Environment and Society 2011
Graduate Research Symposium

Friday, April 15th
8:45 am - 1:15 pm
University Inn 507
About the Symposium

Among the more difficult skills for a new researcher to develop is the ability to convey complex and often unfamiliar ideas to a diverse audience of scholars in the space of a few minutes— in other words, to make the type of presentation that occurs at scientific meetings. Often graduate students make their first such presentation at the thesis defense, when the pressure is greatest and the opportunity to adjust their presentation has largely passed. Today the Department of Environment and Society offers its second Graduate Symposium to provide an opportunity for graduate students to present their ideas to an audience of peers and professors, at a time when they’re just beginning to focus on a researchable problem.

We will hear from 2 Ph.D. and 6 M.S. ENVS graduate students who seek degrees in Human Dimensions of Ecosystem Science and Management (HDESM). Each will describe how they propose to undertake the research that will form the basis for their thesis or dissertation. Some students are just beginning to determine how best to tackle their topic of interest. Others may have already started their research process, but still can benefit by further developing their ideas as influenced by the insights of their peers.

The purpose of today’s session then, is twofold:

- To offer a chance to practice making a scholarly presentation in a format that reflects how scientific research is commonly presented to other scholars; and

- To provide an opportunity to gain feedback from peers and professors on ways to improve their research approach, tackle a vexing question from another angle, and otherwise improve their future scientific inquiries.

Comments and questions, then, are not only welcome but necessary. Today is a venue for helping each other do the best science we can. The pace of the presentations is rapid: Students have been told to speak for no more than 15 minutes, leaving just four minutes for questions and suggestions. If you have an idea or question and don’t get a chance to raise the issue in the time allotted, please take the time to contact the student later— perhaps at the Post-Symposium Social to be held at the home of Kelly Goonan and Ashley D’Antonio (468 East 700 South, River Heights) today starting from 4:00 pm.
ENVIRONMENT AND SOCIETY DEPARTMENT
PRE-PROJECT SYMPOSIUM
College of Natural Resources, Utah State University
UNIVERSITY INN ROOM 507
15 April 2011

Opening Coffee Social 8:45

Opening Remarks – Mark Brunson

Session I: Environmental Attitudes and Perceptions (Discussant: Robyn Ceurvorst)

9:00 – 9:20 Colyn Kilmer
"Disharmony: Investigating local perspectives behind opposition to a proposed wind farm on the Harmony Mountains in Southwestern Utah."

9:20 – 9:40 Joe Unger
"A Study of the Attitudes of Anglers in the State of Utah."

9:40- 10:00 Seth Cook
"Utah Rancher Perceptions of Climate Variability and Carbon Sequestration."

10:00 – 10:20 Taral Hull
"The Theory of Planned Behavior Applied in the Context of Sustainable Guided Nature Based Tourism."

Discussant Feedback 10:20- 10:30

Workshop: 10:30- 11:00 (Presenter: Dr. Brien Norton)
"Let Your Conference Paper Be Remembered: Some tips for effective presentation"

Break 11:00- 11:10

Session II: Environmental Decision-Making and Access (Discussant: Adam Beh)

11:10 – 11:30 Kelly Goonan
"Exploring the Bases of Visitor Standards for Conditions in National Parks."

11:30 - 11:50 Morey Burnham
"Factors Affecting Farmer Decision-making About Adaptive response to Climate Uncertainty: A case study from north-central China."

11:50 - 12:10 Katie Davis Henderson
"Linkages and Access to Water: A case study of canal issues in Logan, Utah."

12:10 – 12:30 Becky Morgan
"Anticipating Change: Identifying opportunities and barriers for implementing adaptive management practices in Rocky Mountain National Park."

Discussant Feedback 12:30-12:45

Workshop: 12:45 – 1: 15 (ENVS Faculty Panel) Refreshments Served
"Beyond IRB: Ethics unplugged, stories from the field"

Closing Remarks – Mark Brunson

End 1:15
Presentation Abstracts

Burnham, Morey  Ph.D. Candidate, HDESM  moreyburnham@gmail.com

Factors Affecting Farmer Decision-making about Adaptive Response to Climate Uncertainty: A case study from north-central China.
Advisor: Z. Ma

