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The Role of Regional Planning in Ecosystem Conservation and Tools for Collaboration

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The Role of Regional Planning in Ecosystem Conservation
and Tools for Collaboration

A Three-Course Option Final Paper Presented

by

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Introduction

The 20th century witnessed a staggering growth in the population of the United States along with urban migration, climate change, development of resource intensive lifestyles, and low-density residential and commercial development. All of these factors put pressure on the ecosystem services humans are dependent upon for their wellbeing and their enjoyment.¹ The existence/nonexistence of those same services are factors in regional planning, because they are not confined neatly to political boundaries. By their very nature these services demand a regional approach to their management and preservation, which is why I pursued a three-course option focused on understanding the role of regional planning in ecosystem conservation and tools for collaboration with Professor Peter Kumble of the Department of Landscape Architecture and Regional Planning at UMass-Amherst as my advisor.

Peter Kumble 12/14/10 9:38 PM

Comment: Citation on ecosystem services. What is it (yes I know what it is, but...)

Overview

My primary reason for pursuing a study of ecosystem conservation within the context of a Master in Regional Planning degree was to develop an awareness of how that

¹ Ecosystems are “a complex set of relationships among the living resources, habitats, and residents of an area” (Michigan Technological University School of Forest Resources and Environmental Science n.d.). An ecosystem “includes plants, trees, animals, fish, birds, micro-organisms, water, soil, and people” and, very importantly, “everything that lives within an ecosystem is dependent on the other species and elements that are also part of the ecological community” (ibid). The interaction between all the elements of an ecosystem and the global force of weather impacts the availability of clean water, nutrient-rich soil, air that is good for breathing, and so much more. Those impacts are commonly known as ecosystem services, which could be effectively defined as a “complex set of relationships among the living resources, habitats, and residents of an area” that help meet a public need, such as for a clean and abundant supply of water suitable for drinking.

discipline could advance ecosystem conservation and collaboration between organizations. On the path to developing this awareness four goals were pursued:

1. Learn about the characteristics and motivations of organizations involved with ecosystem conservation
2. Understand the tools and techniques used to protect ecosystems and why particular methods are chosen in certain circumstances
3. Know the common issues confronting resource conservation organizations and the tools and techniques for their resolution
4. Develop thorough understanding of the ways resource conservation organizations collaborate with one another

Those four goals will provide the framework for discussing the success of this three-course option; however, understanding certain definitions is a crucial foundation to establish before going any further into the discussion. I have adopted definitions that are simple and yet complete. First, ‘ecosystem’ means “a complex set of relationships among the living resources, habitats, and residents of an area” (Michigan Technological University School of Forest Resources and Environmental Science n.d.). An ecosystem “includes plants, trees, animals, fish, birds, micro-organisms, water, soil, and people” and, very importantly, “everything that lives within an ecosystem is dependent on the other species and elements that are also part of the ecological community” (ibid).

While ‘ecosystem’ is a fairly benign term, ‘conservation’ is far more controversial and has a long political history dating back to the beginning of the 20th century when a divide developed between people advocating “wise use” of resources—conservationists—and those who thought land and wildlife should be free from human

influence—preservationists (Sellars 2009). Exploring the relationship between these two factions could be a paper unto itself and is unnecessary in the context of my three-course option, because the whole gamut of conservation and preservation options will be looked at from the perspective of finding points on which to build cooperation between organizations with different priorities. As such Merriam-Webster’s definition of ‘conservation’ suffices: “planned management of a natural resource to prevent exploitation, destruction, or neglect”. So ‘ecosystem conservation’ may be taken to mean the planned management of a complex set of interdependent relationships among the living resources, habitats, and residents of an area.

A literature review during the proposal phase of this option confirmed my suspicion that regional planning and conservation are considerably interrelated, and, as will become apparent later, was still further confirmed in each of the three courses. For example, the “2009 Land Protection Report” prepared by the Massachusetts Executive Office of Energy and Environmental Affairs states: “EEA has targeted 10 large, unfragmented ecosystems across the state for conservation in order to protect our most unique large habitats for future generations... These reserves include mountain tops, wilderness areas, sustainably managed forests and forest reserves, and wild rivers” (Massachusetts Executive Office of Energy and Environmental Affairs 2009). Accompanying this statement is a map of those ten targeted ecosystems that clearly shows the cross-boundary nature of their protection.

