SustR: Sustainable Development for Rural Communities: Social, Health, Economic, and Environmental Advances

We propose to create a consortium of six research-based universities and colleges in Mexico, Canada and U.S. to tackle the most critical issues in rural sustainability by educating a new generation of students and creating collaborative ties among researchers at these institutions. The consortium universities will exchange students and faculty in several engineering and science disciplines (anthropology, sociology, political science, biology, health sciences, environmental engineering and sciences, forestry) involved in finding social, political, economic and technical solutions to the problems of rural communities.

The universities forming this consortium are Michigan Technological University (U.S.), University of Puerto Rico-Mayaguez (U.S.), Universidad de Sonora (Mexico), Universidad Autónoma de Aguascalientes (Mexico), University of Northern British Columbia (Canada), and Lakehead University (Canada). These universities were selected not only for their expertise, but to ensure a wide range of local issues in rural sustainability. Collaborative ties already exist between several of these universities, in terms of student and faculty exchange programs, collaborative research, and education projects. These universities offer a broad range of expertise in the area of rural sustainability, from social sciences, including an understanding of the social dynamics and economics in rural communities; public and community health, including an understanding of determinants of community and individuals’ health in rural and remote communities; natural sciences, including an understanding of the capacity of the natural environment to sustain development in rural communities; and engineering, including knowledge of how to design, build and manage technical solutions.

At least 46 students will be mobilized among the participating universities through one- to two-semester visits and up to 60 students via short-term intensive field courses. The number of students sent and received by each of the universities is approximately equal (approximately 7 student-semester per university) Student activities will consist of three stages: intensive language training, coursework in sustainable development, and professional or research internships with local businesses, municipalities, agencies or at the host university. Students enrolled in semester-long exchanges will be required to register in a course in sustainability at their host university. It is expected that each student exchanged will provide an international perspective on issues discussed in these courses and thereby impact the education of students at the host university.

Faculty activities will focus on the development of a general web-based course in water resources and intensive courses in urban water issues, and on the compilation of a collection of web-based case studies in water resources systems in North America. The faculty participants in the project will meet two times per year, with the locations alternating between the participating universities. Faculty from the participating universities will attend approximately seven trilateral consortium meetings over the project period, including four annual project sponsor meetings.

Faculty at the three institutions will benefit immensely from exchange and discussion with each other as they compare the differences and similarities in their home territories. This exchange will enable students to learn in an "integrated" manner that not only combines diverse disciplines, but also the histories and experiences of the different regions. In effect, this will be a laboratory for student learning and preparation for resolving a central problem that faces rural communities: linking reduction in poverty and increasing sustainability.