GRADUATE PRE-PROJECT SYMPOSIUM

FRIDAY, APRIL 21, 2017
University Inn 507
8:30 AM - 12:30 PM
Department of Environment and Society
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ABOUT THE SYMPOSIUM

One of the most difficult challenges for a new researcher is to learn how to convey complex, often unfamiliar ideas to a diverse audience of scholars in the space of a few minutes. Today's event offers Environment and Society graduate students a chance to practice making a presentation for a scientific meeting. Rather than waiting for the thesis or dissertation defense, this symposium is 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.

THE PRESENTERS

We will hear from 4 Ph.D. students in the Human Dimensions of Ecosystem Science and Management program and 3 M.S. students representing Geography, Ecology and Environment and Society. 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 colleagues in the department, college, and university.

FORMAT OF PRESENTATIONS

Each student has prepared a 15-minute presentation, which will be followed with 10 minutes of questions and answers. There are comment cards available throughout the room for members of the audience to share their thoughts and ideas with the presenters. Please use this opportunity to improve the work of your colleagues.
SCHEDULE

8:30 a.m.       Opening Social and Light Breakfast
9:00 a.m.       Gwendwr Meredith, Ph.D. Human Dimensions
9:25 a.m.       Yajie Li, Ph.D. Human Dimensions
9:50 a.m.       Emily Esplin, M.S. Geography
10:15 a.m.      Taya Carothers, Ph.D. Human Dimensions
10:40 a.m.      BREAK
11:00 a.m.      Shelly Arnold, Ph.D. Human Dimensions
11:25 a.m.      Riana Gayle, M.S. Ecology
11:50 a.m.      Alexandria Dolezal, M.S. Human Dimensions

ABSTRACTS:

GWENDWR MEREDITH:

Inter-agency management of rangelands: Learning effects on innovation adoption rates

Public rangelands constitute nearly half the land in the western United States; however, this land is managed by a multitude of different federal and state rangeland management agencies. With this mosaic of different management strategies across the landscape, adoption of management innovations that promote the sustainable management of rangelands may not reach their full potential. Empirical data concerning innovation adoption and knowledge
transfer among and within these agencies is lacking. I plan to use semi-structured qualitative interviews with agency personnel to ascertain the management framework in which they operate, resulting in a social network of intra- and inter-agency connections. The data from this empirical case study will be used in generating a social network and model determining how rangeland managers perceived as successful can affect the adoption rates of management innovations and how elements of particular management frameworks can break down effective innovation transfer. A multi-relational and interdependent exponential random graph model (ERGM) will be used to improve understanding of the social and ecological connectivity pertaining to rangeland management. Examining patterns of innovation adoption between agencies may show where there is a breakdown in transfer of innovations, especially important in interconnected landscapes. Identifying these constraints to optimal management are crucial to identify because agencies managing rangelands will have to operate in a continually changing environment. Their ability to share innovations and knowledge amongst themselves will increase their transformative capacity and subsequent management quality.

YAJIE LI:

Content-analyzing and modeling communication strategies to reduce heat wave vulnerability

Extreme heat hazards have been the leading cause of weather-related deaths in the U.S. To reduce heat vulnerability, heat-health messages designed to encourage individual adaptation to heat are often used by agencies before and during the extreme heat events. However, the use of such messages has outpaced investigation of how these messages are constructed and to what extent such messages influence the public’s attitudes and
Current studies indicate heat waves are increasing in frequency, longevity, and intensity across the United States. Such a trend calls to attention the way heat wave risk is communicated in order for populations to adapt accordingly. Little research has been conducted on how heat wave risk messaging is created and communicated to determine its effectiveness.
to increase awareness and mobilize adaptive strategies. Furthermore, if factors like previous experience with heat waves and heat-related health symptoms are related to risk perception, this experience may indirectly influence one’s actions to protect oneself during future heat events. Understanding what factors influence one’s heat wave risk perception and adaptive practices can inform how agencies like the National Weather Service (NWS) construct heat wave risk messaging. This study is two-fold in this analysis. First, geo-referenced empirical survey data will be used to analyze demographic and experiential factors that influence Americans’ perception of heat wave risk and self-reported protective behaviors using a multi-level regression model. Second, qualitative interviews of NWS experts and partners for the Salt Lake City region will inform how NWS heat wave products are currently being constructed, used, and disseminated.