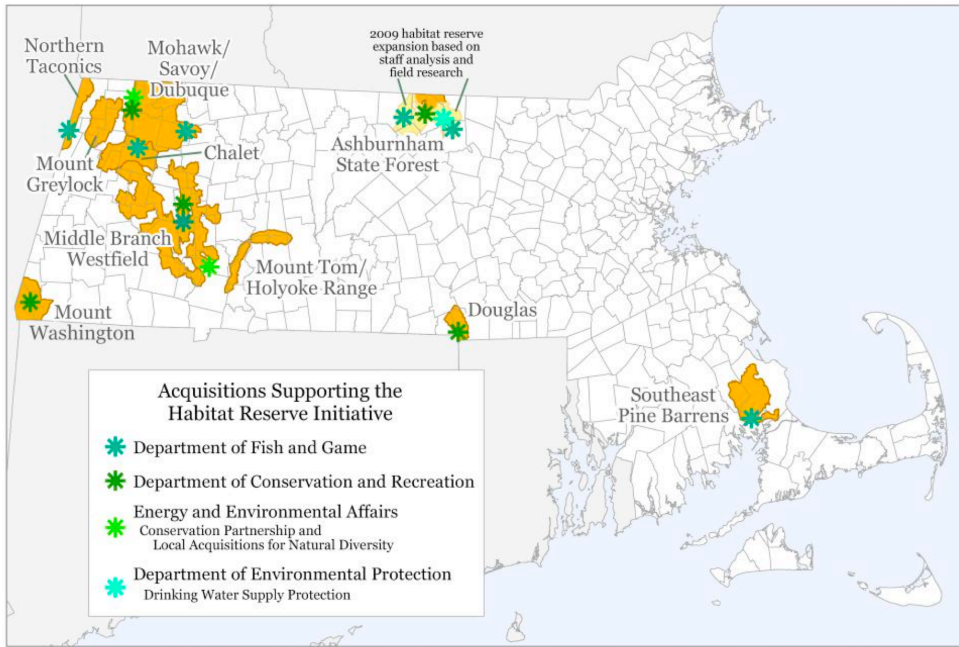


Figure 1: The Area of Each Targeted Habitat Appears in Orange (Massachusetts Executive Office of Energy and Environmental Affairs 2009)

Peter Kumble 12/14/10 9:38 PM
 Comment: Map source citation

While the Massachusetts example is telling, scholars are also exploring the concept of regional planning and conservation, such as in *Stewardship Across Boundaries* (Knight and Landres 1998) and *Protected Areas and the Regional Planning Imperative in North America: integrating nature conservation and sustainable development* (Sportza, Nelson and Day 2003). In *Stewardship*, Professor Knight of Colorado State University and research ecologist Landres bring together the works of wildlife managers, biologists, historians, environmentalists and others to look at the impact of administrative boundaries and human behaviors on land and wildlife stewardship and propose a framework for regional collaboration. *Protected Areas* focuses on the ecosystem connections shared by Canada, the United States, and Mexico and confronts the reality that a lack of knowledge about the similarities and differences in socioeconomic,

environmental, and institutional conditions between the countries has prevented them from successfully protecting the ecosystems they have in common. Additional literature examples specific to each course are discussed later.

In addition to the four goals outlined earlier, I have also identified four specific issue areas that illuminate the role of ecosystem conservation in regional planning, and so these will also help to frame the discussion. One such issue is what method is best to protect a particular ecosystem from destruction. Each protection tool has its own costs and benefits, which can be subjective depending on context and the person or organization evaluating the situation. Furthermore these tools each have their own levels of use restriction, tax rules, and government oversight and involvement.

The second issue is who can use which tools and when. Citizens may use some tools while others are reserved for the government or non-profit organizations, and at times perhaps there may be some combination. Who can and cannot use certain tools impacts the ability to protect and plan for the resources.

A third issue for consideration is the actual cost of a particular method and who pays the cost. For example, some protection methods are paid for by taxpayers, others by land trusts, and still others by user fees. Cost is also relative to the ability and the speed with which funds can be raised, and this can also be dependent on who is doing the fundraising: the government through taxes or a foundation through grants and donations. The cost and who will be paying can no doubt have an impact on what method is chosen (perhaps this is even the most heavily weighted factor in some situations) and may result in conservation not being pursued altogether if the cost is considered too high.

The fourth issue is what compels people, businesses, and the government to protect ecosystems—or not—and knowing the answer to that question is crucial if one is going to work with these entities to formulate plans for a region. These compelling reasons can be emotionally charged and antagonistic to one another; so tempered negotiation may be required to reach agreement about the protection of an ecosystem. This issue would be further complicated by the cross-boundary nature of resource protection. Collaboration between entities would be essential to successful regional ecosystem conservation planning and resolving the four issues iterated above; however, collaboration is also complicated by those same issues, so having a firm grasp of what problems are likely to arise and the potential solutions would be important knowledge for a planner.

The Three Courses

To get a complete understanding of the role of regional planning in ecosystem conservation and tools for collaboration I chose three courses: Applied Field Studies in Belize and Guatemala, National Parks and Protected Areas, and Case Studies in Land Conservation. Below are brief synopses of each course and what I believed they would contribute to my learning at the time each was chosen.