The Loess Plateau region of China has been identified by the Intergovernmental Panel on Climate Change (IPCC) as an area that will be negatively affected by climate change. The climate change scenarios produced by the IPCC for the region project increased average temperatures and possibly great variance in extreme temperatures, increased soil erosion, and decreased water storage. Additionally, measures of the Palmer Drought Severity Index show a trend of increasing drought severity. Discussions of adaptation to climate change have become increasingly important in policy, academic, and development circles as a means of decreasing the negative effects of climate change on human well-being, particularly as it has been realized that mitigation of atmospheric CO₂ alone will not be sufficient to do so. As such, my research examines the conditions and factors affecting farmer decision-making about adaptive practices in the Loess Plateau region of Shaanxi, China. My research has three related objectives: 1) To understand farmer perceptions of climate change and uncertainty in Shaanxi; 2) To determine, what, if any, agricultural and livelihood adaptations farmers have made or plan to make to respond to ongoing and anticipated localized climate change and variability; and 3) To understand how farmers prioritize their responses to climate change and variability within the larger framework of livelihood decision-making. A mixed-methods approach will be used. Semi-structured interviews and focus groups with farmers, county and village administrators, and local researchers will be employed to inform a quantitative survey instrument that will be administered to a random sample of farmers. The results will be used to identify appropriate policy tools and agricultural development projects that can be utilized to promote adaptation strategies among farmers in Shaanxi that address their vulnerability to climate change, as well as other pressing financial and agricultural concerns.

Cook, Seth  M.S. Candidate, HDESM  seth.cook10@gmail.com

Utah Rancher Perceptions of Climate Variability and Carbon Sequestration.
Advisor: Z. Ma

Carbon sequestration can be used to help offset the amounts of CO₂ emitted into the atmosphere as a strategy to mitigate anthropogenic influences on climate variability. Rangelands have the ability to act as carbon sinks and there are emerging discussions about working with ranchers to increase carbon storage on rangelands through improved land management practices. This study has four objectives: 1) understand rancher attitudes toward climate variability and carbon sequestration; 2) better understand rancher thought processes of undertaking carbon sequestration activities; 3) examine current land management practices that have the co-benefit of increasing carbon storage; and 4) determine program characteristics and incentives that are most appealing to ranchers. Open ended interviews will be conducted with range management/extension professionals and ranchers. The qualitative data will be used to inform a quantitative survey that will be sent to Utah ranchers. The results will inform the development of policies and programs that promote carbon sequestration while helping private ranchers accomplish their management goals.
Goonan, Kelly  Ph.D. Candidate, HDESM  Kelly.Goonan@aggiemail.usu.edu

Exploring the Bases of Visitor Standards for Conditions in National Parks.
Advisor: C. Montz

The use of objectives-based management frameworks predicated on indicators and standards of quality is well established in outdoor recreation management. The purpose of such frameworks is to maintain acceptable resource, social, and management conditions in areas utilized for outdoor recreation. The successful application of these frameworks depends on the development of management objectives, indicators of quality, and standards of quality. Management objectives are statements that define the desired conditions to be maintained within an area. Indicators of quality are measurable variables that serve as proxies for management objectives, and standards define the minimum acceptable condition of indicator variables. Several indicator-based frameworks have been developed, including the Visitor Experience and Resource Protection (VERP) framework. The National Park Service developed and instituted the VERP process in 1997 for the purpose of guiding planning and management within units of the national park system.

Under the VERP process, parks are instructed to consider the perspectives of park visitors when identifying indicators and standards of quality. This is generally accomplished through visitor surveys incorporating normative research methods. Visitor evaluations of the acceptability of various conditions can be analyzed to identify visitor-based standards for recreation conditions.

Numerous studies have examined the application of normative theory and methods to formulating visitor standards for conditions in parks and protected areas. However, little research has examined differences in visitor standards between different groups of visitors, and very little has examined the characteristics that underlie visitor standards. Visitors to parks and protected areas are diverse in many ways, and these differences may affect the evaluative judgments visitors make about park conditions. This study will measure visitor standards for a uniform suite of conditions that could be found at a park or similar area. In addition, a variety of visitor characteristics will be measured, including environmental orientation, knowledge of accepted outdoor practices (e.g., Leave No Trace and minimum impact practices), level of place attachment, and recreation motivations. The study will be replicated at multiple units of the National Park Service in order to reflect the diversity of park visitors. Multivariate methods will be used to examine the influence of visitor characteristics on visitor standards for conditions.

