

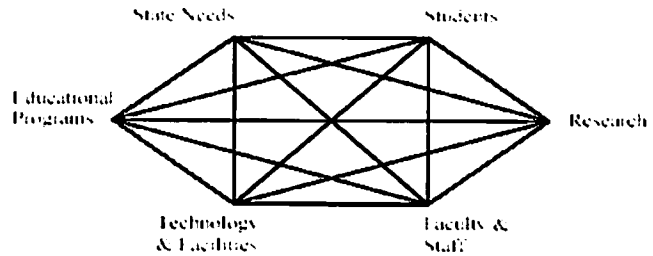
## NRS Ph.D. Proposal

### University of Alaska Board of Regents Program Approval Summary Form

MAU: UAF

Title: Ph.D. Natural Resources and Sustainability

Target admission date: Fall 2008



### How does the program relate to the Education mission of the University of Alaska and the MAU?

The Ph.D. Program in Natural Resources and Sustainability (NRS) directly services the educational mission of the University of Alaska Fairbanks. The UAF Vision Statement (Strategic Plan 2010) states that UAF will “Offer undergraduate and graduate education that takes advantage of our location in the Far North.” This Ph.D. program focuses on the education of high-level professionals with skills for considering the interaction of social and natural systems and informing the development and implementation of practices and policies that enhance natural resource management with emphasis on Alaska and the Circumpolar North.

The University of Alaska Fairbanks is currently involved in several funded national initiatives that are relevant to the educational goals and objectives of the NRS Ph.D. program. The *Resilience and Adaptation Program* at UAF is focused on Ph.D. education and training in the integration of social and natural science to address questions of sustainability in the North. The NRS Ph.D. program would provide an important educational complement to the emphasis of the newly funded *EPSCoR* (Phase 3) on building the research capacity at UA to integrate social, biological, and physical sciences; The NRS Ph.D. program would also provide a key educational linkage to several other UAF initiatives and research projects including The Alaska Center for Climate Assessment and Policy, the newly funded Scenarios Network for Alaska Planning project at UAF, which is part of a circumpolar IPY program and the Center for Global Change at IARC, which funds graduate student research on global change.

### What State Needs met by this program.

Alaska and the Circumpolar North face increasingly complex challenges in use and management of natural resources. These challenges require the education and training of high-level professionals with skills for considering the interaction of social and natural systems and informing the development and implementation of practices and policies that enhance natural resource management. The Ph.D. in Natural Resources and Sustainability at the University of Alaska Fairbanks would prepare future leaders as academic researchers, educators, agency and industry professionals and analysts of non-governmental organizations and communities for careers at the frontiers of science in the management of natural resources and environment.

### What are the Student opportunities and outcomes? Enrollment projections?

Graduates electing a career in academics will find a range of faculty positions in schools of natural resource, resource economics, and environmental studies and sciences. These Ph.D.'s will also find an increasingly expanding number of research funding opportunities related to

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integrated or interdisciplinary programs that explicitly link social, economic, and ecological dimensions. Several examples of this type of research currently exist through the National Science Foundation, and graduates of the program will be well positioned to serve as grant PIs. Those electing to pursue professional careers with government agencies, such as the National Park Service or the Alaska Department of Environmental Conservation, will find that their skills as applied resource management researchers will be in high demand as agencies address societal-ecological problems, such as the economic implications of climate change. Other professional tracks are available as well. There is currently a trend among non-governmental organizations (i.e. non-profits) of Alaska and the US as a whole to build the organizational research capacity with internally hired Ph.D.'s. The Nature Conservancy, the Wilderness Society, and Audubon Society are examples of such organizations that currently employ research staff with Ph.D. training. These Ph.D.'s will also have ample opportunities to work as private consultants, especially given the need for rigorous analysis by private consultant firms that are hired to conduct environmental impact assessments. As well, the recent stated objective of the Alaska Federation of Natives board of directors to train more Alaskan Native Ph.D.'s reflects to the need for well-trained researchers to be staff organizations like the First Peoples Institute and Native profit and not-for-profit organizations. We anticipate that the demand for Ph.D.'s in the area of natural resources and sustainability will grow significantly as Alaska addresses future questions of sustainable development.

Targeted enrollment is five students per year. Total enrollment is seen as twenty students by year four of the program.

### **Describe Research opportunities:**

The NRS Ph.D. Program is centered on training students in original research. The NRS Program will distinguish itself from other programs by emphasizing research focused on both disciplinary (e.g., forest ecology, resource economics) and interdisciplinary (e.g., reaching ecological and economic objectives via adaptive management) natural resource issues at high latitudes, focused primarily on Alaska. In so doing, the NRS Program will contribute directly to the research mission of the University of Alaska, particularly with respect to the following elements of the Vision Statement in the 2006 Strategic Plan:

- Spearhead integrated research, emphasizing our complex high latitude physical, biological and social systems
- Link research discoveries with teaching, service and community engagement
- Create innovative collaborations with communities, businesses and governments that meet state, national and global needs

### **Describe Fiscal Plan for development and implementation:**

There are no new funds being sought for the program. Courses included in the program are currently being offered. Existing faculty and administrative staff will deliver and administrate the program. Students will be located in existing student office facilities at SOM and SNRAS.