Applied Field Studies

Applied Field Studies was to focus on issues of sustainable tourism site development, planning, and design and incorporated two weeks of travel to Belize and Guatemala to see ecotourism locations firsthand. By experiencing sustainable travel, talking with residents, and visiting cultural and natural resources ecotourists would likely

also visit students would be prepared to assess the efficacy of ecotourism as a local development strategy for one site each in Belize and Guatemala. During the duration of the semester students would develop detailed site plans, funding recommendations, and business plans for Augustine, Belize and La Compuerta, Guatemala—the two sites.

Applied Field Studies was chosen because it would provide an opportunity to understand the tools, techniques, and hurdles associated with the conservation of ecosystems in an international setting and from a market-based approach. Also the course would deepen my theoretical knowledge of ecosystem conservation while providing practical, hands-on experience with two projects. I expected to gain a better concept of how ecosystems could be protected using market-based tools, how to present plans for conservation to a government audience and a private citizen group so that the plan is accepted and enacted, and how to work with a group of people from different academic and socioeconomic backgrounds to create a feasible and holistic plan.

Case Studies in Land Conservation

Course #2 was Case Studies in Land Conservation taught by David Kittredge of the Natural Resources Conservation Department. This class was to review actual case studies in conservation with a focus on locally initiated, small-scale success stories described by outside speakers. The class would explore the factors contributing to resource loss and how conservation can be pursued in a parcelized and fragmented landscape dominated by private ownership. Speakers were supposed to illuminate the tactics used by their organizations and individuals to realize conservation results despite

being on a smaller spatial and financial scale than many widely known protected areas, like Yosemite National Park.

Whereas Applied Field Studies would provide a market-based approach to conservation, Case Studies was chosen because it would showcase how nonprofits, local governments, and individual property owners could conserve ecosystem services. I believed Case Studies would provide insight into the reasons people take certain actions, their motivations for protecting or not protecting the resources they own and/or that are in their region, and how private action could impact regional plans. The course's culminating project was described as a case study of a piece of conserved land: who initiated protection and their objectives, what organization received the conservation easement or fee simple title to the land, and how the land fit into the system of protected land within the region. Finally, I also chose Case Studies in Land Conservation because of the opportunity to interact with people intimately involved in conservation planning.

National Parks and Protected Areas

National Parks and Protected Areas taught by Stan Stevens of the Geosciences Department was the third class in my sequence. In depth readings on the national park system in the United States were to illuminate one of the most successful conservation movements in the world undertaken to date in terms of number of square miles protected. This course was chosen because it would shed light on the role of government agencies in the US in spearheading conservation programs, how the public reacts to those policies, the funding issues that arise as economic situations and public taste change, and the

conflict between preservation, recreation, and the concept of 'wise-use' as proliferated by Gifford Pinchot. The difference between various types of government conferred protection, such as monuments, bioserves, and national forests, were also be examined and comparative analyzed.

National Parks and Protected Areas was supposed to focus primarily on the United States, but also provide international case studies. Being able to draw on the diversity of conservation methods found all over the world seemed like a good way to enrich my understanding of ecosystem conservation while giving me a strong foundation of information to draw upon when searching for solutions to conservation problems.

The course syllabus identified the materials to be used in addition to lectures: articles and book excerpts to look at international protected areas, the 2009 documentary film *The National Parks: America's Best Idea* by Ken Burns and Dayton Duncan, and two primary texts to examine America's parks and protected areas: *Wilderness and the American Mind* and *Preserving Nature in the National Parks: A History*. *Wilderness* is a classic book that explores the concept of wilderness and the people and organizations that have influenced the American relationship with wild places and wildlife. It touches on the notable successes of that connection, such as Yosemite National Park, and failures, for example the damming of the Hetch Hetchy Valley in California; both of which are part of the United States' turbulent relationship with the land and animals within its boundaries. Nash calls attention to the association of wilderness with a unique American patriotism, spirituality, and idea of manliness, which compelled a variety of individuals to advocate for conservation and preservation, but sometimes with contradictory motivations. *Wilderness and the American Mind* provides the historical context and

philosophical underpinnings anyone interested in conservation and/or preservation needs to understand how the United States became a country of awe-inspiring landscapes set aside in their natural state for eternity and yet also a nation where waters have been polluted to the point of catching on fire.

Preserving Nature, written by a National Parks historian, provides insight into the formation of America's national parks by giving a stepwise progression from the pre-Civil War period up to the modern day. This book particularly focuses on the often contentious relationship between tourism and preservation and how ecosystem management ideas have developed during the last 150 years, which has influenced the success of the national parks.