Henderson, Katie Davis  M.S. Candidate, HDESM  TesserKate@gmail.com

Linkages and Access to Water: A case study of canal issues in Logan, Utah.
Advisor: J. Endter-Wada

In 2009, a landslide and breach of a century-old hillside canal in Logan, Utah destroyed several housing structures and killed three people. The event triggered political reaction and policy changes regarding restoring water delivery, canal safety legislation, liability concerns for irrigation companies, and the role of open canals in an increasingly urban context. The EIS process currently underway to examine alternatives for the Logan Northern Canal Reconstruction Project provides a unique opportunity to understand linkages to water that different stakeholder groups have and the challenges and dilemmas involved in water policy and planning in areas transitioning from agricultural to urban use. Applying the Linkages to Public Land (LPL) Framework and the Theory of Access to the public resource of water, how people are connected to and access water will be explored and mapped. A combination of research techniques will be employed, including secondary data analysis, observation, and interviews. The primary research objective is to uncover the range of policy issues pertaining to irrigation infrastructure and water delivery in a changing western city.
Hull, Taral | M.S. Candidate, HDESM | taral.hull@gmail.com

The Theory of Planned Behavior Applied in the Context of Sustainable Guided Nature Based Tourism.
Advisor: S. Burr

Outfitters and guides offer a service to those desiring to use wildlands in ways they may not be able to otherwise without proper equipment, skills, knowledge of the land or other specialized knowledge. Outfitters and guides operate in areas that are near wildland areas, and that are often non-metropolitan in nature. These areas have chronically suffered from economic woes. Some have looked to tourism development as a way to provide income to these areas. Sustainable Tourism and ecotourism were developed to provide tourist experiences that have positive impacts on local economies and societies without endangering ecological resources. Outfitters and guides have been singled out as fitting into the realm of sustainable tourism and ecotourism (Nickerson et al, 2007).

The Theory of Planned Behavior (TPB) has been used in a wide variety of ways to help predict specific types of behavior. TPB suggests that an individual’s behavior is determined by their intention to perform the behavior. Intentions are a function of an individual’s behavioral attitudes, subjective norms, and their perceived behavioral control. The proposed research will use the established theory of Planned Behavior in the context of sustainable tourism practiced by outfitters and guides operating in the intermountain region of the United States.

Kilmer, Colyn | M.S. Candidate, HDESM | nylok76@gmail.com

Disharmony: Investigating local perspectives behind opposition to a proposed wind farm on the Harmony Mountains in Southwestern Utah.
Advisor: A. Laudati

There are currently two wind farms in Utah: a small, nine-turbine array at the mouth of Spanish Fork canyon and a large 204 megawatt installation in Milford. Wasatch Wind based in Heber City, Utah and the same company behind the Spanish Fork farm has applied to the Bureau of Land Management (BLM) for a leasing permit to build a 100 megawatt wind farm on the Harmony Mts. on the border of Iron and Washington County. The BLM has traditionally been tasked with managing mineral extraction activities and is now required by a federal mandate to foster greater opportunities for the development of alternative energy sources such as wind, solar and geothermal. As with many natural resources and their management, conflict has arisen over the proposed Harmony Mts. wind project. Many local people in the nearby town of New Harmony are opposed and a group of opponents from the surrounding areas have created a website through which they hope to gain support for their cause.

The purpose of this Masters project is to discover the histories and perspectives behind this opposition. Such land use and natural resource conflicts will likely only become more prevalent in the future as federal agencies and private energy development companies seek to provide the nation with renewable forms of energy. This Masters project does not intend to draw generalizable conclusions that can be applied to other instances of conflict, rather the purpose it to indicate that the unique histories associated with specific areas should be closely inspected to inform more just and productive outcomes.
Morgan, Becky  M.S. Candidate, HDESM  becky.morgan@usu.edu

Anticipating Change: Identifying opportunities and barriers for implementing adaptive management practices in Rocky Mountain National Park. Advisor: M. Brunson

Effective resource stewardship in the national parks requires a dynamic system for anticipating and implementing change in both day-to day operations as well as long-range planning. Often, there is a disconnect between the scientists who are conducting research and the management practices that are implemented. Beginning with emerging issues centered around highly valued Rocky Mountain National Park (ROMO) resources, managers and scientists were brought together to identify the biological, climatic, physical, social, and managerial processes that shape park ecosystems.

The result was an extensive listing of influences and valued resources that are highly relevant to management activities. From this study, attributes that positively influence management decisions, as well as barriers to adaptive practices were identified. In addition to the information gathered in this workshop, a survey of ROMO employees was conducted to identify perceptions of science and its role in management of national parks. Evaluation of survey data and the information gathered through the workshop have been analyzed. Recommendations and techniques for improved communication and internal planning strategies are explored.

Unger, Joe  M.S Candidate, HDESM  junger@aggiemail.usu.edu

A Study of the Attitudes of Anglers in the State of Utah. Advisor: S. Burr

Partnering with the Utah Division of Wildlife Resources, this project will consist of two online surveys. The first will be sent to 50,000 participants in ten survey periods from April 30, 2010 to March 31, 2012. This survey will only study fish caught during those time periods and general site-specific information. The second survey will be sent to 10,000 participants during the month of September, 2011 and will focus on overall attitudes towards different management techniques the DWR uses.