and strategies, engage the public in planning for climate change, and motivate the public to take action.

The team working on this project will help ANR communicate the visioning process and its results to the public, in particular to people who are considering engaging in this issue, but haven’t yet. In keeping with the themes in Chapter 6 of Greening Vermont, this will involve:

* Capturing personal narratives and motivations from participants
* Understanding the vision for climate change adaptation developed by this initiative and how participants understand the concepts of vulnerability and adaptation
* Characterizing the context within which the initiative was convened (e.g. ANR’s organizational mandate, the history of related initiatives in Vermont or elsewhere, etc.)
* Learning about the process of engaging stakeholders, identifying innovative approaches
* Highlighting lessons learned from ongoing implementation that can inform future action (e.g. What is being successfully incorporated into the wildlife planning process that can be a model for moving forward with the other sectors addressed through the framework?)
* Translating aspects of the process and scientific findings into a format readily accessible to the general public, in keeping with ANR’s mission to provide factual and trusted information to the public. This could include press releases, designing content for a website, etc.

**Vermont Council on Rural Development: Council on the Future of Vermont**

The Vermont Council on Rural Development (VCRD) is a non-partisan, non-profit organization whose mission is to “help Vermonters and Vermont communities develop their capacity to create a prosperous and sustainable future through coordination, collaboration, and the effective use of public and private resources.” VCRD accomplishes this through two primary roles – serving as community organizers and neutral facilitators of policy dialogs that connect officials and local citizens. VCRD’s work cuts across a variety of scales and engages closely with the Vermont Governor’s Cabinet, federal and state agencies, congressional offices, local officials, non-profit rural development leaders, businesses, and thought leaders at the community level.

During dialogs convened by the Governor and facilitated by VCRD, policy-makers identified a need to better understand Vermonters’ visions for their long-term future to frame policy, planning and budgeting. In response, and building on a history of Vermont dialogs, including the Vermont Commission on Country Life in 1928-9 and Governor Kunin’s Commission on Vermont’s Future in 1988, VCRD facilitated a public dialog called the Council on the Future of Vermont from 2007-2009. The Council met with people from across Vermont’s counties and from many different demographic groups. This process and its resultant reports and outcomes are documented at: <http://vtrural.org/programs/policy-councils/future-of-vermont>. Major conclusions include Vermont’s dedication to the future of its ecosystems that support agricultural and forestry businesses, on which VCRD has catalyzed action through the Working Landscape Enterprise Initiative (<http://workinglands.vermont.gov/>), and the need for an energy plan, a current priority for VCRD.

Given inaction at the federal level and difficulties the state faces in leading on climate policy, carbon taxation, and funding resilience and mitigation efforts, VCRD is interested in catalyzing political movement around Vermont’s “Green Energy Economy.” Budgeting for the state’s climate action policy is crucial to moving any number of key environmental initiatives from the rhetoric stage to the policy, funding, and implementation stages. While requiring Vermonters to face difficult tradeoffs, a dialog around budgeting is also an opportunity for Vermont to be an economic and environmental “solution builder” that attracts entrepreneurs and creative young minds to the state and serves as a model for the rest of the country.

The team working on this project will help VCRD envision the next steps in building a policy structure and budgeting for Vermont’s climate policy, including carbon taxation. In keeping with the themes in Chapter 6 of Greening Vermont, this will involve:

* Capturing personal narratives and motivations from participants in the Council on the Future of Vermont
* Understanding the vision for energy planning
* Characterizing the context within which the initiative was convened (e.g. VCRD’s organizational mandate, the history of past dialogs in Vermont or elsewhere, etc.)
* Learning about the process of engaging stakeholders, identifying innovative approaches
* Highlighting lessons learned from ongoing implementation that can be a model for moving energy budgeting forward.
	+ In particular: What is being successfully incorporated into the Working Landscape Enterprise Initiative to move from big visioning to a cornerstone policy initiative that united leaders around core objectives and a political campaign with a significant budget?
* Making recommendations for next steps, which could include policy recommendations, design of a state-wide dialog, etc.

**Institute for Sustainable Communities: Resilient Vermont Project**

The Institute for Sustainable Communities (ISC)—founded by Vermont Governor Madeline Kunin 25 years ago—utilizes mentoring, training, capacity building, and infrastructure support to harness the power of communities to address their most pressing and complex challenges (<http://www.iscvt.org/what_we_do/>). ISC’s key focal areas include climate and environment, education for sustainability, community building, advocacy and leadership, and civil society and they work across the globe with current programs in the U.S., India, China, Bangladesh, and Serbia. Their U.S. work has largely focused on climate leadership academies and community learning networks that support the efforts of major U.S. cities in the areas of climate protection and sustainable development.

Until recently, ISC has mostly worked outside of Vermont. However, in the wake of Tropical Storm Irene, ISC sought to bring its network of national and international partners working on climate adaptation to benefit Vermont. To this end, they partnered with the State of Vermont and a strategic advisor from the Consensus Building Institute (<http://www.cbuilding.org>/) to launch the Resilient Vermont Project (<http://resilientvt.org/>). Working with stakeholders from state and local government, businesses, and non-profits, the Resilient Vermont Project convened a series of summits and working groups with the goal of developing, “an integrated, long-term strategy for resilience—one that weaves together state, regional and local initiatives, and better equips the state to prepare for, respond to and bounce back from future climate impacts and the natural disasters that we know will come”.

The work of the Resilient Vermont Project is documented on the project’s web-page, and the draft final report and recommendations entitled, “Vermont’s Roadmap to Resilience: Preparing for Natural Disasters and the Effect of Climate Change in the Green Mountain State” was just released last week (<http://resilientvt.org/project-documents/>). This draft report will be discussed at a final public forum on Friday September 19th, and is open for public comment through the end of the month. The four priority action areas addressed in the report include elevating and integrating emergency management, knowing risks, working and learning together, and aligning rules and investments for stronger communities.

Through learning about Resilient Vermont’s process, this team will envision possible next steps for moving forward. In order to further a broadening understanding of resilience, students may consider Resilient Vermont’s work within the context of past dialogs in Vermont and elsewhere (e.g. 2007 Vermont Governor’s Commission on Climate Change, the Council on the Future of Vermont, the Millennium Ecosystem Assessment), the role of funding mechanisms, (e.g.Vermont Community Foundation’s High Meadows Fund, Linthilac Foundation), and potential new partners for future implementation (e.g. Conservation Voters). In keeping with the themes in Chapter 6 of Greening Vermont, this will involve:

* Capturing personal narratives and motivations from participants in Resilient Vermont (in cooperation with Bright Blue)
* Describing the current understanding of resilience as defined by the project and its participants and how this has changed over time
* Learning about the process of engaging stakeholders, identifying innovative approaches
* Characterizing the context within which the initiative was convened. For example, how is the process and project experience of Resilient Vermont similar and different from other visioning initiatives in Vermont and other places?
* Drawing on lessons learned from implementation of other visioning initiatives in Vermont and elsewhere to make recommendations for next steps (i.e. How can Resilient Vermont catalyze a broader conversation about resilience in Vermont, beyond post-Irene and flooding planning? What could next steps look like?).