Course Outcomes

I approached each course with regional planning in mind, which is to say I knew they would not necessarily discuss regional planning and I would need to bring that viewpoint into the course. I knew it would also be important for me to remember my three course option focus on tools for collaboration, since information pertaining to those tools was likely to be presented throughout courses but not necessarily directly. This was primarily achieved by choosing research and paper topics carefully, since these were the parts of each course that allowed for the most latitude in personalization of topics. Each of the courses, and the products and research pursued therein, will now be explored to see how regional planning was incorporated.

Applied Field Studies

In Applied Field Studies the class was divided into two groups: one working primarily on plans for the Belizean site (Mountain Pine Ridge Reserve) and the other group on the Guatemalan site (the village of La Compuerta). Students who were not Landscape Architecture degree candidates could work in either or both groups, since they would not be design-focused. My work was mostly with the Guatemalan group on the value of guesthouses, possible funding sources, and groups that could be collaborators on a guesthouse project; however, I also contributed research to the Belizean group concerning biosphere reserves and funding sources.

The Guatemalan student group developed site designs incorporating overnight accommodations for visitors and asked me to develop the case for this recommendation.

The following are excerpts from the write-up I produced for the report:

“The UMass team recommends that those people in La Compuerta interested in establishing guesthouse stays visit with the Toledo Ecotourism Association (TEA) just over the border in southern Belize. TEA is a voluntary member group that has successfully been managing a network of guesthouses in Mayan and Garifuna communities for approximately twenty years. The guesthouses are small timber and thatched roof structures and are communally owned by a group of TEA members in each village. The guesthouses include bunk beds as well as single beds and lodgers are provided with towels, blankets, pillows, sheets and mosquito nets to make their stay more comfortable. In addition to overnight accommodations, visitors with TEA can choose to have their

meals with local families, participate/observe cultural activities (such as festivals, music, and craft making), and learn about the area through nature tours.”

“La Compuerta could learn from TEA’s experience and incorporate elements into their own guesthouse program. The plan designed by the UMass team includes several cabins modeled after a popular ecotourism destination in Belize—Trek Stop—and they would lend themselves well to small groups of visitors looking to get to know the community and visit Naj Tunich. Though La Compuerta already has a group of villagers directing its tourism operations they could look to TEA for ways to improve their organizational structure and gain insight into solving common problems.”

One of my goals with the write-up was to show how learning from another group meant they did not have to start from scratch in La Compuerta and working with others could increase their chance of successfully preserving their resources while also building a sustainable income source.

For the Belizean group my task was to research the United Nation’s Biosphere Reserves and present a case for why the Mountain Pine Ridge Reserve should pursue Biosphere Reserve designation. The following are excerpts from that write-up:

“Biosphere Reserves are the creation of the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and are “areas of terrestrial and coastal ecosystems promoting solutions to reconcile the conservation of biodiversity with its sustainable use” (UNESCO n.d.).

This mission directly aligns with the goals the Forest Service has set for Mountain Pine Ridge Forest Reserve (MPR). In recent years forestry has declined within the Reserve freeing staff to focus on alternative sustainable uses of this unique landscape, which has led to a desire to create an ecotourism site accessible and interesting to people from a variety of income and interest backgrounds.”

“Applying to become a Biosphere Reserve would increase the prestige of the site and potentially attract additional visitors and researchers. Hopefully the Biosphere Reserve status would also encourage and improve the ability of MPR’s management to actively engage in wildlife monitoring and collaborate with researchers and volunteers on related projects. The biosphere reserve concept can be used as a framework to guide and reinforce projects to enhance people’s livelihoods and ensure environmental sustainability. “UNESCO’s recognition can serve to highlight and reward such individual efforts as well as raise awareness among local people, citizens and government authorities on environmental and development issues” (UNESCO n.d.).”

After in-depth research for both groups I developed Excel spreadsheets detailing funding and collaboration possibilities based on what each group was recommending in its designs and my knowledge of the sites from our earlier visit. Information collected and compiled for possible funders included the name of the funding source, web site, the

interest area of the funder, the specifics of the grant, the grant amount, and the next step in pursuit of the funding. For potential collaborators their name, web site, area of interest, forms of help, contact person, and next step were collected.

