

Please complete a template for each area of research, scholarly and artistic strength and/or promise

Name of RSA Area: Extreme Environments

Is this an area of strength or promise ?

Using the indicators appropriate to your unit, please provide evidence to support the area of strength or promise identified above. Please modify the suggested indicators to best reflect your unit.

Indicators	Evidence
<p>High Quality People</p> <ul style="list-style-type: none"> • Visionary leadership • Critical mass of outstanding faculty, chairs, named professorships • National and international awards and citations • Invited presentations at national and international conferences and at institutions outside the U of S • Training of highly qualified personnel (number and quality of graduate students; employment of post-doctoral fellows, research associates, research assistants and technicians) • Participation on National Review Committees, Editorial Boards, etc. 	<ul style="list-style-type: none"> • Ten faculty (3 in Northern Studies, 5 in Dept. of Climate Change; 2 in Dept. of Forestry) working in area • Recent CRC T1 (Isabella Smith) and one professor emeritus holding U of S Chair in Environmental Change • K.V.W. Innovation Award in Environmental Change (value \$500,000 over five years) held by CRC • 30 graduate students • Graduate student exchange program with University of Nepal (10 students since 2002)
<p>Significant Regional, National, and International Relevance</p> <ul style="list-style-type: none"> • Impact on policy (social, business, government, health, education) • Impact on artistic, performance, cultural and literary work • Contributions to service facilities, community organizations, public debate • Contributions to technological advances • Relevance to regional and Canadian innovation agenda • Community initiatives that benefit the public and private sector • Outreach activities (including creation of undergraduate employment opportunities (e.g., summer students, research project and work experience undergraduate classes)) 	<ul style="list-style-type: none"> • One of three Canadian institutions (U of T, UNB) with expertise in extreme environments • One of top federal agenda items related to economic development in next 5 to 10 years (See Innovation Agenda, 2004) • Implications for provincial economic development due to current reliance on primary bioresources, particularly agriculture and forestry
<p>Ability to Attract Resources</p> <ul style="list-style-type: none"> • Research funding • Endowment funding • Creation of facilities and space • External funding for other than research • Personnel and graduate student funding • Direct economic impact (e.g. spin-off companies, job creation, impact on tourism) 	<ul style="list-style-type: none"> • Two new start-up companies (Project Z, 2004; Alliance Canada, 2001) • 15 patents for new technology • Five SSHRC scholarships, 3 CIHR, and 10 NSERC • \$400,000 in research grants in 2004; \$2.5 in contract activity since 2001; university equity in two start-up companies cited above • New technology being applied to road building techniques in Canadian subarctic; start-up companies employing 10 technical and scientific staff between them
<p>Significant Collaborative Activity</p> <ul style="list-style-type: none"> • Cross-unit and cross-college collaborative groups • Interdisciplinary and multidisciplinary achievements • Use of existing U of S and local facilities and resources • International partnerships • Government agency linkages • Industry linkages • Community partnerships and collaborations 	<ul style="list-style-type: none"> • Recent collaboration established with College of Engineering related to equipment functioning in extreme climates and Department of History and College of Law related to aboriginal land claim issues • Graduate program unique in Canada for interdisciplinary focus (SPR Reviewers comments, 2004) • Partnership with Australian company (Aust. Innovation)
<p>Significant Activity Output</p> <ul style="list-style-type: none"> • Publications (journal publications, books and book chapters) • Performances • Exhibitions • Case books, treatises, case comments • Presentations at national and international conferences • Citations • Patents and commercialization agreements 	<ul style="list-style-type: none"> • 94 refereed journal publications between 2000 and 2004 • Provided expert scientific testimony in recent legal suit of territorial government