**TAYA CAROTHERS:**

**Community-based research in Salt Lake City’s urban river corridor**

Using a community-based research approach, my research will focus on understanding community connections to the Jordan River and surrounding park system. Starting with a fourth-grade classroom at Rose Park Elementary in Salt Lake City, I will help facilitate projects and discussions that address perceptions and connections to this urban river. After a relationship has been formed with the elementary school students, I will reach out to their parents to participate in a community-based research project in which members of the community help form research questions meaningful to them and work side-by-side with the research facilitator (me in this case) to get answers to their questions. The broad research question that I will think about while
Liquid fuels, such as gasoline and kerosene, are a major component of the United States’ commercial, industrial, private, and transportation sectors. In the United States today, over 90% of the liquid fuel that is consumed is fossil fuel derived. This poses a problem for two reasons. Firstly, fossil fuels are finite resources that will become increasingly scarce and eventually become too costly to produce profitably. Secondly, as of 2011 the United States imports over 44% of its domestic oil consumption, which makes the U.S. vulnerable to globalized world oil price fluctuations. To try to mitigate the effects of these issues, the U.S. in recent decades has looked to biofuels to reduce fossil fuel consumption. This dissertation research will focus on both the viability of these alternative liquid biofuels to replace fossil fuel consumption, and their desirability. This project will undertake a comprehensive assessment of the suitability of biofuels to satisfy major parts of the requirements of industrialized nations for liquid fuels. The suitability of biofuels will be measured by a multimethod approach including surveys, agent based modeling, life cycle analysis, complex systems analysis, and historical research.
Drought is an inevitable and natural occurrence. However, as the global climate continues to warm, precipitation levels become more variable, and populations grow, the negative impacts of drought are likely to become more pronounced. As a result, many cities are beginning to develop adaptation or mitigation plans that will make them more resilient to future drought events. This presentation presents an ongoing systematic search of drought and climate policies in the U.S. Policies and planning documents are being identified from city websites using a list of search terms ranging from “drought” and “water conservation” to “climate mitigation.” The systematic search is being conducted to populate a database detailing the presence or absence of drought-related policies in all U.S. cities with populations greater than 100,000. The database will also be populated with other variables characterizing each city’s sociodemographic composition and its hydroclimatic history. Analyses of data within the database will be conducted to determine the most significant factors contributing to the formation of a drought-specific policy. Identifying significant factors, whether they be sociodemographic or hydroclimatic, leading to the formation of drought-related policy will provide valuable insight into the forces shaping the climate resilience of human communities.
The growing disparity in food access and nutritional consumption between communities of differing socioeconomic status continues to be a problem for most American cities, and Salt Lake is no exception. While various studies have shown that socioeconomically disadvantaged neighborhoods have access to fewer food outlets, there is less known about their access to nutritious foods. The purpose of this study is to document the main characteristics of the food landscape in several lower-income neighborhoods in SLC. The first phase of the study will begin with an audit of all existing food retailers and other food sources in these neighborhoods. These audits will gather a range of information about the selection, quality, price, source, and cultural appropriateness of the foods being sold at each outlet. Phase two of the study will employ interviews with store owners to assess perceptions of the community and understanding of community needs when it comes to healthy food access. I also hope to facilitate focus groups with community members to assess perceptions of food availability, experiences of food insecurity, and current consumption behaviors. By conducting a detailed assessment of the availability, quality, and affordability of nutritious food sources, this study will contribute to a better understanding of food security issues in these communities. This knowledge can be used to begin addressing those concerns, with the eventual goal of establishing a “Good Food District” in these neighborhoods to help provide community members with better access to affordable healthy, local, and sustainable food options.