Name	Web Site	Interest	Specifics	Amount	Specifics	Amount	Next Step
PACT Belize	www.pactbelize.org	Management and sustainable development of Belize's natural and cultural resources; grants are awarded for protected areas management and conservation, Protected Areas Promotion and Development, Environmental Education and Awareness, and Community Development around Protected Areas	Planning Grants: Project planning grants will be made available for stakeholder consultations and problem analysis in project planning, conceptualization, design and formulation of a proposal for submission to PACT. A minimum of 50% counterpart contribution is required. The screening and approval process will not exceed two weeks.	up to \$5,000 BZ if applying for a large grant afterwards with 50% match from applying org.	Large Grants: Through the Large Grants Program, PACT seeks to implement the National Protected Areas Policy and System Plan. These projects should leverage PACT funds for national and/or regional impact. Each Large Grant must be implemented within a period of two years.	Large Grants are offered for eligible projects over \$100,001 to a maximum of \$400,000.	Online Application (no deadline)

Table 1: Example of Data Collected for Funding Sources

The final aspect of Applied Field Studies was preparation for and participation in an end-of-semester presentation to the Landscape Architecture and Regional Planning faculty and student body as well as any guests in attendance. For my part I developed PowerPoint slides to be added into the presentation of each group which explained to the audience the importance of the MPR seeking Biosphere Reserve status, the value of guesthouses in La Compuerta, and funding and collaboration resources for implementing the Guatemala group's design and program recommendations.

Example: Toledo Ecotourism Association (TEA)

- Voluntary member group managing a network of guesthouses in Mayan and Garifuna communities in southern Belize for approximately twenty years
 - communal ownership by the village's TEA members
 - small timber and thatched roof huts
 - provide guests with basic amenities, like towels, sheets, mosquito nets, etc.
- Guests can choose to take their meals with villagers in their homes and there are opportunities for guided nature tours, participating in local customs, and observing arts and crafts making

Guesthouses in La Compuerta

- Recommend visiting with TEA members
 - see program in action
 - help trouble-shooting
 - learn from experienced people with similar cultural backgrounds
- Existing organizational structure in La Compuerta for handling tours of Naj Tunich can be expanded to include guesthouses
- Village has expressed an interest in offering music and food to visitors

Figure 2: Examples of Slides from Final Presentation

Funding

Project points relevant to grant-makers:

- very low incomes
 - primarily agricultural
 - use of forest resources
- low educational attainment
- rural
- biodiversity

Potential Collaborators

- Conservation International
 - Ecotourism Learning Program: class subjects incl. sustainable ecotourism concepts, tourism assessments, and product development
 - Poptun Chamber of Commerce could pass knowledge on
- Verde Ventures
 - loans for small to medium-sized businesses that contribute to healthy ecosystems and human well-being
 - loan to make improvements suggested in Plan
- Foundation for International Community Assistance (FINCA)
 - Micro-financing to small business owners
 - loans could improve existing village businesses
 - particularly interested in women, so may be avenue to get more women involved in ecotourism in La Compuerta

Figure 3: Examples of Slides from Final Presentation

Applied Field Studies contributed greatly to the first and second goals which were outlined earlier, namely understanding the motivations of groups involved in ecosystem conservation and knowing which conservation tools to use depending on the situation. Travelling to Belize and Guatemala provided an opportunity to look at conservation as a mode for improving rural life by using the ecosystem as a resource for tourism development. The people in La Compuerta were desperately poor and primarily subsistence farmers and other than agriculture their main assets were biodiversity and the archeological site near their village, neither of which they owned but at least to which they had access. Helping to conserve their surroundings was the result of looking for new ways to build prosperity for the village, so their ecosystem conservation efforts were motivated by financial goals. Knowing this motivation was important in developing designs and other recommendations for the village and changed how the group approached the assignment. Had the primary motivation been conservation we may not have recommended guesthouses with the same vigor, but they were integral to the plan for bringing more earning potential into the village and hopefully their inclusion will encourage buy-in from the villagers in the overall project plan.

Case Studies in Land Conservation

Case Studies in Land Conservation was centered around guest lecturers coming into the class to share about their role in conserving land all over New England. The course especially highlighted the role of towns, nongovernmental organizations, partnerships, and individuals in responding to the need for conservation at a smaller

spatial and financial scale than many state and federal government programs, which due to their greater financial resources are sometimes able to purchase large swaths of land in fee simple acquisitions. The syllabus stated that “landscapes dominated by private ownerships have pressing conservation needs” and the “stakes are high in many places as conservation options are lost due to land conversion and development”. This situation is nested within the reality of “parcelized or fragmented landscape,” which makes acquiring large pieces of land at one time virtually impossible. Because of this reality, the course intended to show the value of smaller groups working together and the cumulative effects that many small efforts can have on the landscape.

Guest lecturers came from a variety of professions and organizations and there was always time to ask questions after their presentation. The diversity of speakers was appreciated, because it especially contributed to meeting goals two, three, and four: understanding the tools and techniques used to protect ecosystems and why particular methods are chosen in certain circumstances; knowing the common issues confronting resource conservation organizations and the tools and techniques for their resolution; and developing a thorough understanding of the ways resource conservation organizations collaborate with one another.

Name	Position	Employer/ Organization	Lecture Topic
Wayne Feiden	Director of Planning and Development	City of Northampton (MA)	Land protection through zoning, municipal acquisition, easement, and limited development
Brandon Kibbe	Land Protection Specialist	Mass Wildlife	Land protection from the perspective of a state conservation agency
Marty Klein	Board Member	Passcommuck Land Trust	Land protection by an all-volunteer, local land trust
Leigh Youngblood	Executive Director	Mount Grace Land Conservation Trust	Regional land trust land protection examples
Jay Closser	Real Estate Appraiser	Landvest	Developing the appraisal value of an easement
Cynthia Henshaw	Executive Director	East Quabbin Land Trust	Regional land trust land protection examples
Bob Wilber	Director of Land Protection	Massachusetts Audubon Society	Land protection by a statewide conservation organization
Chris Pryor	Forest Stewardship Coordinator	New England Forestry Foundation	The importance of monitoring easements
Sonya LeClair	Community Forest Programs Coordinator	New England Forestry Foundation	Working with volunteers to facilitate conservation
Laura Herbert and Rob Fletcher	Erving Open Space Committee	Town of Erving (MA)	Local campaign for land acquisition and subsequent action
Keith Ross	Senior Advisor	Landvest	Aggregation of land protection projects: reducing cost, time and energy, and stimulating interest
Wendy Sweetser	Director, Highland Community Initiative	The Trustees of Reservations	Community Preservation Act as a conservation tool
Kristin DeBoer	Executive Director	Kestrel Trust	Regional land trust land protection examples

Table 2: Case Studies in Land Conservation Speaker List

As can be seen from Table 2, some of the lecturers focused on regional conservation efforts and they spoke about their interactions with other conservation groups as well as how they tried to limit the duplication of efforts and unnecessary competition for funding dollars. For example, Leigh Youngblood of Mount Grace Land

Conservation Trust highlighted how that organization formed a regional collaborative with all of the entities working on conservation within their 23 town service area. This meant bringing together an assortment of groups that varied in size, mission, and management style. The collaborative worked to set standards and best practices to which all the groups could adhere and even applied for some funding opportunities they could not have pursued individually. Additional examples of regional efforts in conservation were given by Kristen DeBoer of the Kestrel Trust, which collaborates with the Belchertown Land Trust, Rattle Snake Land Trust, Valley Fund, and Franklin County Land Trust to preserve farmland in the Pioneer Valley. DeBoer drew attention to the role a land trust can play as the middleman between the private property owner and the state, because people are often suspicious of government and therefore not as inclined to hear their ideas and work with them.

Several of the speakers spoke about the difficulty of finding funding for conservation and how that stumbling block has led them to seek out partnerships as well as less obvious ways of preserving land. Wendy Switzer of the Highland Communities Initiative and Wayne Feiden of Northampton's Department of Planning spoke in particular about using zoning to prepare for the future and limit land uses, which can effectively—though not permanently—preserve land within cities in towns. They both saw the importance of being proactive rather than reactive to development pressures; however, Switzer also brought up the difficulty of convincing rural residents of the need to be prepared when their communities had never experienced any great amount of growth. Her solution was to look for ways to build the regional identity amongst

residents and in so doing make them more aware of the specialness of the place they called home and the need to protect it from undesirable changes.

Case Studies in Land Conservation culminated in a final project where students could work alone or in groups to assemble the elements of one case study where a parcel of land was conserved. The elements of the case study included a narrative description (expenses, methods of financing, people and groups involved, location and size of property, ecological/conservation role of the property, etc.), timeline of how the case developed, lessons learned by those involved, and photos and maps of the area.

My case study was of a Northampton parcel previously owned by Helen Kabat which became part of a larger area of conservation in the northeast area of the city. One portion of the narrative described the process of acquiring the land:

“The process of acquiring the Kabat parcel began in early 1999 when the Broad Brook Coalition (BBC), which partners with the city in growing and managing the Fitzgerald Lake Conservation Area, did a mailing to all the property owners in a portion Northampton’s defined acquisition boundaries and invited them to a meeting. Helen Kabat attended and expressed interest in selling the property. The BBC passed on the lead to the city and Feiden followed up with her to work out the details. Issues regarding an unclear title to the land had to be sorted out, but for the most part it was a relatively simple donation of fee simple title to the city. Northampton was able to sweeten the deal by providing Kabat with an appraisal so she would have no out-of-pocket expenses and would be able to receive some tax benefits for the donation. Kabat was motivated by two

factors: the reality that she would be unlikely to sell the property for much on the open market and a desire to preserve the property forever. Though the parcel was fairly large—17 acres—it was isolated from roadways, so anyone purchasing it with development in mind would need to build a road, which would probably require purchasing additional land or right of way easements. Furthermore the zoning map (Map 2) shows the parcel zoned as Rural Residence/Watershed Protection/Water Supply Protection, which all together present some considerable restraints on development.”

Later on I went on to write:

“Protecting this portion of the watershed is important for preserving the water quality of the region, which is one of Northampton’s goals as it sees the conservation land within its bounds as part of a municipal puzzle that makes up a larger Connecticut River Valley puzzle.”

These two excerpts illuminate how the property owner and city had some similar motivations, but also some differences, for conserving this particular parcel. They were ultimately able to work together to meet the needs of both parties. It also bears mentioning that this conservation effort was the result of a local nonprofit organization, the Broad Brook Coalition, which has an on-going partnership with the city, learning of Kabat’s interest in disposing of the property and passing that information on to the city for follow-up. This makes for a great example of nongovernment-government collaboration and maintaining long term partnerships with groups that share similar missions.

National Parks and Protected Areas

This was perhaps the most traditionally designed of the three courses, because it revolved around frequent lectures by the professor accompanied by textbook readings and films. The grading system of the class included two exams, three short response papers, a research paper, and a presentation based on the research paper. The course was designed, according to the syllabus, to explore “efforts in the U.S. and worldwide to promote biodiversity conservation, sustainable development, and social justice through the designation and management of national parks and other protected areas.”

Approximately two-thirds of the class was devoted to land conservation history in the United States. The film *The National Parks: America's Best Idea* and two books, *Preserving Nature in the National Parks: A History* and *Wilderness and the American Mind* were used extensively during this portion of the class. These sources were all excellent and helped shed considerable light on goal one, which was related to motivations for conservation. They each examined the circumstances that led certain individuals to fight to preserve land in perpetuity; the conflicts that arose between property rights advocates, laissez-faire capitalists, and conservationists; the various methods Presidents have used to conserve land; and the changing perceptions and philosophies of society at large towards land and wild animals.

Conveying the wealth of information learned in National Parks and Protected Areas is difficult barring the transcription of class notes and exams, which does not seem appropriate; however, an excerpt from one of the exam questions does help explain how this class contributed to meeting my concentration goals. The question read “A) How do the goals of the US National Parks and the US National Forests differ? B) Why can they

be said to constitute “two sides of the same coin”? I wrote:

“The U.S. National Park Service has a dual mandate to preserve land and wildlife for future generations and to also provide settings for the use and enjoyment of the public. While the Forest Service is concerned to some degree with public enjoyment, their focus is much more on the extraction and use of resources for a sustained yield. Since the Forest Service was overseen by Gifford Pinchot and primarily employed graduates of the Yale School of Forestry, which his family endowed, there was a remarkable level of cohesiveness within the division and intent focus on using the land they oversaw for commercial benefit. They treated forest resources as an agricultural product meant to be raised and harvested using scientific methods to ensure its continued viability over time. Though the Forest Service did have recreation programs and trails to attract the public, it wasn’t able to compete with the National Parks in this regard...”

“Whereas the National Forests were developed for commercial output, the National Parks tended towards tourism and resource protection. Providing people with places to play, relax, and rejuvenate has often taken precedence over unmarred preservation. The heavy involvement in tourism was spurred by the Park’s first director, Stephen Mather, who believed the parks needed to contribute to the national economy if they were going to resist persistent attempts to commercially develop them.

“For the National Parks tourism served as a mode of protection and for the Forest Service sustained yield was believed to hold the key to

resource conservation. Since both departments had conservation as a goal, but had different ways of achieving it, they could be said to represent “two sides of the same coin.”

This question and my answer delved into the idea of competing organizations, different motivations, and the tools available for meeting conservation goals.

National Parks and Protected Areas also gave me a valuable introduction to the issues confronting organizations seeking to conserve land and wildlife around the world. Learning about the incorporation of indigenous rights into conservation agreements, different types of governance used to protect land, the movement towards corridor (e.g. regional) protection of biodiversity, and how protected areas can contribute or hurt indigenous cultures was very helpful in expanding my knowledge base related to ecosystem conservation and tools for collaboration. The United States is not the only, nor is it the first, nation to pursue conservation and there are lessons to be learned and models to be followed from other countries. One video about the establishment of a the Central Kalahari Game Reserve in Botswana was enlightening because it showcased how complicated preservation can be: true motivations can be concealed behind benevolent sounding rhetoric, conservation can be a tool for displacing and assimilating cultures, and those in control are not always the best stewards of the land and its inhabitants—human and non-human alike. While I may never work in Botswana, these factors and issues are translatable to places all over the world and are a reminder of the importance of caution and choosing collaboration partners wisely.

This course involved producing a research paper on some topic related to U.S. National Parks. Given the broad choice of topics it was possible for me to direct my

choice towards the role of ecosystem conservation and collaboration, which I did by writing a paper entitled “Collaborative Regional Wildlife Conservation: A Case Study of Yellowstone Wolf Policy”. My thesis was that the “success of the YNP [Yellowstone National Park] reintroduction program has rested largely on the recognition of wolves as animals with large habitat ranges and territories, which has led to state, federal, international, and nongovernmental collaboration to plan on a regional scale for the recovery of American wolf populations”. The paper covered the territorial history of wolves in the western United States and their role in biodiversity, the systematic efforts at eradication following European settlement, the recognition by scientists and wildlife experts that wolves were important to ecosystems, the hurdles which had to be overcome prior to the reintroduction of wolves in Yellowstone, and the successes and persistent issues with the reintroduction program. The following is an excerpt of particular relevance to my concentration:

“While the Recovery Plan in its entirety is quite lengthy, there are several points that are most relevant to understanding the role of cooperation and compromise in the long term success of the program. First, there was the decision to place the wolf under experimental nonessential status, which “relaxed the customary restrictions on the removal of problem animals through a variety of closely regulated and carefully defined means” and was “a concession to those people who feared that full protection of wolves under the Endangered Species Act would hinder adequate management and control of wolves” (Schullery 1996, 262). Second, was the coordination between the NPS and Fish and Wildlife Service, which

worked closely together throughout the entire project including wolf reintroduction site choice and the Environmental Impact Statement preparation (Lowry 2009). Additionally these two agencies worked with other organizations, like the Forest Service, because there was a substantially higher probability of successful wolf reintroduction if the recovery zone was made truly regional by the inclusion of public lands around YNP (Schullery 1996). Third, though wolves had long ago inhabited an enormous range, a smaller but still large enough area had to be chosen for their reintroduction to the United States and this would by necessity demand cooperation between various protected areas as well as government bodies. The Recovery Plan identified the Greater Yellowstone area as the region for wolf recovery and this choice would pose numerous opportunities for negotiation between parties with polarizing viewpoints.”

Some of those “parties with polarizing viewpoints” were identified in the paper as being part of the Wolf Management Committee set up by the Department of the Interior and included a “diverse group of government, agriculture, and environmental officials from such organizations as the Gem State Hunter’s Association, Idaho Department of Fish and Game, National Wildlife Federation, American Sheep Industry Association, and, of course, the Fish and Wildlife Service and National Park Service”.

Conclusion

The three courses I took for my concentration all contributed significantly to an understanding of the tools and methods used to protect ecosystems and how different organizations can work collaboratively to maximize conservation success. As the human population grows, technology advances, and climate change occurs, it will be imperative for regional planners to have a firm grasp on how to best manage and protect sensitive ecosystems. I would like to use my knowledge of conservation strategies with my regional planning expertise to help individual communities cooperate to protect the ecological resources and systems they have in common. Helping municipalities see beyond their borders to how they are ecologically interconnected with each other will create a holistic, long-term, ecosystem level approach to conservation rather than what is frequently a scattered, parochial, and near-sighted approach that fails to recognize the interdependence of all life regardless of artificial political boundaries.

Regional planning is about bringing people together to solve problems that impact an entire area, which includes the depletion and degradation of ecosystems. Conservation planning can work hand-in-hand with regional planning in other issues areas, such as transportation, housing, and employment, but in order for that to happen planners have to be trained in conservation methods and fostering cooperation. This three course concentration in ecosystem conservation and tools for collaboration has better prepared me to meaningfully participate in planning efforts, locate funding resources, research conservation tools, and form partnerships. Additionally, it has inspired a long term interest in the value of collaboration, the importance of negotiation, and the tools needed

to create sustainable networks among stakeholders within the conservation realm as well as within a wider variety of issue areas.

Bibliography

Knight, Richard L., and Peter B. Landres. *Stewardship across boundaries*. Washington, D.C.: Island Press.

Lowry, William. *Repairing Paradise*. Washington, D.C.: Brookings Institution Press, 2009.

Massachusetts Executive Office of Energy and Environmental Affairs. *2009 Land Protection Report*. Boston: Massachusetts Executive Office of Energy and Environmental Affairs, 2009, 6.

Michigan Technological University School of Forest Resources and Environmental Science. *Kid's Corner*. <http://forest.mtu.edu/kidscorner/ecosystems/definition.html> (accessed April 13, 2010).

Schullery, Paul, ed. *The Yellowstone Wolf A Guide and Sourcebook*. Worland, WY: High Plains Publishing Company, 1996.

Sellars, Richard West. *Preserving Nature in the National Parks: A History*. New Haven, CT: Yale University Press, 2009.

Sportza, Lucy, J. G. Nelson, and J. C. Day, . *Protected Areas and the Regional Planning Imperative in North America: integrating nature conservation and sustainable development*. Lansing, MI: Michigan State University Press, 2003.

UNESCO. "FAQ: Biosphere Reserves?" *UNESCO*. <http://www.unesco.org/mab/doc/faq/brs.pdf> (accessed April 22, 2010).